ปัจจัยที่มีผลต่อความนิ่งของอัตราการไหลของเครื่องป้อนแบบสกรูและเครื่องป้อนแบบโต๊ะหมุน

นางสาวดารณี สีนา

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญา วิศวกรรมศาสตรมหาบัณฑิต

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FACTORS AFFECTING THE SMOOTHNESS OF FLOW RATE OF A SCREW FEEDER AND A ROTARY TABLE FEEDER

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นางสาวดารณี สีนา : ปัจจัยที่มีผลต่อความนิ่งของอัตราการไหลของเครื่องป้อนแบบสกรูและเครื่องป้อนแบบโต๊ะหมุน (FACTORS AFFECTING THE SMOOTHNESS OF FLOW RATE OF A SCREW FEEDER AND A ROTARY TABLE FEEDER) อ.ที่ปรึกษา : ศ.ดร.วิวัฒน์ ตัณฑะพานิชกุล, อ. ที่ปรึกษาร่วม : รศ.ดร.ธวัชชัย ชรินพาณิชกุล จำนวนหน้า 166 หน้า. ISBN 974-130-094-8

เครื่องป้อนแบบสกรูและเครื่องป้อนแบบโต๊ะหมุน นิยมใช้กันอย่างกว้างขวางในงานจัดการวัสดุปริมาณมากและกระบวนการอนุภาคอุตสาหกรรม โดยทั่วไปแล้วอัตราการไหลที่แต่ละเวลาจากเครื่องป้อนแบบสกรู และเครื่องป้อนแบบโต๊ะหมุนจะเกิดการแกว่งอย่างรวดเร็วในระดับหนึ่ง งานวิจัยนี้ทำขึ้นเพื่อศึกษาปัจจัยที่มีผลต่ออัตราการไหลออกที่ราบนิ่งของสารจากเครื่องป้อนแบบสกรู และเครื่องป้อนแบบโต๊ะหมุน ปัจจัยที่ศึกษาสำหรับเครื่องป้อนแบบสกรูได้แก่ชนิดของสาร 2 ประเภท, รูปร่างของปากทางออก 4 แบบ, ความดันย้อนกลับ และความเร็วรอบของสกรู ในกรณีของเครื่องป้อนแบบโต๊ะหมุน ได้แก่ ชนิดของสารเหมือนข้างต้น, ช่องห่างในแนวตั้งระหว่างใบกวาดหยาบกับจานหมุน, ระยะสอดของใบกวาดละเอียดจากขอบจานหมุน และความเร็วรอบของจานหมุน นอกจากนี้ยังศึกษาถึงอิทธิพลของกรดสเตียริกที่มีต่อการไหลออกของสารจากเครื่องป้อนทั้งสองชนิดด้วย

จากการศึกษาพบว่าพอลิเอทิลีนความหนาแน่นต่ำที่มีโครงสร้างเชิงเส้น (LLDPE) ชนิดผง เหมาะสมที่จะใช้กรณีของกับเครื่องป้อนแบบสกรูความเร็วรอบ 50 รอบต่อนาที, ความดันย้อนกลับ 2 kg / cm^2 และรูปทางออกสี่เหลี่ยมคางหมู ซึ่งให้อัตราการไหลเป็น 7.16 กรัม / วินาที และค่าการแปรเปลี่ยนของอัตราการไหลเป็น 4.694×10^{-3} ส่วนพอลิเอทิลีนความหนาแน่นต่ำที่มีโครงสร้างเชิงเส้นชนิดเม็ดและผงยิปซัมเหมาะสมที่จะใช้กับความเร็วรอบ 38 รอบต่อนาที โดยที่ไม่ใช้ความดัน และใช้ทางออกรูปวงกลม โดยพบว่ามีอัตราการไหลเป็น 1.10 กรัม / วินาที และค่าการแปรเปลี่ยนของอัตราการไหลเป็น 1.143×10^{-3} หากเพิ่มความเร็วรอบเป็น 50 รอบต่อนาที โดยไม่ใช้ความดัน และใช้ทางออกรูปวงกลม พบว่าอัตราการไหลเป็น 17.5 กรัม / วินาที ค่าการแปรเปลี่ยนของอัตราการไหลเป็น 3.010×10^{-3} ตามลำดับ ในกรณีของเครื่องป้อนแบบโต๊ะหมุน LLDPE ชนิดผงและผงยิบซัมเหมาะสมที่จะใช้กับช่องห่างของใบกวาดหยาบ 1.95 มิลลิเมตร โดยที่ใช้ระยะสอดใบกวาดละเอียด 12.0 มิลลิเมตรและความเร็วรอบของจานหมุน 3 รอบต่อนาที จะได้อัตราการไหลเป็น 1.8 กรัม / วินาทีและค่าการแปรเปลี่ยนของอัตราการไหลเป็น 6.526×10^{-2} ในขณะที่ใช้ความเร็วรอบ 9 รอบต่อนาที จะได้อัตราการไหลเป็น 3.444×10^{-1} กรัม / วินาที และค่าการแปรเปลี่ยนของอัตราการไหลเป็น 1.201×10^{-2} ตามลำดับ

การศึกษาอิทธิพลของกรดสเตรียริกที่มีต่อการไหลออกของสารพบว่า ในกรณีของเครื่องป้อนแบบสกรู เมื่อผสม LLDPE ชนิดเม็ดกับกรดสเตียริก 0.5 เปอร์เซ็นต์โดยน้ำหนัก จะช่วยทำให้ของผสมมีการไหลตัวดีขึ้น แต่จะให้ผลตรงกันข้ามเมื่อเปรียบเทียบกับกรณีที่ไม่ใช้ความดันและใช้กับผงยิบซัม ในกรณีของเครื่องป้อนแบบโต๊ะหมุน เมื่อผสม LLDPE ชนิดผงหรือผงยิบซัม กับกรดสเตียริก 0.5 เปอร์เซ็นต์โดยน้ำหนัก จะกลับทำให้ของผสมมีค่าอัตราการไหลที่มีการแกว่งเพิ่มขึ้น

ภาควิชา……วิศวกรรมเคมี……..　　ลายมือชื่อนิสิต………………………………..…………

ภาควิชา……วิศวกรรมเคมี……..　　ลายมือชื่ออาจารย์ที่ปรึกษา………………….…..………..

ปีการศึกษา……2543……………　　ลายมือชื่ออาจารย์ที่ปรึกษาร่วม…..…………………....

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KEY WORD : SCREW FEEDER / ROTARY TABLE FEEDER / FLOW VARIATION / INSTANTANEOUS FLOW RATE / LLDPE / GYPSUM

DARANEE SRINA: FACTORS AFFECTING THE SMOOTHNESS OF FLOW RATE OF A SCREW FEEDER AND A ROTARY TABLE FEEDER. THESIS ADVISOR: PROF. Dr. WIWUT TANTHAPANICHAKOON, THESIS COADVISOR: ASSOC. PROF. Dr. TAWATCHAI CHARINPANITKUL, 166 PP. ISBN 974-130-094-8.

Screw feeders and rotary table feeders are used extensively in bulk materials handling and powder processing industries. Generally, the instantaneous discharge flow rates from the screw feeder and the rotary table feeder exhibit some degree of rapid fluctuation and possible medium-term flow variation. The present work experimentally investigates the effects of various factors on the smoothness of the discharge flow rate of a typical screw feeder and a rotary table feeder. In the case of the screw feeder, the factors investigated are two types of test material, four configurations of outlet ports, applied back pressure, and the rotational speed of the screw. In the case of the rotary table feeder, the factors are the same types of test material, the vertical gap between the coarse scraping plate and the turntable surface, the insertion depth of the fine scraping plate from the turntable edge in the radial direction and the rotational speed of the turntable. In addition, the effect of stearic acid lubricant is also investigated.

From the experimental results, it has been found that in the case of the screw feeder the suitable conditions for LLDPE resin are: screw speed of 50 rpm with back pressure of 2 kg/cm^2 and trapezoidal outlet (the resulting flow rate is 7.16 g/sec and flow variation is 4.694×10^{-3}). For LLDPE pellets and gypsum powder, the suitable conditions are: screw speed of 38 rpm without back pressure and circular outlet (the flow rate is 1.10 g/sec and its variation is 1.143×10^{-3}) and screw speed of 50 rpm without back pressure and circular outlet (the flow rate is 17.5 g/sec and its variation is 3.010×10^{-3}), respectively. In the case of the rotary table feeder, the suitable conditions for LLDPE resin and gypsum powder are: the insertion depth of the fine scraping plate 12.0 mm, the vertical gap of the coarse scraping plate 1.95 mm, and the optimal rotational speed of the turntable 3 rpm (the flow rate is 1.8 g/sec and its variation is 6.526×10^{-2}), and 9 rpm (the flow rate is 3.444×10^{-1} g/sec and its variation is 1.201×10^{-2}), respectively.

As for the lubricating effect of stearic acid in the case of the screw feeder, LLDPE pellets exhibit a smoother flow and pulsing is reduced. This trend is reverse when back pressure is not applied and when stearic acid is mixed into gypsum powder. Similarly, in the case of the rotary table feeder, both the LLDPE resin and gypsum powder also exhibit less smooth flow and amplitude of the flow fluctuation is increased.

Department……Chemical.Engineering…	Student's signature………………………………
Field of study….Chemical.Engineering…	Advisor's signature………………………………..
Academic year…….2000………………..	Co-advisor's signature…………………………….

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NOMENCLATURE

$\overline{q}_0$	Density size distribution (%μm)
q_r^*	Density distribution whose abscissa is expressed as logarithmic diameter
Δm	Mass measured (-)
M	Total mass of particles
D_p	Particle diameter (μm)
Q_r	Cumulative distribution (%μm)
R	subscript: r = 0 for number basis, r = 1 for length basis, r = 2 for area basis, and r = 3 for mass or volume basis
D_v50	particle size at the 50% point of the cumulative curve (μm)
R.H.	Relative humidity (%)
Q	flow rate (kg/s or g/sec)
Q_{mj}	mean of “m” flow rates (kg/s or g/sec)
$\overline{Q}_m$	grand mean of flow rate (kg/s or g/sec)
σ_Q	standard deviation of instantaneous flow rates (-)
σ_{Qm}	standard deviation of Q_m (-)
n	number of experimental data for time smoothing (data)
m	number of flow rate data for calculating mean flow rate (data)
k	number of time intervals with Q_m, σ_Q (data)

CHAPTER 1

INTRODUCTION

Screw feeders are used extensively in bulk materials handling and powder processing industries such as mixing , granulation and crystallization because their positive displacement mode of operation provides good volumetric feed control over extended periods. The effluent flow from the screw feeder does however exhibit pulsations which occur at every revolution of the screw. The severity of the pulsation is dependent on the properties of the bulk material, the screw geometry and speed of rotation. In many applications such as feeding to weigh hoppers and slurry mixing tanks, a consistent average quantity delivered over a moderate period of time is what is of importance and variation in the instantaneous flow rate does not affect plant operation. But there are certain applications where fluctuations in the instantaneous flow rate should be avoided. Such applications include feeding to coal fired boilers and flash furnace style smelters. Fluctuations in the feed rate results in variations in the resulting flame, thus potentially affecting plant operation.

Similar to screw feeders, the rotary table feeder also exhibits variations in the instantaneous flow rate, which depends on the flowability of the powder and the adjustable gap between a scraping plate and the turntable. This paper describes an extensive series of experiments, which were undertaken to come up with ways of smoothing the discharge flow from a screw feeder and a rotary table feeder. It aims to present some suitable method, which achieves smooth instantaneous flow for a range of bulk material properties.

1.1 Background

After visiting several industrial plants, the author has found screw feeders and rotary table feeders are used extensively. In some plants the feeders are operated without any need of precision in feeding. But a number of plants such as THAI POLYETHYLENE CO., LTD and SIAM GYPSUM CO., LTD. require both precision and consistency in continuously feeding small proportions of additives which are key ingredients of their products. If the flow fluctuations result in a too low content of the additives at certain instants, this will be unacceptable to their customers. To prevent this potential problem, many plants feed a surplus quantity of the additives to ensure acceptable products. It is hoped that this research will be beneficial to these plants.

1.2 Objectives of the Present Study

1.2.1 To study the factors that affects the fluctuation of the instantaneous flow rate of a screw feeder and a rotary table feeder.

1.2.2 To determine a suitable condition for the smooth of flow rate of the screw feeder and the rotary table feeder.

1.3 Scope of Study

1.3.1 Study how to operate the screw feeder and rotary table feeder.

1.3.2 Study the factors that contribute to fluctuations of the instantaneous flow rate of a screw feeder:

1.3.2.1 Type of raw material: linear low-density polyethylene (LLDPE) resin, LLDPE pellets and gypsum powder (GSM)

1.3.2.2 Lubricant: mixture of LLDPE pellets with stearic acid
mixture of gypsum powder with stearic acid

1.3.2.3 Outlet geometry: circular, square, trapezoidal and triangular

1.3.2.4 Rotational speed of screw: 10, 26, 38, 50, 59 rpm

1.3.2.5 Back pressure: 0, step-down, 1, 1.5 and 2 kg/cm^2 for LLDPE resin
0 and 1 for LLDPE pellets
0 and 0.6 for gypsum powder

1.3.3 Study the factors that contribute to fluctuations of the instantaneous flow rate of the rotary table feeder:

1.3.3.1 Type of raw material: linear low-density polyethylene (LLDPE) resin and gypsum powder (GSM)

1.3.3.2 Lubricant: mixture of LLDPE resin with stearic acid
mixture of gypsum powder with stearic acid

1.3.3.3 The vertical gap between the coarse scraping plate and the turntable surface: 0.38, 1.20, 1.95 mm

1.3.3.4 The insertion depth of the fine scraping plate from the turntable edge in the radial direction: 12.0, 15.0, 19.0 mm

1.3.3.5 Rotational speed of the turntable: 3, 6, 9 and 10 rpm

1.4 Expected benefit

1.4.1 Understand how the above factors affect the flow fluctuations from the screw feeder and the rotary table feeder.

1.4.2 Come up with suitable condition, which yields smooth instantaneous flow rate from the screw feeder and the rotary table feeder.

CHAPTER 2

LITERATURE REVIEW

Gabriel I. Tardos and Quingyang Lu [1] studied two vibratory feeders, one with and the other without vibration control, and a screw feeder which were used to feed a wide variety of powders. The main goal of their work was to quantify the "goodness" of feeding, i.e. constant rate of powder flow as a function of time, using different powders with vastly different characteristics. It was found that both the vibratory feeders were generally well suited for precision feeding operations, yielding a more or less linear relationship between the flow rate and vibration amplitude, especially for the case of larger sized materials. The feeder with vibration control proved to be somewhat more reliable, ensuring a much wider range of feed rate with a smaller variation in the flow rate with time. Both feeders exhibited somewhat larger variations in the feed rate when used with more cohesive or fine materials such as zeolite and cement powders. From their work with the screw feeder it was found that the presence of the vibrator on the hopper had a significant role in improving both the overall flow as well as the precision of feeding.

Hiroaki Masuda, et al. [2] experimentally studied the static and dynamic characteristics of a belt feeder, screw feeder, vibra - screw feeder, and Flo - tron . On the basis of this study, further discussion into their characteristics was made, and it revealed that the instantaneous feed rate of the screw feeder oscillated with a fairly large amplitude. For the vibra - screw feeder, however, the amplitude became smaller as the speed of revolution increased. Especially for the belt feeder, the step responses were theoretically analyzed to show that the weighing method had a time delay in the response. This fact must be taken into consideration in the automatic flow control of a particulate system.

Y. Yu and P.C. Arnold [3] proposed a theoretical model for achieving a uniform flow pattern based on the pitch characteristic of the screws such as stepped pitch, tapered shaft, tapered screw. The limitations of some methods for increasing the screw capacity were discussed. Experimental studies on the flow pattern in a wedge hopper with a screw feeder were also carried out. Four screws of different configurations were investigated on a test rig. All the screws had increased screw capacity in the flow direction. In the experiments a dividing grid was fitted above the screw to form a central division over the axis of the screw in order to isolate each side into a number of divisions which matched the different pitches of the screw. The results from the experiments were presented and compared with the theoretical predictions.

S.J. WICHE & A. W. Roberts [4] studied the solution of the feed fluctuation problem. They demonstrated that the solution, which can be implemented on existing screw feeders, as well as incorporated in new feeder designs, could smooth the discharge flow rate for a variety of bulk materials with their properties ranging from free flowing to cohesive. The experimental work conducted demonstrated that some smoothing of the flow rate from the screw feeders could be achieved by modifying the outlet port geometry.

A. Joppich and H. Salman [5] incorporated a pneumatic fuel feeding system for wood powder fired gas turbines at the Vienna University of Technology. One of the most important requirements of the fuel feeding is a highly homogeneous mass flow of wood powder. Therefore, the performance of the mechanical conveying part of the feeding system was studied experimentally at flow rates corresponding to the actual operation range. Besides screw feeding, a vibrator was also used to homogenize the flow rate. While the screw feeder showed large fluctuations, the vibratory conveyer reduced them considerably. The tests also showed that for each flow rate a certain optimum amplitude of the vibrator existed at which the fluctuations reached a minimum. Furthermore, a linear function was observed between the optimum oscillation amplitude and feeding rate.

Mitsumasa Kimata, et al. [6] studied the effect of stearic acid treatment on the mechanical properties and flowability of aluminium hydroxide powder. Straight lines were obtained on semi – logarithmic papers upon plotting the porosity of these straight lines were approximately constant irrespective to the stearic acid concentration. At the equivalent porosity the values of these mechanical properties decreased with an increase in the stearic acid concentration, that is, the flowability of the powder was improved by the higher concentration of stearic acid. The tertiary mechanical properties, namely, angle of repose and compressibility measured in tapping test, were well correlated with the secondary ones obtained in shear and tensile strength

CHAPTER 3

FUNDAMENTAL KNOWLEDGE AND THEORY

3.1 Linear Low Density Polyethylene (LLDPE) Resin and its properties

Polyethylene

The monomer, ethylene, was originally obtained from sugar by fermentation and dehydration;

Molasses → ethyl alcohol → ethylene

Ethylene is now obtained from oil, or preferably light naphtha, by using cracking process.

Low-density polyethylene

Low-density polyethylene, generally considered to have a specific gravity in the range 0.915 - 0.930, is manufactured under condition of high pressure and high temperature, usually 1500 - 3000 bars and 150 - 250^{o}C. Its' production process is usually conducted continuously in stirred reactors or tubes. The reaction conditions make use of free radical to attack on monomer, leading to long-chain branching, C_2 and C_4 chains and other irregularities, including unsaturation. Molecular weight, and its distribution as well as branching are controlled in the reaction operating modifiers, by temperature and pressure, as well as by the type and concentration of initiator.

The structure of LDPE is generally similar to that of HDPE, but the crystallinity is limited by branches, which cannot fit into the crystalline lattice. Crystallinity is frequently 50 - 65% and is also dependent on molecular weight. The higher molecular–weight, lower crystallinity. Branching is specified as the number of CH_3 per 1000 carbon atoms, generally 25 - 30 for high-pressure polymers. Specific gravities of the crystalline and amorphous states are very different, 1.01 and 0.84 respectively, giving a method for assessing crystallinity. X-ray methods are also employed for determining the crystalinity. While Melt Flow Index (MFI), is widely used as a monitor of processability: the higher the MFI the greater the fluidity (the lower the viscosity) of the melt. Grades of LDPE suitable for all processing methods including rotational moulding, are generally available. The processing methods employed for some applications are given below.

The properties of LDPE are those expected of a lower-crystallinity variant of HDPE; the melting point is lower, approximately 115°C, varying with density. LDPE is almost a factor of 10 less rigid than HDPE or polypropylene and the yield stress is much lower. Both modulus and yield stress depend on density (crystallinity) and on MFI. At moderate and high molecular weights the PE polymer is very tough, but low-molecular-weight grades are susceptible to environmental stress cracking. Long-chain branching favorably affects molecular weight vs. processing behavior. Electrical property of PE is excellent, but depends on impurities and additives. Additives are frequently incorporated in LDPE to modify the properties for particular applications; these include flame-retardant, slip and anti-blocking additives for film, antioxidants, UV stabilizers, pigments and occasionally prodegradants.

Applications include film for packaging manufactured by the tube-blowing process, which consumes some 70% of LDPE production; a miscellany of uses takes the remaining 30%, including:

Bottles	Extrusion blow moulding
Mustard jars	Injection blow moulding
Bowls, buckets	Injection moulding
Cold water tanks	Rotational moulding
Paper coating	Extrusion

Low-density polyethylene is still one of the cheapest thermoplastics, possessing excellent impact performance but very flexible. At the end of the 1970s there was seen considerable interest in the so-called linear low-density polyethylene (LLDPE), which are intermediate in properties and structure to the high-pressure and the low-pressure materials. Strictly speaking these materials are copolymers but it is most convenient to consider them alongside the homopolymers.

Properties of LLDPE and VLDPE

There is a wide range of linear low-density polyethylenes (LLDPEs). Primarily competitive with LDPE, LLDPE have found rapid acceptance because of their high toughness (at low, normal and high temperatures), tensile strength, elongation at break and puncture resistance compared to LDPE of similar melt flow index and density. More specifically the improved resistance to environmental stress cracking has been emphasized and then results in a consequence of the higher heat deformation resistance.

Property	Polyethylene "Linear" Low Density
Specific gravity	0.918 - 0.935
Refractive index (n_D^{25})	1.51
Tensile strength (psi)	1900 - 4000
Elongation (%)	100 - 950
Tensile modulus (10^5psi)	0.38 - 0.75
Impact strength (ft-lb/in, of notch)	1.0 - 9.0
Heat-deflection temperature (^{0}F, 264 psi)	_
Dielectric constant (1000 cycles)	2.25 - 2.35
Dielectric loss (1000 cycles)	< 0.0005
Water absorption (one-eighth in. bar, 24 hr%)	_
Burning rate	very slow
Effect of sunlight	Requires protection
Effect of strong acids or bases	Resistant
Effect of organic solvents	Resistant
Clarity	Opaque

3.2 Gypsum Powder and its properties

Gypsum [$CaSO_4$. $2H_2O$] is formed naturally by the evaporation of salt water in shallow inland seas, the calcium sulphate in solution being precipitated, as at the southern end of the Dead Sea; extensive deposits of Permian age, hundreds of meters thick, are worked at Stassfurt in Germany. Gypsum is also formed by the decomposition of Pyrite (FeS_2) in the presence of calcium carbonate, e.g. crystals of selenite found in the London Clay is due to this reaction. Gypsum, $CaSO_4.2H_2O$, is a monoclinic flattened parallel to the side pinacoid, common crystals being made up of prism, clinopinacoid and negative hemipyramid, often twinned; it occurs commonly in laminated, granular, compact or fibrous forms. Perfect cleavage occurs parallel to side pinacoid because the bonds between layers of water molecules and the neighboring atoms are easily broken. Since gypsum is very soft, with a hardness of 2, it can be scratched easily with a fingernail. Most gypsum occurs in diamond-shaped crystals or in granular masses. The crystals have three cleavages one perfect, one good, and one poor. One variety, having a fine fibrous structure, is called satin spar. The fine-grained, massive variety is alabaster, which is carved into ornamental objects due to its pink or white appearance. Gypsum is much used in the building industry in the manufacture of plasters and plasterboard, as retardant of cement. Selenite is the transparent variety of gypsum.

<u>Physical Characteristics of Gypsum</u>

Form	Cleavage	Hardness	Sp.Gr.	Other properties
Tubular crystals, and clearable, granular, fibrous, or earthy masses.	One perfect cleavage, yielding thin, flexible folia; 2 other much less perfect cleavages.	2	2.2 - 2.4	Colorless or white, but may be other colors when impure. Transparent to opaque. Luster vitreous to pearly or silky. Cleavage flakes are flexible but not elastic like those of mica.

3.3 Weight Feeders

3.3.1 Flow patterns

Laboratory studies have verified the practical existence of two major types of flow patterns (see Figure 3.3.1):

1. Mass-flow
2. Funnel-flow

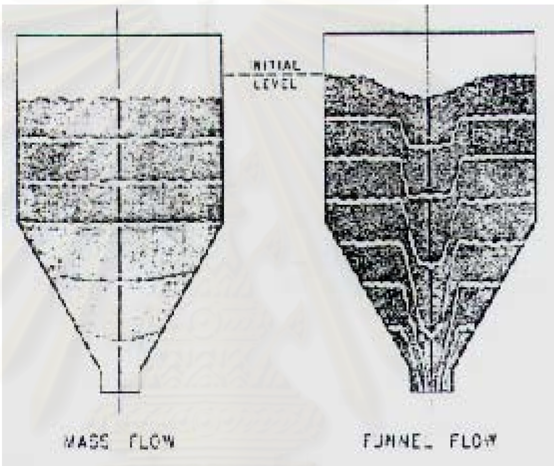


Fig.3.3.1: Types of flow patterns

Mass-flow means that the whole mass of the material in the bin is moving when any of it moves. Some particles in the converging zone (hopper) are moving faster than others in the bin proper, but they are all in motion. There is relative motion between the bulk material and the wall surfaces of the bin.

Funnel-flow describes the type of flow that takes place in the center of the bin. Only the center core in the bin is in motion. Flow will stop if the material at the top of the bin does not run down into the core opening left by the funnel-flow (this situation is also called piping or ratholing).

The two types of flow produce different results from the point of view of the over-all process. Mass-flow provides first-in, first-out flow. It also remixes particle size segregation that may occur during the loading, when larger lumps roll down a mound shape at the top of the bin. The mass-flow does not occur in flow in pipe condition. With the mass-flow conditions, particle flow is uniform and steady. There are no dead regions within the bin. However, there are some disadvantages, such as:

1. Steeper hopper sides are required, increasing the height.
2. The abrasive nature of some materials sliding on the bin wall increases wear.

Although the funnel-flow does not cause much wear on the bin walls, it does not give first-in, first-out flow. It tends to segregate the solids. Large areas of dead storage may considerably reduce the live capacity of the bin. Some of the material may be in the bin for years. This situation may be unacceptable if the material is subject to deterioration during storage.

Most bins now in use and on the drafting boards are inadvertently designed for funnel-flow, which occurs in all hoppers with sharp valleys and low valley angles, as well as in all insufficiently steep conical hoppers. A conical hopper whose slope is less than 60 deg. from the horizontal has invariably a funnel flow pattern. In the funnel-flow, the solids flow only in a vertical channel extending from the bin outlet, upward through the material (Figure 3.3.1). The solids outside of the channel are stationary and flow into the channel by sloughing off the top surface.

Funnel-flow hoppers have erratic discharge rates because the solids do not flow uniformly in the vertical channel above the discharge opening. The solids flowing down such a channel tend to form voids topped with arches. As an arch breaks, the solids fall into the void but under the impact, the solids tend to pack and arch again. Surging flow is the rule in funnel-flow hoppers. In the storage of powders, surging often results in flooding which occurs when the void extends all the way to the feeder and the falling mass of solid aerates and acquires fluidity as it impacts the feeder.

3.3.2 Flow problems

The flow problems encountered in bins and hoppers can be classified in the following categories:

1. No-flow (arching)
2. Limited flow only (piping)
3. Particle size segregation
4. Insufficient flow rate and capacity

No-flow or arching conditions occurs when the strength or stickiness of a granular bulk solid is such that the material will bridge over the discharge opening (See Figure 3.3.2.) The only natural force available to break up the arch is the gravitational force, or weight of the material. If the weight of material is larger than the strength of the supporting arch span, then the arch will fail. Using a measured strength value of a specific granular bulk solid, engineers can calculate the minimum span (discharge opening) over which the material will arch. As long as the actual discharge opening is larger than this minimum value, no arching will occur.

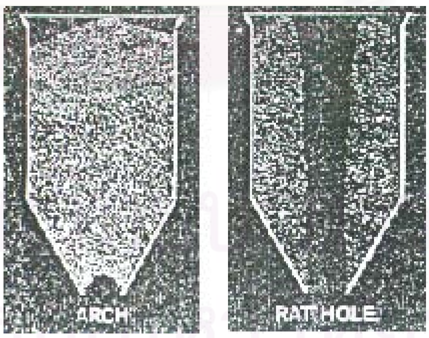


Fig.3.3.2: Schematic view of arching and ratholing conditions

Limited flow or piping conditions occurs when a funnel-type flow pattern develops and only the material in the center core of the bin is withdrawn. The material surrounding the funnel has sufficient strength to support a deep well above the discharge opening. Figure 3.3.3 shows a typical bird-eye's picture of piping or ratholing.

Piping diameters can also be calculated on the basis of measured strength values of the granular bulk solids.

Fig.3.3.3: Typical rathole in a bin

Particle size segregation problems occur with a funnel-type flow pattern. When bulk granular materials are charged into a bin at a central point, the larger particles tend to be concentrated near the bin wall and the finer particles near the charging point as shown in Figure 3.3.4. When the material is discharged, the center core of fines will come out first (Figure 3.3.4a) leaving the coarser material to come out later (Figure 3.3.4b). When the rate of withdrawal is the same as the rate of filling, the level of material in the bin remains steady and a non-segregating funnel flow develops. In effect the bin acts as a spout as shown in Figure 3.3.4c.

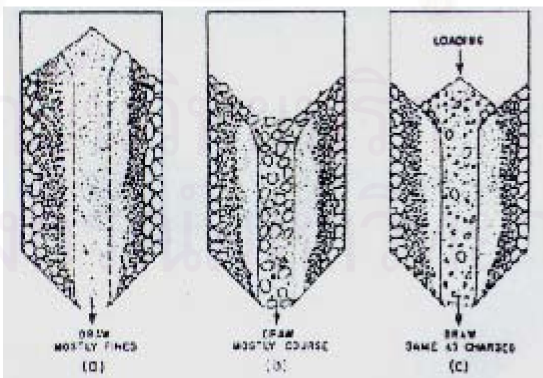


Fig.3.3.4: Schematic view of material segregation in a bin

3.3.3 Factors affecting gravity flow

Many of the problems encountered with bulk material and bins have been traced to factors relevant to the flow properties of the material. If we expect and design for one set of conditions and then experience another, we may have trouble because the equipment cannot handle the out-of-tolerance situation. To anticipate the problems in the design stage, it is necessary to know all the variables of material characteristics to be handled, study the behavior of the material in these varying states, and be prepared to handle such variation.

The shape, size and weight of the particles make a difference. There are wide assortments of bulk materials. More are being developed constantly. Particles may be smooth, spherical, oblong, jagged, flaky, fibrous, crystalline, regular or inconsistent. Particles may be of various sizes from fine powders to granules, lumps or large chunks. Density may generally range from 65 to 4806 kilograms per cubic meter. The material stream may contain mixtures of wide ranging sizes, shapes and weights or may be such that these properties vary within narrow limits.

Flow conditions are also affected by hardness of the surfaces of the material. Other physical attributes, such as cohesion of like particles or adhesion qualities with respect to the bin walls, affect the particle flow behavior. Material properties complicate the problems by not being constant at all ambient conditions. Temperature and moisture variations are the biggest problems. The tendency of fine powders to aerate is another property that affects material flow. If a hygroscopic material is processed and loaded in a bin at one temperature, it may have considerably different flow properties after sitting for two days under changing conditions of moisture and temperature.

Flowability tests are useful not only in helping to specify bins but also in indicating the conditions in which the granular solids are suitable for gravity flow. Shear test equipment to measure these flow properties is commercially available (See Figure 3.3.5).

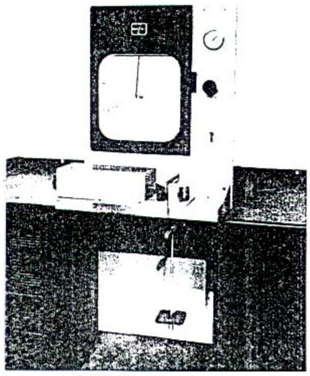


Fig.3.3.5: Shear testing apparatus required measuring flowability properties

Throughput requirements of the manufacturing process is a major item governing design. Those who measure their activities in tons per hour have size problems not encountered in operations that handle kilograms per day. Capacity can be expressed in terms of weight or volume of material. Process characteristics, expressed in maximums and minimums, must give the answers to the following questions:

1. How much material is to be in storage at a given point? This will be reflected in the over-all physical dimensions of the bin.
2. At what rates will the bin be loaded? This will size the input system.
3. At what rates must the bin be unloaded? This will size the output system.

The other design considerations of bin installations are all considered as a consequence of the capacity determinations. Flow quantities of the process must be met. Formerly, some engineers thought of the input system, storage system, and output system as three separate unrelated problems. Now it is becoming more apparent to all that these problems are interrelated in such a manner that they should be considered as one system.

3.3.4 Flow properties of a bulk solid

Before a theory and an eventual method of calculation of bulk solids flow can be established, it is essential that the physical nature of the flow of granular solids be understood. When a solid flows in a bin or hopper, the following conditions occur within the deforming mass:

1. There is continuous shear deformation.
2. The pressure exerted on the solid changes as the solid moves from one portion of the flow channel to another.
3. The strength and density of the solid change as the pressure changes.
4. When flow stops, the pressures exerted during flow remain essentially the same.

3.3.5 Various feeders

3.3.5.1 Screw feeders

A screw feeder consists of a screw, a U-shaped trough or cylindrical casing, and a motor drive. As the screw rotates, particles are forced to move from the hopper to the outlet of the feeder. Figure 3.3.6 shows a screw feeder with a U-shaped trough. A modified screw (e.g., tapered screw) is utilized so as to obtain the uniform flow pattern in the feed hopper. Feeding against a pressure difference is also possible by modifying the screw configuration. For wet powder feeding, a screw feeder consisting of twin screws is suitable. A coil called an auger is also utilized instead of a normal screw.

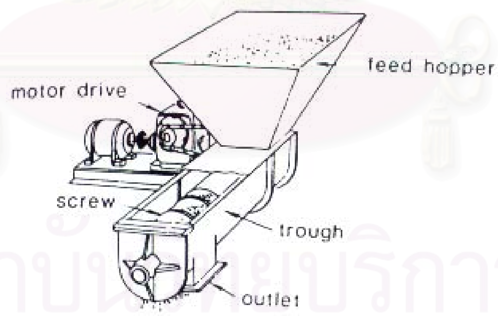


Fig.3.3.6: Screw feeder

The powder feed rate is proportional to the rotational speed of the screw as long as the powder compressibility is negligible. The instantaneous powder feed rate fluctuates periodically as the screw rotates. The fluctuation can be suppressed by using a smaller screw and higher rotational speed, or by using a coil screw (an auger feeder).

The dynamic characteristic flow is generally modeled as a second- or third-order time delay.

In many instances where floodable materials are involved, screw feeders are used as pre-feeders for weight-belts. However, a screw feeder is not a reliable device to hold back materials that have a high degree of floodability and require a relatively long time for deaeration. In addition, when screw feeders are used in conjunction with mass-flow hoppers, care should be exercised to feed across the full hopper opening. The feeder must have increased feed capacity in the direction of flow. As illustrated in Figure 3.3.7a, a constant pitch screw feeder will draw only from the back end of the hopper outlet. In order to improve the feed capacity in the direction of withdrawal, variable pitch screw feeders may be used as shown in Figure 3.3.7b. A similar effect can be achieved with a stepped pitch screw or tapered screw in a tapered trough. A constant pitch screw with a decreasing shaft diameter in the feed section is another possibility.

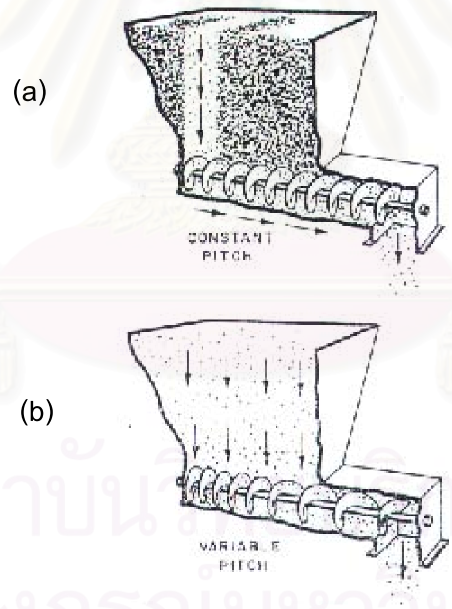


Fig.3.3.7: Screw feeders with constant pitch and variable pitch

The screw feeder length-to-diameter ratio is generally limited to 6 for uniform feeding from a slot opening. For this reason, screws are not suitable for extremely long slot openings. Pitch variation is generally limited to a range between 0.5 times the screw diameter as a minimum and 1.5 times the diameter as a maximum. Several factors should be established before selecting a screw feeder, such as:

a) Kind and character of material being handled
b) Bulk density of material as conveyed
c) Maximum flow rate
d) Size or screen size analysis
e) Overall length of feeder
f) Hopper opening dimensions

Single-screw feeders are most commonly used. However, if inlet opening is very wide, multiple screw feeders are more practical.

Properly designed screw feeders are very effective flow regulators when used under slot openings of mass flow silos. Wide slot openings can be accommodated by using multiple screws side by side at the opening. Screw feeders do not provide a positive seal. In funnel flow, silo's powder flow will be unpredictable, and if the powder should then become aerated during discharge, it has the potential for flushing uncontrolled through the screw flights.

A constant pitch screw should not be used with a slot opening (Figure 3.3.8). In order to withdraw material from the entire length of the slot, the screw must have injection at appropriate points into the pressure vessel and the transport line, and air bypass devices mounted internally or externally to the transport pipe. These arrangements not only provide some measure of control of the solids velocity and flow patterns within the transport pipe but some also make it possible to start up with the pipe partially blocked with solids.

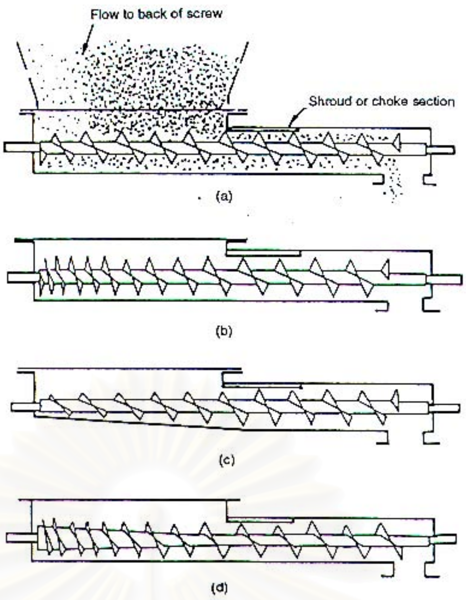


Fig. 3.3.8: Screw feeder (a) Uniform pitch, feeds from rear,
(b) Increasing pitch, (c) Increasing flight diameter,
(d) Pitch with decreasing shaft diameter.

3.3.5.2 Table feeders

A table feeder basically consists of a turntable, a scraper, and a motor drive, as shown schematically in Figure 3.3.9. The powder feed rate can be adjusted by changing either the scraper position or the rotational speed of the turntable. The skirt clearance S in Figure 3.3.9 is also changed when an extremely wide operational range is required. The powder feed rate is proportional to the rotational speed in the practical range of operation, but it is a nonlinear function of the scraper position. The dynamic characteristics are modeled as either a proportional element or a derivative element. Further, the instantaneous feed rate can be fairly smooth compared with that of the rotary or screw feeder. The flow pattern in the feed hopper is affected by the hopper inclination and the scraper. Flow distortion can be controlled by using more than two scrapers.

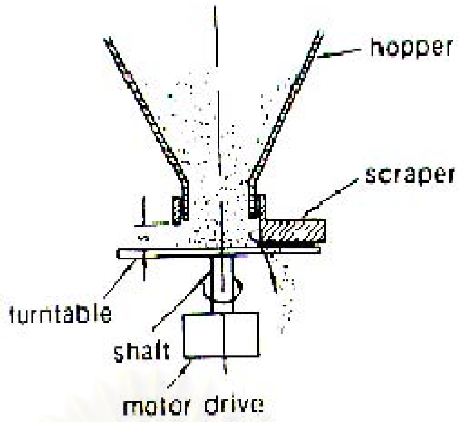


Fig.3.3.9: Table feeder

For fine powders, a special scraper is used to extend the powder uniformly on the turntable before feeding by normal operation. Also, in some types of table feeders, a rotating shell is utilized instead of the turntable. A stationary scraper strips off particles from a gap between the rotating shell and a plate. Table feeders of the conventional type are Auto-feeder, Omega feeder, Bailey feeder, Bin-discharges, and Com-Bin feeder. In these feeders, powder is confined in a vessel.

Feeders should be selected carefully, because some feeders might be unsuited to the process, resulting in a failure of feeding itself. Further, dynamic characteristics of the feeders could also affect the accuracy of feeding. If the feeder cannot respond to a fast change in the manipulating signal, a fluctuation of flow caused by a disturbance cannot be suppressed and could cause a dynamic error in the feeding process. The static and dynamic characteristics of feeders will depend on powder properties such as particle size, shape, internal friction coefficient, and powder flowabilities. They will also depend on the operating conditions, including temperature, pressure, and moisture content of powder in the process. Unstable flow is caused by poor feeder selection or inadequate hopper design. An unstable flow with bridging or flushing will also be caused by a variation in powder properties or operating conditions. The following conditions are necessary for feeders:

1. They must be suitable for the properties of the powder.
2. The operating range must be sufficiently broad.

3. The static characteristics must be stable and the repeatability of feed rate high.
4. They must have excellent dynamic characteristics.

As mentioned earlier, powder properties affect powder flow. It is necessary to know such properties as particle size, particle shape, cohesiveness, frictional property, and abrasive property. The feeder should be selected based on a consideration of such properties. If the feeder is inadequate, it becomes impossible to control the powder feed rate. Table 3.3.1 shows an empirical rule for the selection of various feeders. As shown in Table 3.3.1, no feeder is suitable for use with adhesive powders, and careful attention should be paid to feeder selection. [10]

Table 3.3.1: Empirical Rule for the Selection of Feeders[a]

	Particle size[b]					Flowability[c]				Abrasiveness, etc.[d]					
Feeder	a	b	c	d	e	f	g	h	I	j	k	l	m	n	o
Gate valve	D	O	O	O	D	X	O	D	D	D	X	D	O	D	D
Rotary	D	O	O	X	X	O	O	X	X	D	X	X	D	X	X
Table	D	O	O	O	D	D	O	D	D	O	D	X	O	X	D
Belt	D	O	O	O	O	D	O	O	D	O	O	O	O	D	O
Screw	O	O	O	D	X	O	O	D	D	D	X	X	D	D	D
Vibrating	O	O	O	O	X	D	O	O	D	O	X	O	O	X	O

Note: [a]O = Applicable, D = Difficult, X = no use

[b]a = less than 100 μm, b = 100 μm - 1 mm, c = 1 mm - 1 cm, d = 1 cm - 10 cm, e = larger than 10 cm

[c]f = excellent, g = moderate, h = low, i = cohesive

[d]j = abrasive, k = fragile, l = low bulk density, m = high temperature, n = slurry, o = flaky fibrous

3.4 Evaluating Flow Properties of Solids (Ralph L. Carr, 1965)

3.4.1 Evaluating flowability

The evaluation of the flow characteristics of a powder will involve the use of four properties:

1. Angle of repose
2. Compressibility
3. Angle of spatula
4. Cohesion or coefficient of uniformity

<u>Angle of repose</u>

The angle of repose defined by Terzaghi (1948) is the angle between the horizontal and the slope of a heap of particle dropped from some elevation. For our purpose, it can be defined as the constant angle to the horizontal assumed by a cone like pile of particles. This pile is carefully built up by dropping particles from a point above the horizontal plane until a constant angle is measured. Figure 3.4.1 shows an apparatus, which is used to measure the angle of repose.

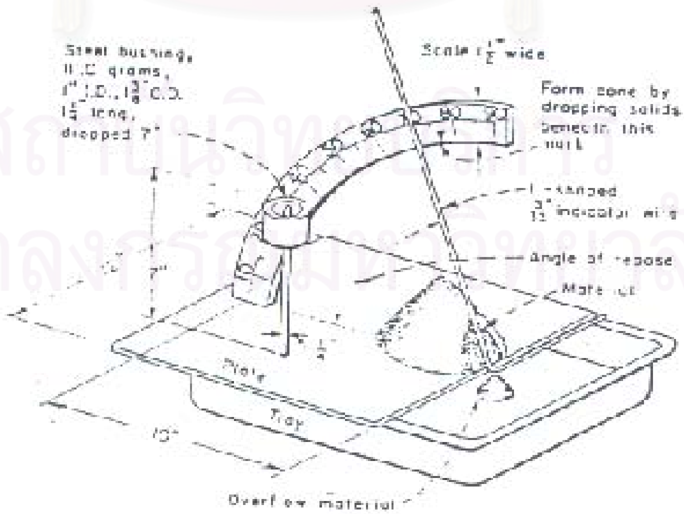


Fig.3.4.1: The angle of repose measurement

The lower the angle of repose of a powder, the more flowable it will be, and the more floodable it will be because it results from the frictional forces between particles.

Compressibility

The percentage compressibility determined by the measurement of the aerated and packed bulk density are defined as follows:

$$\frac{100\,(P - A)}{P} = \%Compressibility$$

where P = Packed bulk density (g / cm^3)

A = Aerated bulk density (g / cm^3)

Angle of spatula

A spatula, which is a 5 x (7/8) in. flat blade is inserted parallel to the bottom of a pile of particles in a container and then lifted straight up. A free-flowing material will form a pole on the blade. A non-free-flowing material will form a number of irregular angles of rupture on the blade. In either case, the angles to the horizontal are measured and an average value is to be taken. Then the spatula is tapped gently, producing a lower angle or angles of spatula, which are measured and again averaged. The average of the two measurements is used in the flowability computation and is termed as the angle of spatula.

Except for very free-flowing materials, the angle of spatula is always higher than the angle of repose for a given powder. The angle of spatula gives a broader spectrum of flowability information than the angle of repose. The higher the angle of spatula of a powder, the less its flowability will be. For a powder to be considered free flowing, its angle of spatula should be less than 40 degrees. Powders with a high non-uniformity in both size and shape will need a broader width of blade on which to form an angle of spatula.

Cohesion and uniformity

Cohesion and the uniformity coefficient are used in flow evaluation. Cohesion is used with powders (very fine particles) or with material on which an effective cohesive force can be measured. The uniformity coefficient is used with granular and powdered materials.

Cohesion The procedure for finding the apparent surface cohesion involves determining the retention of material on a nest of 60, 100, and 200-mesh screens, plus a bottom pan. This test is a direct determination of the amount of energy necessary to pull apart aggregates of cohesive particles in a specified time.

Uniformity coefficient This is the numerical value arrived at by dividing the width of sieve opening that will pass 60% of a sample by the width of sieve opening that will just pass 10% of the sample. It is determined from the screening analysis of the material.

3.4.2 Different kinds of bulk density

The bulk density of a material is the weight per unit volume of a large number of particles of the material. The unit is customarily kilogram per cubic meter. Specific gravity, on the other hand, is a relative number relating the mass and the volume of distilled water at a certain temperature. Except for its effect on compressibility, bulk density is not useful in evaluating the flowability of a substance. There is no direct linear relationship between the potential flowability of a powder and its bulk density. Other properties of the substance counteract whatever potential effect its bulk density could have on flowability.

The bulk density of a material is not a single definite number like specific gravity; rather it is any one of several values. Four different values are computed for the bulk density of a material and one more is indicated.

The methods for obtaining the aerated (loose) and packed bulk density are described below. Other terms include average bulk density, which is simply the average of the aerated and packed bulk densities, and the working bulk density, which is

$$W = (P - A)\,C + A$$

where W , P and A are respectively working, packed, and aerated bulk densities, and C is compressibility expressed as a fraction. Working bulk density is the figure most often used in computations.

Fluid bulk density

This is less than the aerated bulk density of a material. The faster a fluid-like material is moved through the air, the more fluid-like it can become and the greater the volume it will occupy. Thus its weight per unit volume will be less in every case than the aerated bulk density of a material, although the exact difference is hard to pin down because of the variable factors involved.

Measuring bulk density

Generally, one should select a small metal cylinder or square container (or even a wide-mouthed jar). This will be used, with an appropriate factor, to relate directly the net weight of the material in this small container to its actual bulk density in kilogram per cubic meter. Figure 3.4.2 shows the design of the container used. The less uniform a material is in its range of particle size, the larger a container should be used.

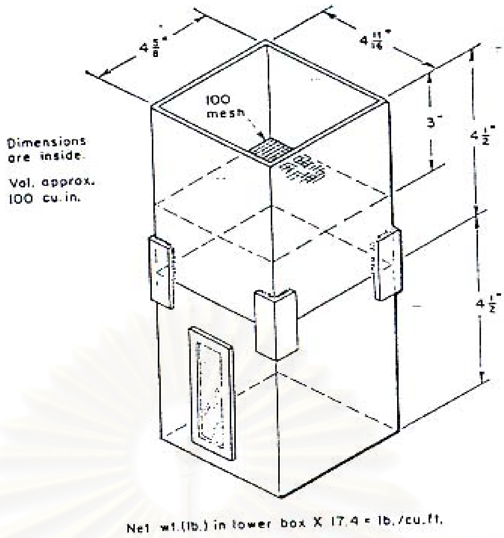


Fig.3.4.2: Bulk-density box for testing both aerated and packed bulk densities

<u>Aerated (loose) bulk density</u>

Carefully screen the material passing the coarse screen (about 10 mesh) into the bulk-density container below. Fill material to overflowing. Level off the overflow and weigh the container. The net weight times an aerated or loose bulk density in kilogram per cubic meter.

<u>Packed bulk density (tap bulk density)</u>

Fill the material into the bottom container and put more material into the top container. Put the two containers on the tapping holder. The standard number of tapping counts is 180 counts. The material in the lower container packs down, leaving a void that is filled with material tapped. After standard tapping, remove the top container, level off the excess in the bulk-density container and weight it. The vibrated net weight gives the packed bulk density.

3.4.3 Calculating flowability

Table 3.4.1 shows how these various criteria can be used in calculating a flowability point score for any type of dry material. Through experience gained in testing over 2,800 dry-material samples, the manufacturers are able to divide the point scores of materials into seven categories, ranging from excellent to very, very poor from a flowability standpoint. These categories are explained in the first, second and third column of Table 3.4.1. In each of the “property” columns, the values of the property are listed, along with an equivalent point score for each. Thus the ideal value of each property has a point score of 25. As the value of the property increases, the point score decreases, finally reaching zero for the poorest material.

It will be noted that the best material in the bottom category of Table 3.4.1 would receive a point score of only 18. Any material with a point score under 20 requires special equipment and perhaps special engineering in order to feed it.
Standard feeders will not simply be applicable. After measuring the flow properties of a material, one goes to Table 3.4.1 and allots points according to each flow property value of the material.

Table 3.4.1 Evaluation of Flowability Index

Flowability and Performance	Angle of Repose		Compressibility		Angle of Spatula		Uniformity Coeff.		Cohesion	
	Deg	Points	%	Points	Deg	Points	Units	Points	%	Points
Excellent; 90-100 pts.	25	25	5	25	25	25	1	25		
Aid not needed	26 - 29	24	6 - 9	23	26 - 30	24	2 - 4	23		
Will not arch	30	22.5	10	22.5	31	22.5	5	22.5		
Good, 80-89 pts.	31	22	11	22	32	22	6	22		
Aid not needed	32 - 34	21	12 - 14	21	33 - 37	21	7	21		
Will not arch	35	20	15	20	38	20	8	20		
Fair, 70-79 pts.	36	19.5	16	19.5	39	19.5	9	19		
Aid not needed (but vibrate	37 - 39	18	17 - 19	18	40 - 44	18	10 - 11	18		
if necessary)	40	17.5	20	17.5	45	17.5	12	17.5		
Possible, 60-69 pts.	41	17	21	17	46	17	13	17		
Borderline material	42 - 44	16	22 - 24	16	47 - 59	16	15 - 16	16		
May hang up	45	15	25	15	60	15	17	15	< 6	15
Poor, 40-59 pts.	46	14.5	26	14.5	61	14.5	18	14.5	6 - 9	14.5
Must agitate	47 - 54	12	27 - 30	12	62 - 74	12	19 - 21	12	10 - 29	12
Vibrate	55	10	31	10	75	10	22	10	30	10
Very poor, 20-39 pts.	56	9.5	32	9.5	76	9.5	23	9.5	31	9.5
Agitate more	57 - 64	7	33 - 36	7	77 - 89	7	24 - 26	7	32 - 54	7
positively	65	5	37	5	90	5	27	5	55	5
Very, very poor, 0-19 pts.	66	4.5	38	4.5	91	4.5	28	4.5	56	4.5
Special agit., hopper	67- 89	2	39 - 45	2	92 - 99	2	29 - 35	2	51 - 79	2
or eng' g.	90	0	> 45	0	> 99	0	> 36	0	> 79	0

3.4.4 Evaluating floodability

Floodabiblity of a material is its tendency to liquid-like flow due to natural fluidization of a mass of particles by air. The evaluation of the potential floodability of a material involves the use of the following four properties of dry materials:

1. Flowability
2. Angle of fall
3. Angle of difference
4. Dispersibility

Flowability

This is the same of property evaluated above. The more flowable a material is, the greater its floodability can be. A material with a flowability point score of, say, 58 would tend to form a relatively weaker arch in a hopper and thus would tend to flood more readily from this weaker arch than a material of lower point score.

Angle of fall

After carefully building up the angle of repose of a substance on a metal plate equipped with a protractor for angle-of-repose measurements, a small steel bushing of 111.0 grams weight is dropped on to the plate three times from a height of 7 in. (See Figure 3.4.1). A new angle of repose results from the jarring. This angle is called the “angle of fall”. The angle of fall is a direct measure of the relative flowability and floodability of a material.

Angle of difference

This is the value arrived at by computing the difference between the angle of repose and the angle of fall. Some floodable materials may not have a very low angle of fall but may still have a high angle of difference. This measurement gives still another picture of the potential floodability of a material apart from its angles of repose and fall. The greater the angle of difference of a floodable material, the greater its potential for flooding or fluidizing.

Dispersibility

Dispersibility, dustiness and floodability are all interrelated. The more dispersible a powder is in the air, the more dusty and the more floodable it can be.

Dispersibility is a direct measure of the ability of a material to flood or be fluidized. To determine dispersibility, an apparatus consisting of a 4-in.-I.D. plastic cylinder with length of 13 in. is supported vertically with a ring-stand above a 4-in.-dia. watch glass and 10 grams of material is prepared. Then the material is dropped through the cylinder from a height of 24 inch above the watch glass. Material remaining on the watch glass is weighted. Some material has been dispersed during the fall. After that calculate the % dispersibility from this equation

$$\frac{\left[10-\left(weight\ \text{ in grams remaining}\right)\right]}{10}\,x\,100$$

3.4.5 Calculating floodability

The values of floodable properties are listed in the second column of Table 3.4.2. A hypothetical material could total 100 points. In Table 3.4.2, point scores are distributed, and floodability scores are divided into categories in a manner similar to Table 3.4.1.

This floodability evaluation procedure gives an all round picture of the potential floodability of material. A very floodable material is seen to have passable to fair but unstable flowability, a low angle of fall, a large angle of difference, and high dispersibility.

Table 3.4.2 Evaluation of Floodability Index

Floodability and Performance	Flowability		Angle of Fall		Angle of Difference		Dispersibility	
	Pts. (table 2.1)	Points	Deg	Points	Deg	Points	%	Points
Very floodable, 80-100 pts.	60 +	25	10	25	30 +	25	50 +	25
Positively rotary seal	59 - 56	24	11 - 19	24	29 - 28	24	49 - 44	24
will be necessary	55	22.5	20	22.5	27	22.5	43	22.5
	54	22	21	22	26	22	42	22
	53 - 50	21	22 - 24	21	25	21	41 - 36	21
	49	20	25	20	24	20	35	20
Floodable, 60-79 pts.	48	19.5	26	19.5	23	19.5	34	19.5
Rotary seal will	47 - 45	18	27 - 29	18	22 - 20	18	33 - 29	18
be necessary	44	17.5	30	17.5	19	17.5	28	17.5
	43	17	31	17	18	17	27	17
	44 - 40	16	32 - 39	16	17 - 16	16	29 - 21	16
	39	15	40	15	15	15	20	15
Inclined to flood,	38	14.5	41	14.5	14	14.5	19	14.5
40-59 pts. Rotary seal	37 - 34	12	42 - 49	12	13 - 11	12	18 - 11	12
is desirable	33	10	50	10	10	10	10	10
Could flood, 25-39 pts.	32	9.5	51	9.5	9	9.5	9	9.5
Rotary seal probably needed	31 - 29	8	52 - 56	8	8	8	8	8
depending on dropping veloc.	28	6.25	57	6.25	7	6.25	7	6.25
Won't flood, 0-24 pts.	27	6	58	6	6	6	6	6
Rotary seal will	26 - 23	3	59 - 64	3	5 - 1	3	5 - 1	3
not be needed	< 23	0	> 64	0	0	0	0	0

3.5 Electrostatic Discharges

Under certain atmospheric conditions, objects or people can charge themselves with electrical energy. This effect can be associated with the field of electrostatics. This is very often the case in data processing systems. In most cases, the system's dissipation is given up to the surroundings as heat, which results in a large drop in the relative humidity, generally under 50%. The danger that the operating personnel in such surroundings can electrostatic charge themselves up is very great, whether due to a synthetic carpet or clothes. If equipment is touched, e.g. control desk, then the person is discharged, which is felt like a slight electrical shock. The electrical action, however, is often intensive enough to cause interference, which shows up as a Program error or loss of data, or in the worst case destruction of sensitive components.

3.5.1 How the electrostatic effect and its mechanism

In most cases a person at his working place is an electrostatic charge carrier. The charging is influenced by the following factors:

1. The relative humidity of the air. With high humidity the charge is more quickly dispersed (Figure 3.5.1)

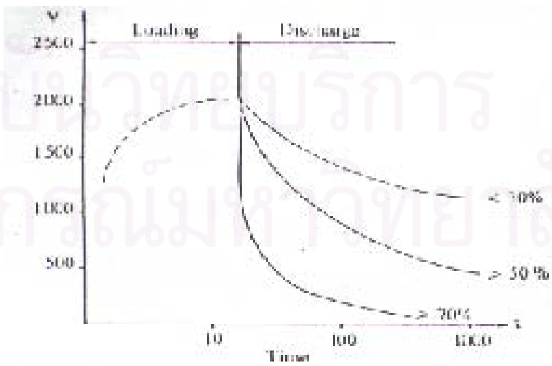


Fig.3.5.1: Effect of the humidity (air) on the discharge

2. To a lesser extent the temperature. (Figure 3.5.2)

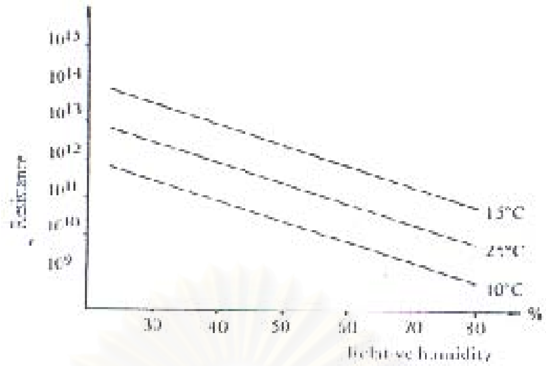


Fig.3.5.2: Resistance behavior of cotton carpet

3. The insulation resistance of the material associated with the charging such as shoe soles and clothes. Typical values are 10^{10} to 10^{14} Ω / cm

4. The dielectric constant of the insulating material associated with the charging.

5. The capacity of person to the reference earth.

6. Rhythmic movement of the person e.g. walking velocity, pace (dragging) etc.

7. Behavior with time e.g. pauses or intermittent movement.

8. Perspiration behavior of the participating person (skin resistance).

9. Type of footwear, which comes into contact with the floor.

10. Pressure between the two materials.

Typical case of charging or discharging takes paces as follows (Fig.3.5.3)

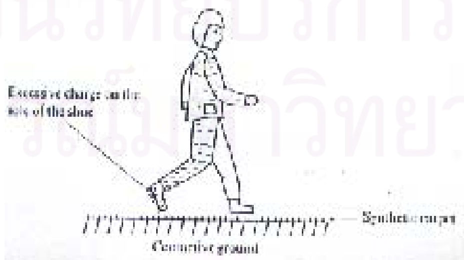


Fig.3.5.3: Charging process of person

By walking on an insulated floor with good insulating footwear of a different insulating material, an excess charge builds up on the under side of the shoe sole since two different insulating materials rub each other when walking on the carpet. The human body can be regarded as conductive.

3.5.2 Effect of grounding

The results of the effect of ground wires may be summarized as follows:

1. Electrostatic unbalance may be reduced by the installation of ground wires and by decreasing the spacing between wires.
2. Electrostatic unbalance may be reduced by changing the arrangement of the phase and ground wires.

CHAPTER 4

EXPERIMENTAL EQUIPMENT AND PROCEDURE

4.1 Test Material

4.1.1 Linear low-density polyethylene (LLDPE) resin and pellets

THAI POLYETHYLENE CO., LTD donated LLDPE resin and LLDPE pellets for this investigation. The particle size distribution of the LLDPE resin was evaluated using a Vibro Standard Screen Shaker (Koei Sangyo Co., Ltd. model VSS-50). The results are shown in Figure 4.1.1 and 4.1.2. The particle size at the 50% point of the cumulative curve is shown in Table 4.1.1. Microphotographs of sample particles were taken with a Scanning Electron Microscope (SEM) at Scientific and Technological Research Equipment Centre to analyze the shape of the particles. The results are shown in Figure 4.1.3

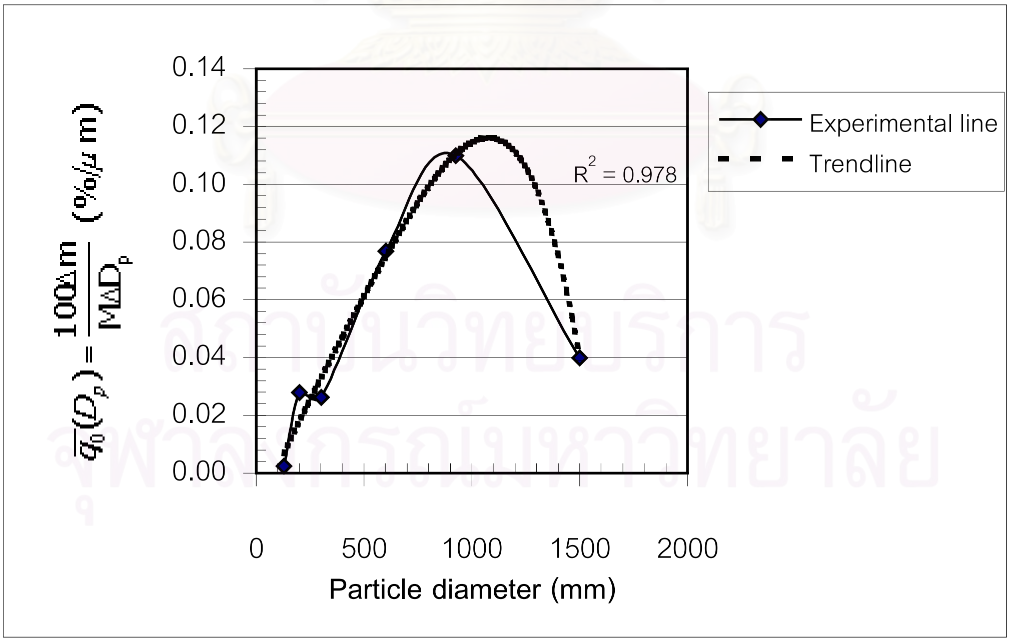


Fig.4.1.1: Size distribution of LLDPE resin

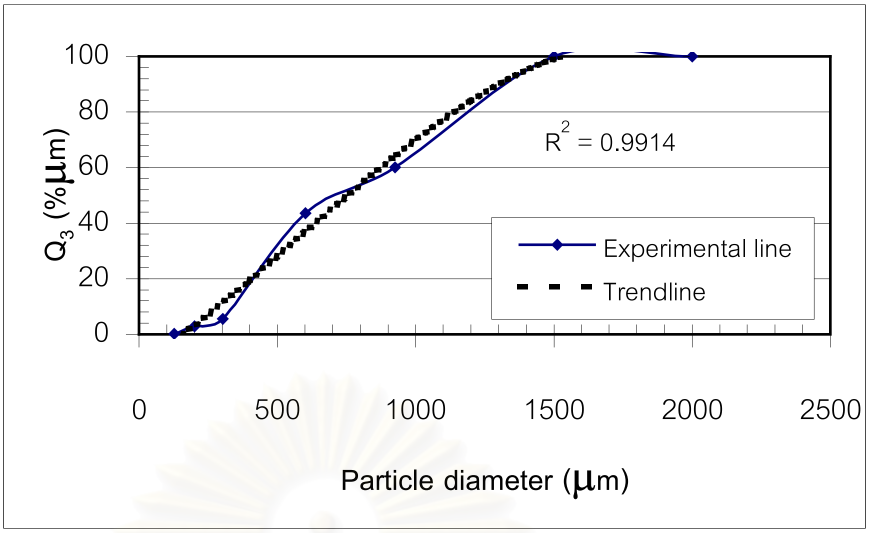


Fig.4.1.2: Cumulative distribution of LLDPE resin

Table 4.1.1: Flow characteristics and particle size of test materials

	LLDPE resin	LLDPE pellets	Gypsum powder	Stearic acid	LLDPE resin: stearic acid 0.5%wt	Gypsum: stearic acid 0.5%wt
Angle of Repose(deg.)	32	-	43.4	51.93	35.1	49.8
Angle of Spatula(deg.)	38.4	-	53.2	71.2	42	65.6
Aerated Density(g/cm^3)	0.383	-	0.826	0.296	0.387	0.833
Pack Density(g/cm^3)	0.409	-	1.39	0.523	0.426	1.381
Compressibility(%)	6.3	-	40.5	43.47	9.1	39.6
Cohesion(%)	94.1	-	57.4	86.27	98	77.1
Flowability Index	64	-	36	26	61	28
Angle of Fall(deg.)	23.8	-	27.8	32.7	25.6	39.7
Angle of Diff.(deg.)	8.2	-	15.6	19.23	9.5	10.1
Dispersibility(%)	6.8	-	27.5	8.77	8.8	4
Floodability Index	60.25	-	63.5	45.5	64	52.25
D_v50(μm)	726.13	2289.9	76.744	89.9	_	_

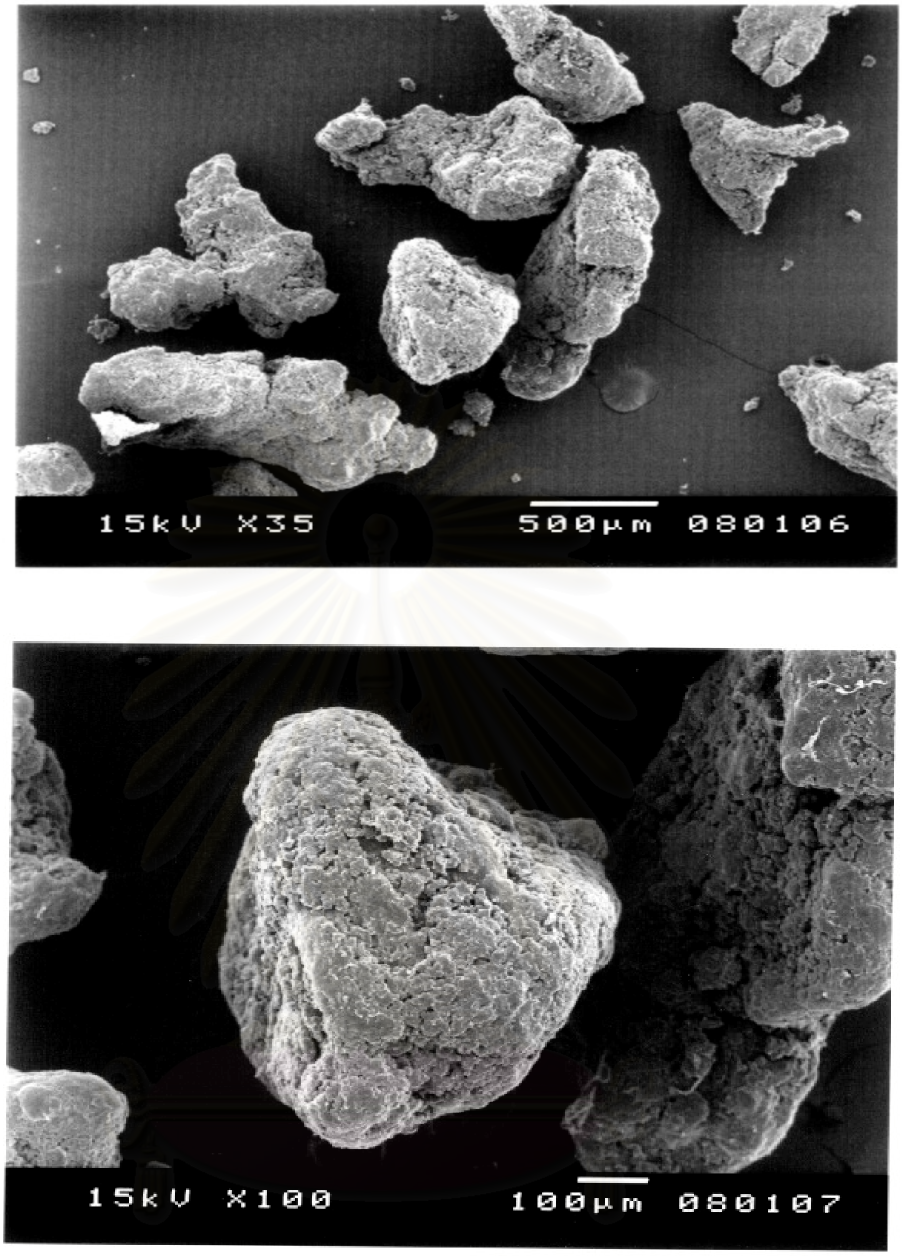


Fig.4.1.3: SEM photograph of linear low-density polyethylene (LLDPE) resin

The particle size distribution of the LLDPE pellets were evaluated using a Vibro Standard Screen Shaker (Koei Sangyo Co., Ltd. model VSS-50). The results are shown in Figure 4.1.4 and 4.1.5. The particle size at the 50% point of the cumulative curve is shown in Table 4.1.1. Microphotographs of sample particles were taken with a Scanning Electron Microscope (SEM) at Scientific and Technological Research Equipment Centre to analyze the shape of the particles. The results are shown in Figure 4.1.6.

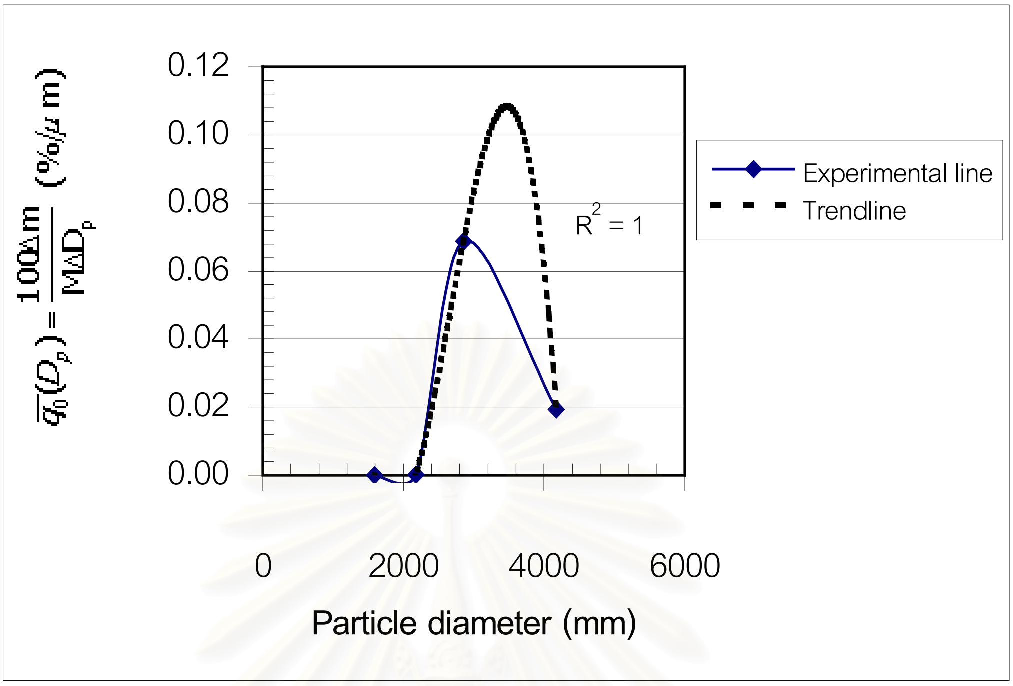


Fig.4.1.4: Size distribution of LLDPE pellets

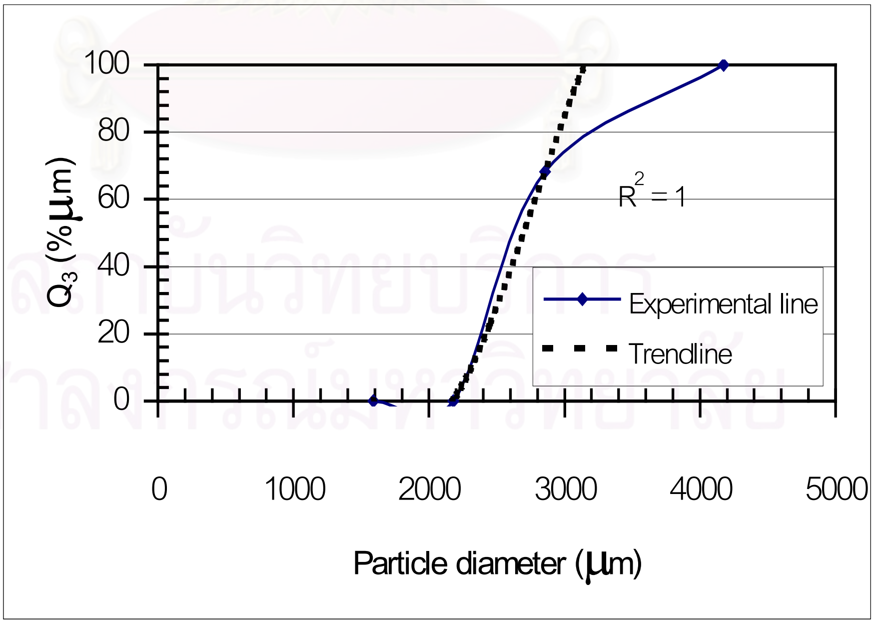


Fig.4.1.5: Cumulative distribution of LLDPE pellets

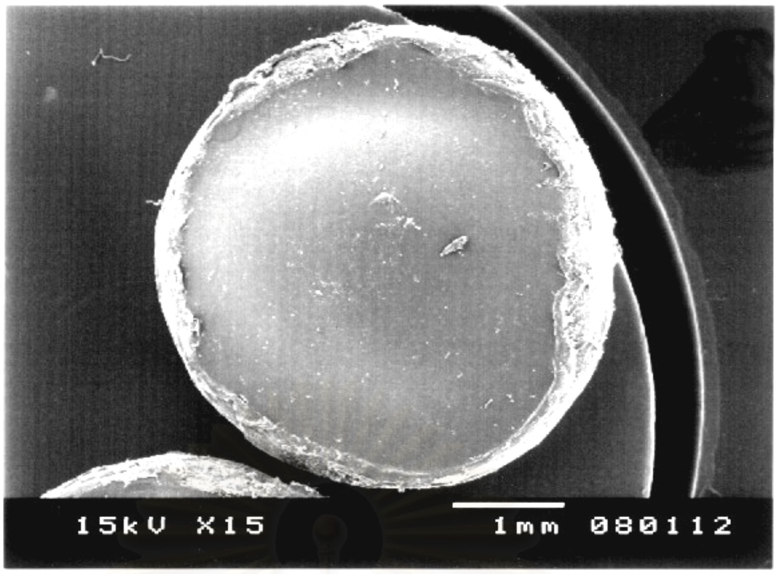


Fig.4.1.6: SEM photograph of linear low-density polyethylene (LLDPE) pellets

The flow characteristics of LLDPE resin were determined using a Powder Characteristic Tester (Hosokawa Micron Corporation model PT-N). The results are shown in Table 4.1.1. The LLDPE pellets are too big to check their flow characteristics with the Powder Characteristic Tester.

4.1.2 Gypsum powder

Gypsum powder was purchased from SIAM GYPSUM INDUSTRY CO., LTD. Its particle size distribution was evaluated using the same Vibro Standard Screen Shaker (Koei Sangyo Co., Ltd. model VSS-50). The results are shown in Figure 4.1.7 and 4.1.8. The particle size at the 50% point of the cumulative curve is shown in Table 4.1.1. Microphotographs of sample particles were taken with a Scanning Electron Microscope (SEM) at Scientific and Technological Research Equipment Centre to analyze the shape of the particles. The results are shown in Figure 4.1.9. The flow characteristics of gypsum powder were determined using the Powder Characteristic Tester (Hosokawa Micron Corporation model PT-N). The results are shown in Table 4.1.1.

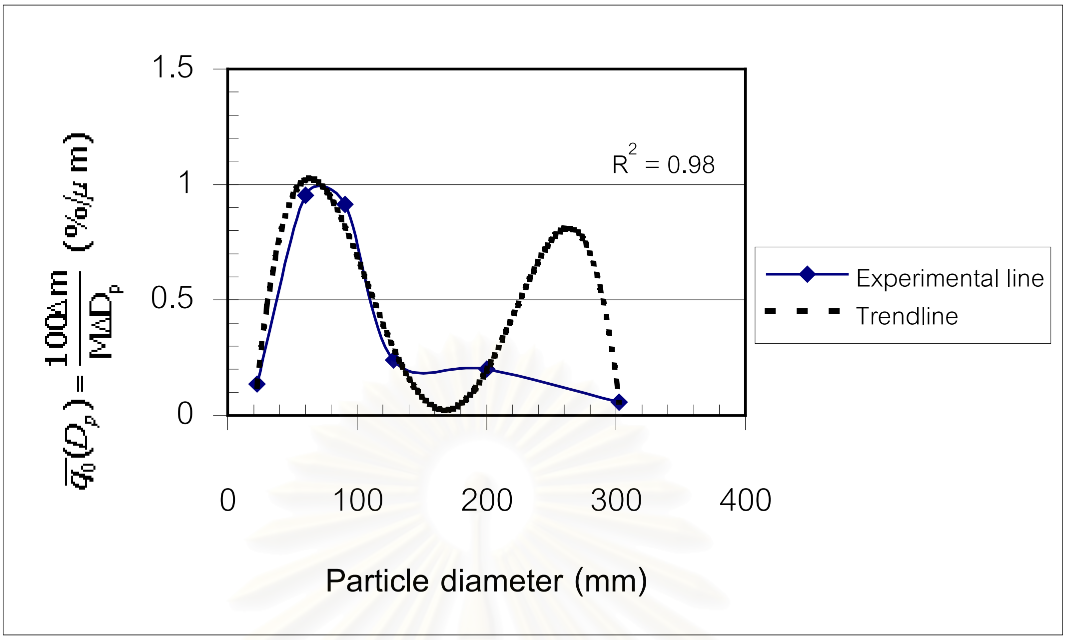


Fig.4.1.7: Size distribution of gypsum powder

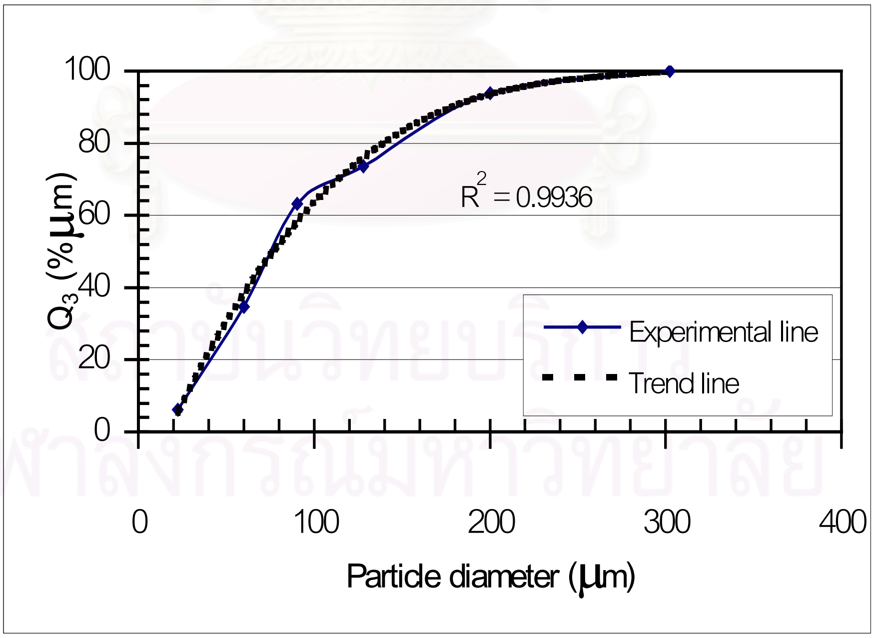


Fig.4.1.8: Cumulative distribution of gypsum powder

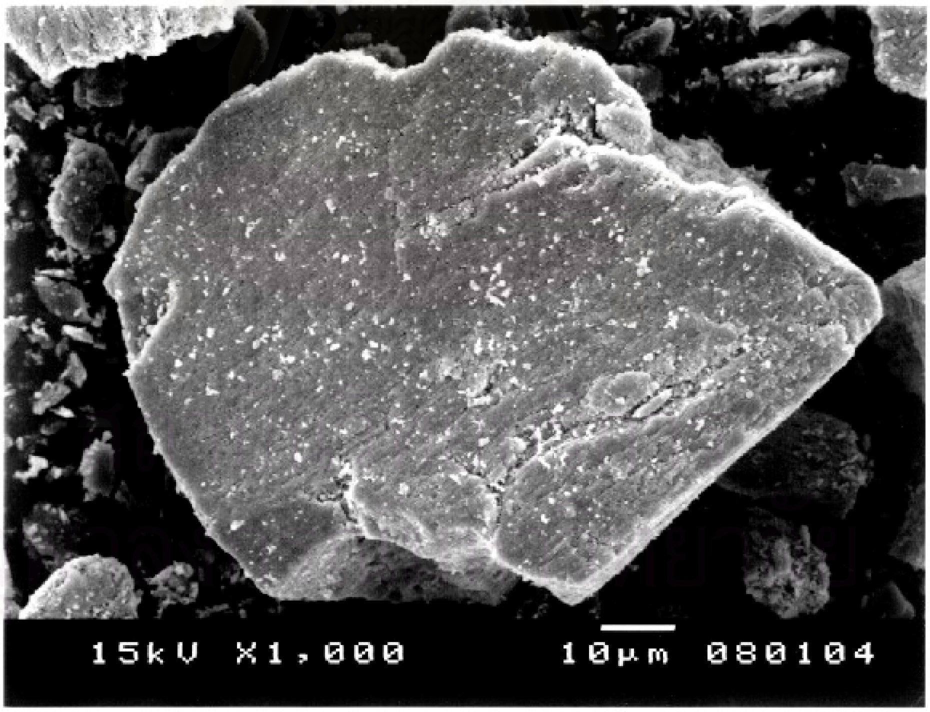


Fig.4.1.9: SEM photograph of gypsum powder

4.1.3 Lubricant

The solid lubricant used in selected experiments was stearic acid powder, purchased from Molecule Co., Ltd. Its properties are as shown below:

Chemical formula : $CH_3(CH_2)_{16}$ COOH

Molecular mass : 284.49

Acid value : 200 - 210

Melting point : 54°C

Sulphate Ash : 0.1%

Iodine value : 4.0%

Its particle size distribution was evaluated using the Mastersizer S at Scientific and Technological Research Equipment Centre. The results are shown in Figure 4.1.10 and 4.1.11. The particle size at the 50% point of the cumulative curve is shown in Table 4.1.1. Microphotographs of sample particles were taken with a Scanning Electron Microscope (SEM) at Scientific and Technological Research Equipment Centre to analyze the shape of the particles. The results are shown in Figure 4.1.12. The flow characteristics of stearic acid powder were determined using the Powder Characteristic Tester (Hosokawa Micron Corporation model PT-N). The results are shown in Table 4.1.1.

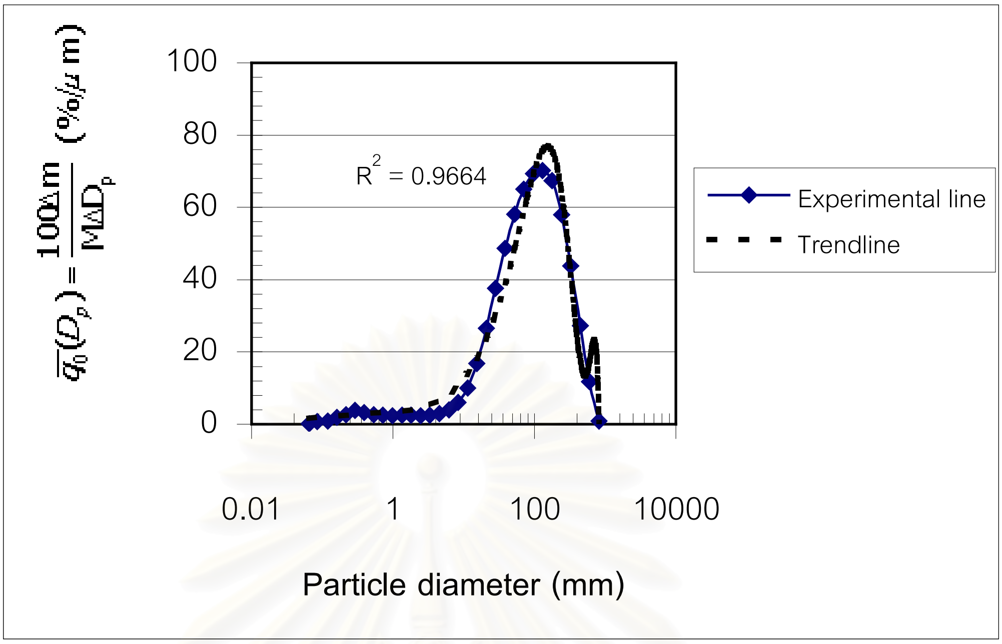


Fig.4.1.10: Size distribution of stearic acid powder

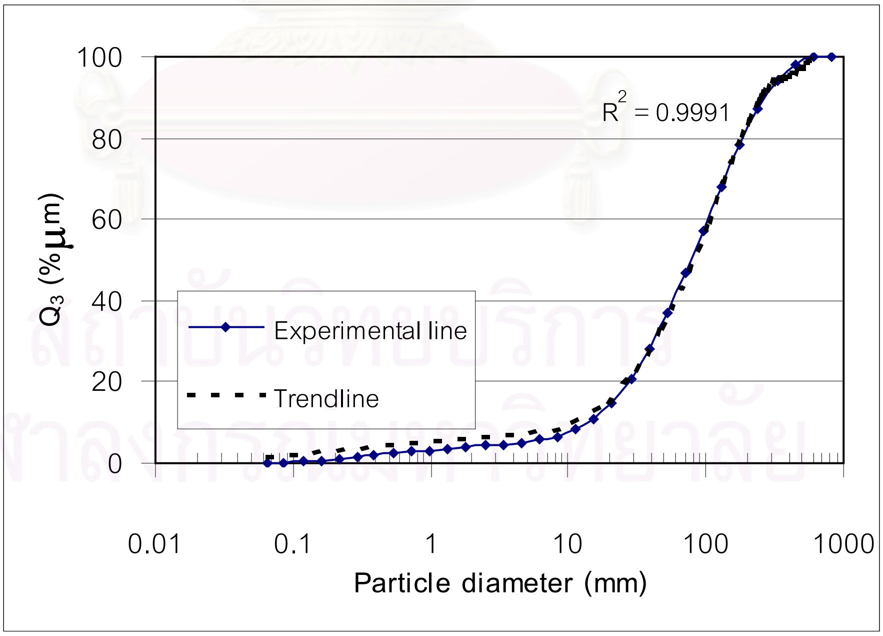
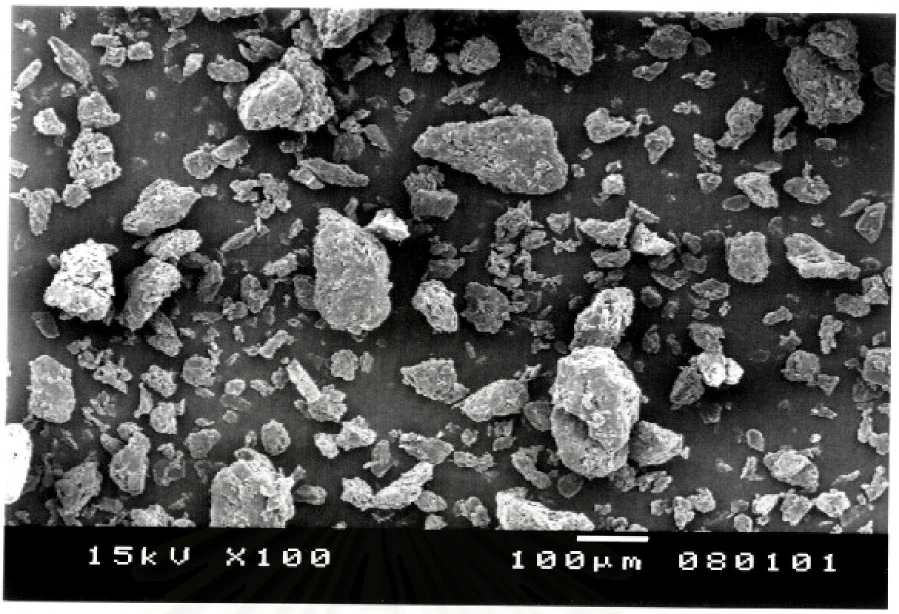


Fig.4.1.11: Cumulative distribution of stearic acid powder



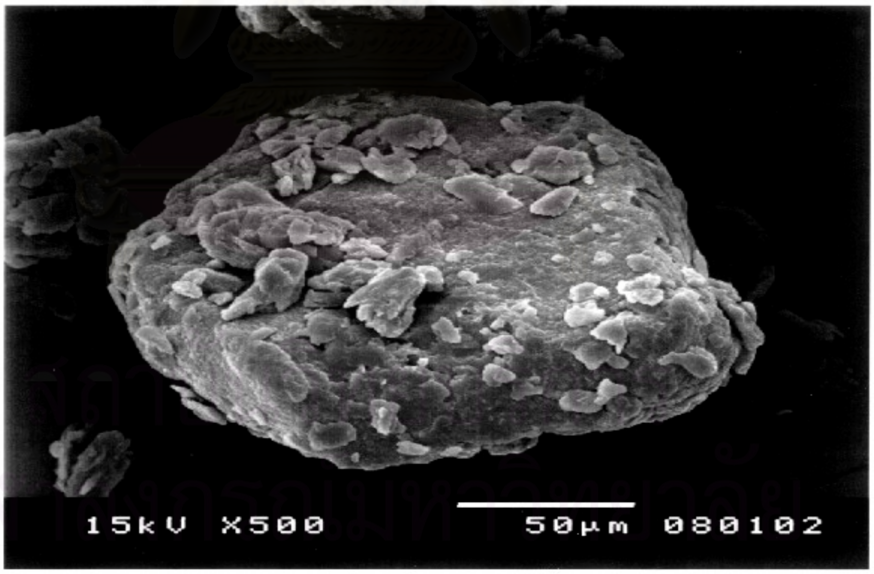
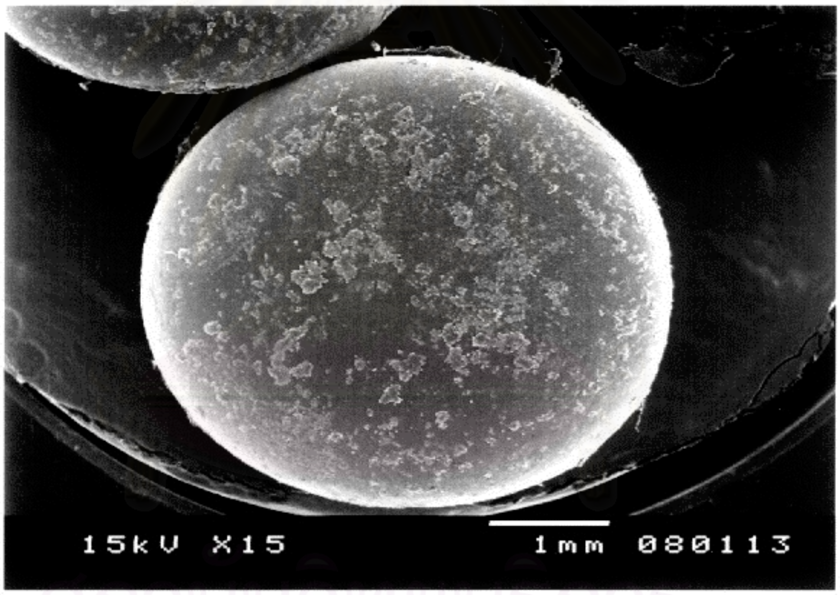


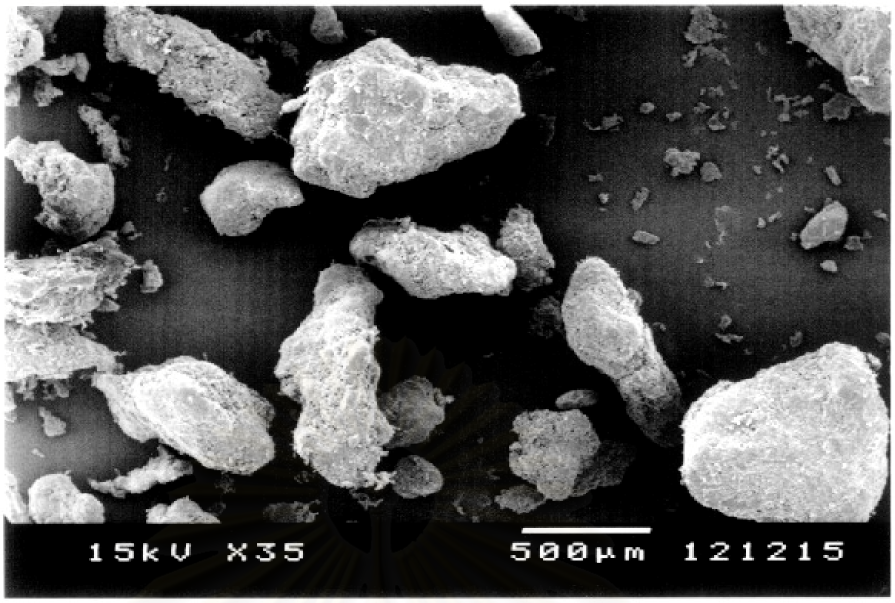
Fig.4.1.12: SEM photograph of stearic acid powder

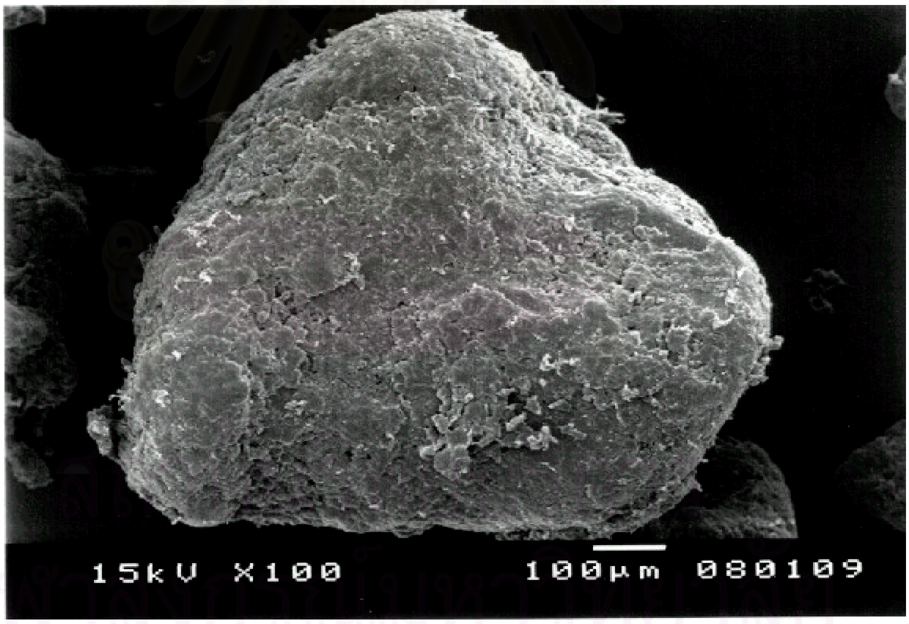
4.1.4 Mixture of two components

Microphotographs of mixture of the sample particles were taken with a Scanning Electron Microscope (SEM) at Scientific and Technological Research Equipment Centre to analyze the morphology of the mixer particles. The results are shown in Figure 4.1.13 4.1.14 and 4.1.15. The flow characteristics of mixture of LLDPE resin with stearic acid and mixture of gypsum with stearic acid were determined using the Powder Characteristic Tester (Hosokawa Micron Corporation model PT-N). The results are shown in Table 4.1.1.



Fi g.4.1.13: SEM photograph of mixture of LLDPE pellet with stearic acid





Fi g.4.1.14: SEM photograph of mixture of LLDPE resin with stearic acid

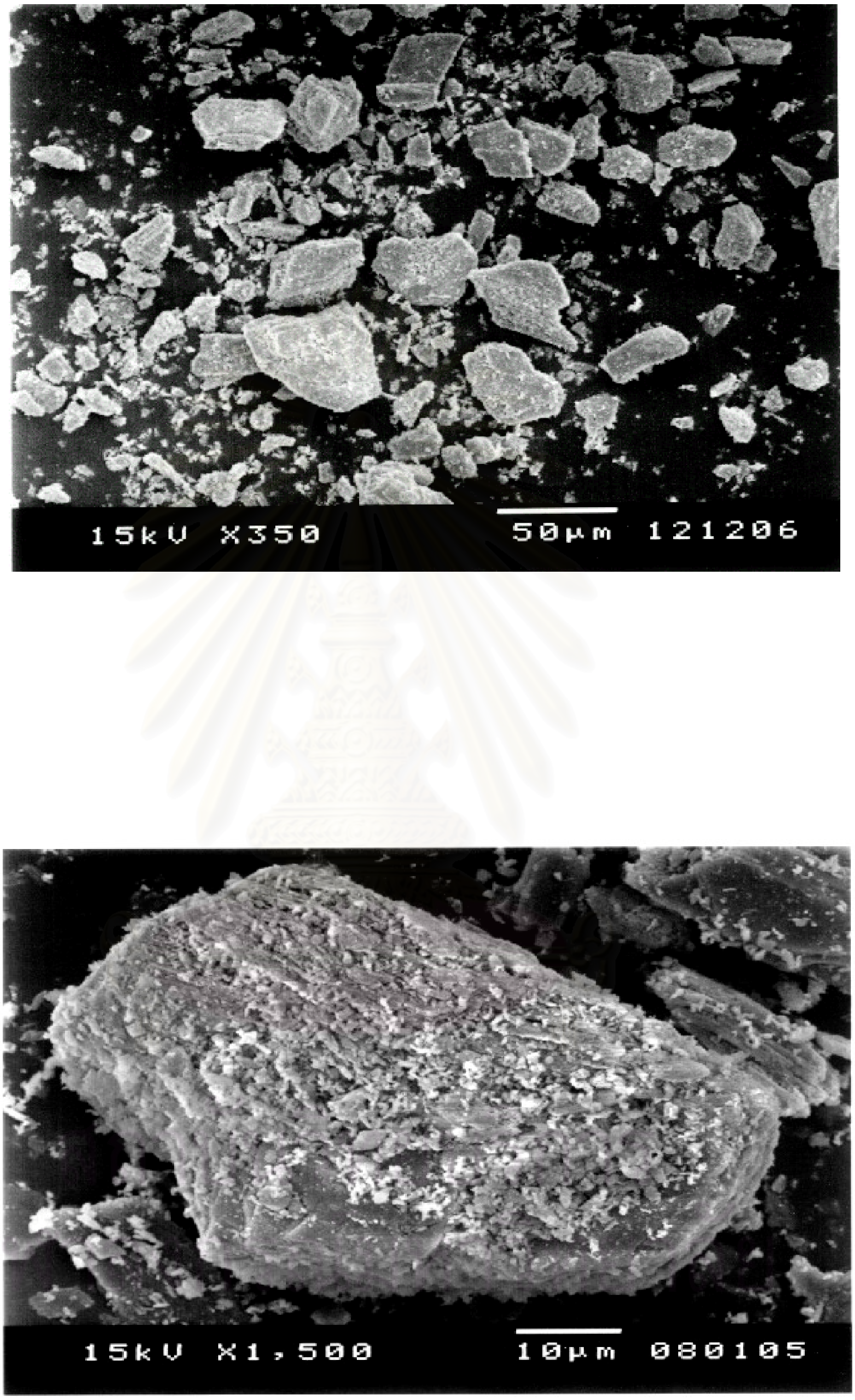


Fig.4.1.15: SEM photograph of mixture of gypsum powder with stearic acid

4.2 Equipment

4.2.1 Pre-treatment / preparation of test materials

The device used for mixing the test samples to avoid segregation was a rotary V-shape mixer (Tokuju Corporation model VA-5). See Figure 4.2.1. The rate of particle mixing of the V-shape mixer is rather low, but a satisfactory final degree of mixedness for the present purpose can be expected. Powder samples to be mixed are charged up to 30 - 50% of the vessel volume. The rotational speed is set at 50 - 80% of the critical rotational speed, N_{cr}, given as [10]

$$N_{cr} = \frac{0.498}{\sqrt{R_{max}}} \qquad \text{(rev./sec)}$$

where R_{max} = maximum radius of rotation (m)

The mixer's diameter is about 19.5 cm and is suitable for about 2 – 5 litres of materials.

Fig.4.2.1: V-shape mixer

4.2.2 Analytical instruments

4.2.2.1 Particle size distribution (See Figure 4.2.2)

The instrument used for evaluating particle size distribution was Vibro Standard Screen Shaker (Koei Sangyo Co., Ltd. model VSS-50). This instrument has combined motion of vibration and gyration and is equipped with a vibration frequency adjuster and timer.

Fig.4.2.2: Vibro Standard Screen Shaker

4.2.2.2 Powder Characteristic Tester (See Figure 4.2.3)

The tester is Hosokava Micron model PT-N. This tester directly converts relevant physical measurements into an index of flowability and corresponding index of floodability based on the flowability index tables originally proposed by R.L. Carr in

1965. It provides seven mechanical measurements and three supporting measurements of dry bulk powder samples. The measured characteristics, which can be grouped into two categories, are:

Mechanical measurement group

1. Angle of repose
2. Compressibility
3. Angle of spatula
4. Cohesiveness
5. Angle of fall
6. Dispersibility
7. Angle of difference

Supporting measurement group

1. Aerated bulk density
2. Packed bulk density
3. Uniformity

Fig.4.2.3: Powder Characteristic Tester

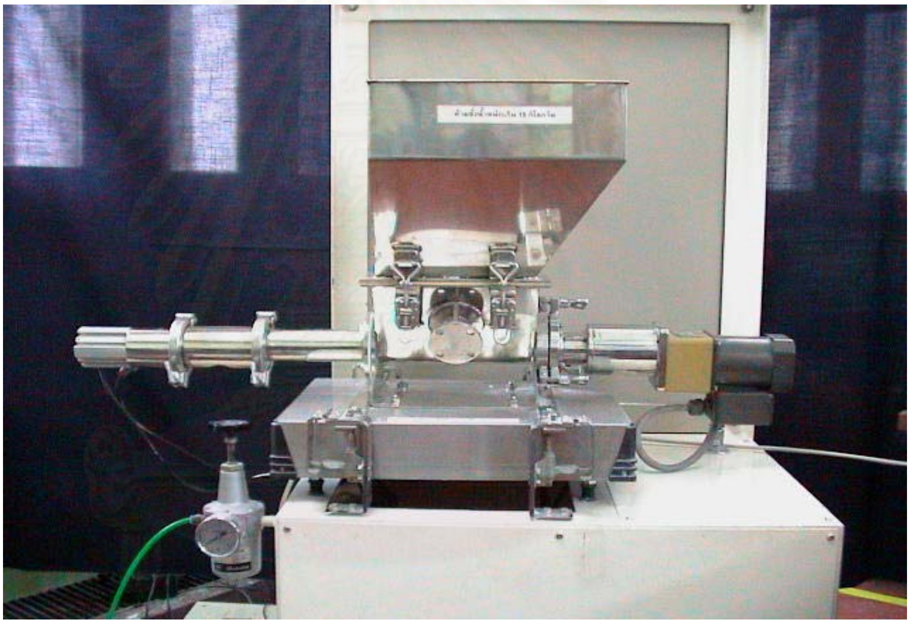
4.2.3 Experimental equipment

The major components of the experimental system are as follows:

4.2.3.1 Screw feeder (See Figure 4.2.4)

The screw feeder used in the experiments is made by AKATAKE ENGINEERING CO., LTD serial number 11-T21-002. It is equipped with a knob adjuster for the rotational speed. Discharge rate of the feeder ranges from 0.5 – 1.5 liters / min. This instrument has special system. It can use pneumatic back-pressure for the smoother flow.

a)



b)

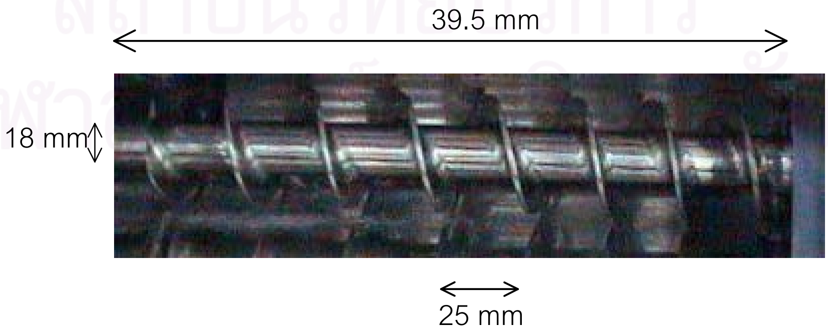


Fig.4.2.4: Screw feeder

(a) Schematically of screw feeder and (b) Screw geometry

The relationship between the setting of the speed adjusting dial and the actual rotating speed of the screw is shown in Figure 4.2.5.

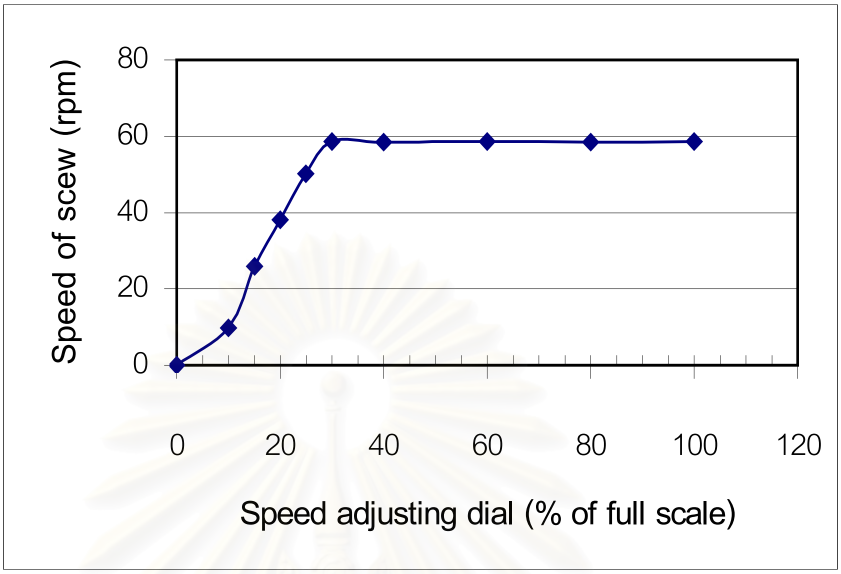


Fig.4.2.5: Calibration curve of the screw feeder

4.2.3.2 Rotary table feeder (See Figure 4.2.6)

The rotary table feeder used in the experiments was SANKYO PIO-TECH CO., LTD model MFOV-1VO. It is called “Micro Feeder” because its discharge rate can be as small as 0.1 cm^3/min. Powder particles, which flow out by gravity from the hopper gate onto the turntable are first scraped with a coarse scraping plate to obtain a powder layer of well defined height on the turntable. The layer is next scraped with a fine scraping plate whose position is adjusted so as to deliver the desired discharge rate of the powder.

In general the following characteristics are featured:

1. Discharge of powder at flow rates as small as 0.1 cm^3/min. is possible.

2. Discharge rates depend on the gap between the coarse scraping plate and the turntable, the height and feeding angle of the fine scraping plate and also the speed of the turntable. In this way, the discharge rate can be turned down to 1/200 of the maximum flow rate.

3. Discharge flow is obtained continuously at very low deviations within 0.5 - 5% depending on the flowability of the powder.

Fig.4.2.6: Micro feeder

The relationship between the setting of the speed adjusting dial and the rotating speed of the turntable is as shown in Figure 4.2.7.

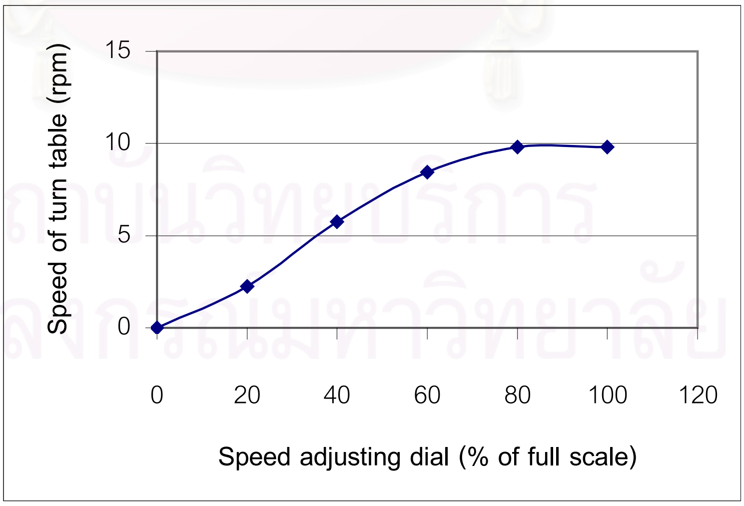


Fig.4.2.7: Calibration curve of the rotary table feeder

4.2.3.3 Weighing instruments

Analytical micro-balance (See Figure 4.2.8)

The micro balance used was model AB204-s of METTLER TOLEDO (TH) LTD. Its specifications are as follows:

Maximum capacity	:	210 g
Readability	:	0.1 mg
Linearity -/+	:	0.3 mg
Adjusting weight	:	200 g
Adjusting weight with certified balances:		200 g
Overall dimensions (W x D x H)	:	190 x 290 x 339 mm

Fig.4.2.8: Analytical micro-balance

The calibrated relationship between the indicated weight and true weight is as shown in Figure 4.2.9. The calibration was carried out by the Industrial Calibration Center of Technology Promotion Institute.

Fig.4.2.9: Calibration results of the analytical micro-balance

Ordinary electronic balance (See Figure 4.2.10)

This balance was model BW–15RB purchased from SIAM SCALES & ENGINEERING CO., LTD. Its specifications are as follows:

Maximum capacity	:	15 kg
Readability	:	2 g
Platform size (mm)	:	280(w) x 280(D) x 80(H)
Temperature range	:	-10 °C ± 40 °C
Max. tare range	:	Max. capacity

Fig.4.2.10: Ordinary electronic balance

The calibrated relationship between the indicated weight and true weight is as shown in Figure 4.2.11 The calibration was carried out by the Industrial Calibration Center of Technology Promotion Institute.

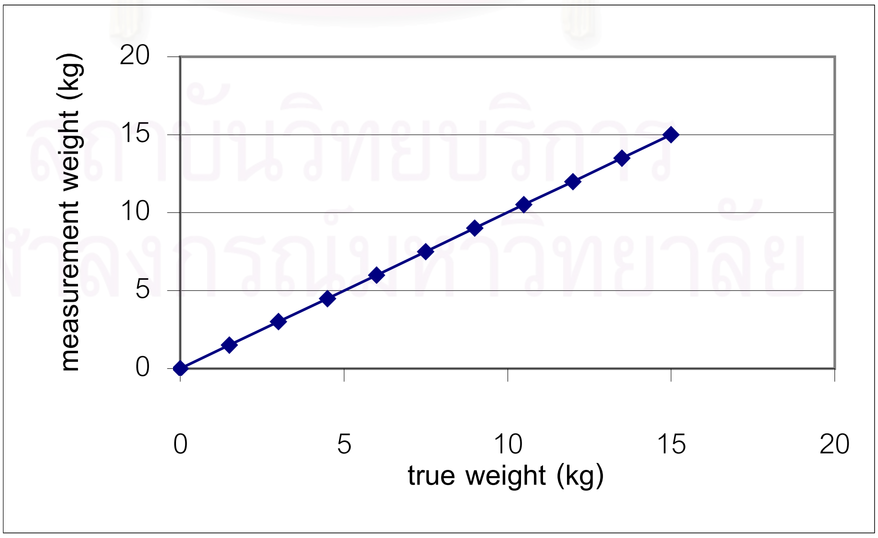


Fig.4.2.11: Calibration results of the ordinary electronic balance

4.2.3.4 Impact reducing chute

The device was constructed and installed to partially reduce the impact of discharged particles falling onto the analytical micro-balance. It consists of an aluminum duct, a holding stand and a small motor (speed about 1200 rpm) with unbalanced propeller blades as shown schematically in Figure 4.2.12. The motor generates vibration that eliminates the accumulation of particles on the inner surface of the chute.

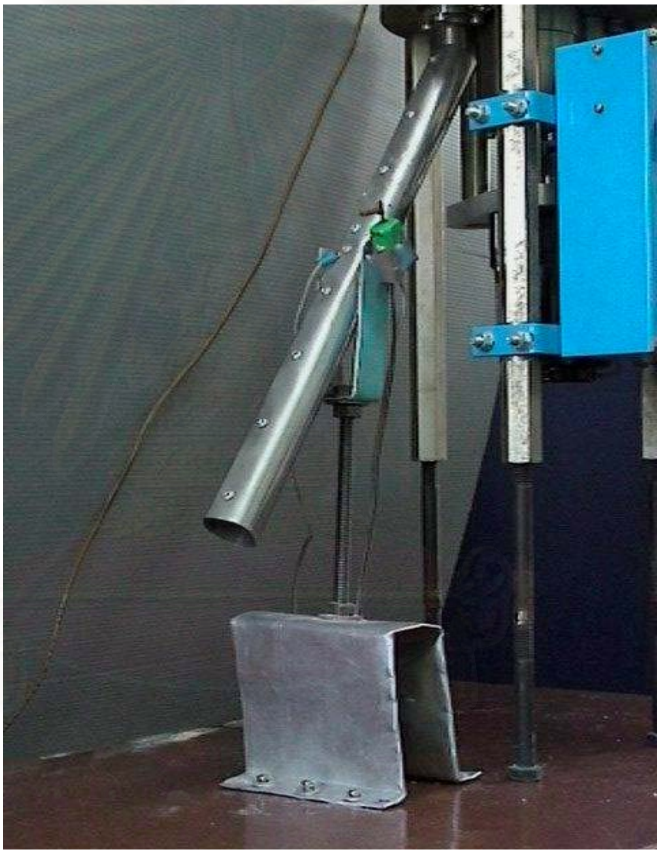


Fig.4.2.12: Impact reducing chute

4.2.3.5 Data acquisition system

The output signal from the weighing platform of the ordinary electronic balance was sent intermittently to a personal computer for recording the cumulative mass of particles discharged from the feeder. An RS 232 interface was used to convert the analog signal from the weighing platform into digital signal for the computer. Specifications of the personal computer used for data acquisition are as follows:

CPU/CLK : 486DX2 / 66 MHz

Fixed Disk : 408 MB

CRT display : VGA / EGA

Shadow RAM: 384 KB

An application program coded in Visual BASIC was used for data acquisition and analysis.

4.2.3.6 Grounding system

Ground wires were installed to reduce the adhesion of particles on the chute wall and the feeder due to electrostatic effect. The screw feeder was equipped with a ground wire held by a nut-bolt, as shown in figure 4.2.13. The rotary Table Feeder had two ground wires as shown in figure 4.2.14. A ground wire was welded to the chute, while another was attached using a nut.

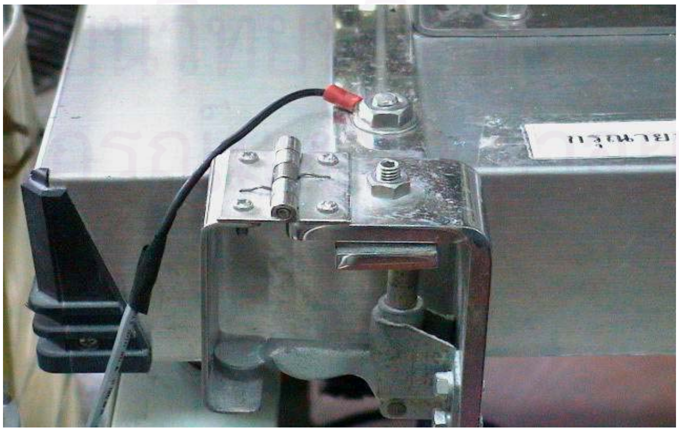


Fig.4.2.13: Grounding of the screw feeder

Fig.4.2.14: Grounding of the rotary table feeder

4.2.3.7 Outlet geometry (See Figure 4.2.15)

The present investigation studied four shapes of discharge outlets. Every outlet has essentially the same opening area of 16 cm^2. The dimensions of the outlets are as follows:

Circular : diameter = 4.50 cm

Square : the length of each side = 3.99 cm

Trapezoidal : height = 8 cm, the lengths of the parallel sides are 1.00 and 2.98 cm

Triangular : base = 4.5 cm, height = 7.07 cm

Fig. 4.2.15: Type of discharge outlet

4.3 Experimental Conditions

4.3.1 In the case of the screw feeder

The experimental conditions used in this work are as follows:

1. Type of test material: linear low density polyethylene (LLDPE) resin, LLDPE pellets and gypsum powder
2. Shape of discharge outlet: square, circular, triangular and trapezoidal
3. Discharge back-pressure: no back-pressure, step-down back-pressure, and constant back-pressure (0.6 - 2.0 kg/cm^2)
4. Rotational speed of screw:10, 26, 38, 50, 59 rpm
5. Temperature in lab. room: Temp. dry bulb 25 - 30 ^{o}C (air-conditioned)
   Temp. wet bulb 20 - 25 ^{o}C (air-conditioned)
6. Time of mixing in stearic acid with a V-shape mixer: 15 min (when it is used)
7. The rotational speed of the V-shape mixer for sample preparation: 31 rpm
8. Vibration frequency of the standard sieving (Hz): 5
9. Vibration time of the standard sieving: 20 min

List of experimental runs and code names for the screw feeder are as shown in Table 4.3.1

Table 4.3.1: List of experimental runs and code names for the screw feeder

Group1: LLDPE resin

No.	Code name	No.	Code name	No.	Code name	No.	Code name	No.	Code name
1	S-PEr-Cc-P0-10	21	S-PEr-Cc-P2-10	41	S-PEr-Sq-P1.5-10	61	S-PEr-Tp-P1-10	81	S-PEr-Ta-Sd-10
2	S-PEr-Cc-P0-26	22	S-PEr-Cc-P2-26	42	S-PEr-Sq-P1.5-26	62	S-PEr-Tp-P1-26	82	S-PEr-Ta-Sd-26
3	S-PEr-Cc-P0-38	23	S-PEr-Cc-P2-38	43	S-PEr-Sq-P1.5-38	63	S-PEr-Tp-P1-38	83	S-PEr-Ta-Sd-38
4	S-PEr-Cc-P0-50	24	S-PEr-Cc-P2-50	44	S-PEr-Sq-P1.5-50	64	S-PEr-Tp-P1-50	84	S-PEr-Ta-Sd-50
5	S-PEr-Cc-P0-59	25	S-PEr-Cc-P2-59	45	S-PEr-Sq-P1.5-59	65	S-PEr-Tp-P1-59	85	S-PEr-Ta-Sd-59
6	S-PEr-Cc-Sd-10	26	S-PEr-Sq-P0-10	46	S-PEr-Sq-P2-10	66	S-PEr-Tp-P1.5-10	86	S-PEr-Ta-P1-10
7	S-PEr-Cc-Sd-26	27	S-PEr-Sq-P0-26	47	S-PEr-Sq-P2-26	67	S-PEr-Tp-P1.5-26	87	S-PEr-Ta-P1-26
8	S-PEr-Cc-Sd-38	28	S-PEr-Sq-P0-38	48	S-PEr-Sq-P2-38	68	S-PEr-Tp-P1.5-38	88	S-PEr-Ta-P1-38
9	S-PEr-Cc-Sd-50	29	S-PEr-Sq-P0-50	49	S-PEr-Sq-P2-50	69	S-PEr-Tp-P1.5-50	89	S-PEr-Ta-P1-50
10	S-PEr-Cc-Sd-59	30	S-PEr-Sq-P0-59	50	S-PEr-Sq-P2-59	70	S-PEr-Tp-P1.5-59	90	S-PEr-Ta-P1-59
11	S-PEr-Cc-P1-10	31	S-PEr-Sq-Sd-10	51	S-PEr-Tp-P0-10	71	S-PEr-Tp-P2-10	91	S-PEr-Ta-P1.5-10
12	S-PEr-Cc-P1-26	32	S-PEr-Sq-Sd-26	52	S-PEr-Tp-P0-26	72	S-PEr-Tp-P2-26	92	S-PEr-Ta-P1.5-26
13	S-PEr-Cc-P1-38	33	S-PEr-Sq-Sd-38	53	S-PEr-Tp-P0-38	73	S-PEr-Tp-P2-38	93	S-PEr-Ta-P1.5-38
14	S-PEr-Cc-P1-50	34	S-PEr-Sq-Sd-50	54	S-PEr-Tp-P0-50	74	S-PEr-Tp-P2-50	94	S-PEr-Ta-P1.5-50
15	S-PEr-Cc-P1-59	35	S-PEr-Sq-Sd-59	55	S-PEr-Tp-P0-59	75	S-PEr-Tp-P2-59	95	S-PEr-Ta-P1.5-59
16	S-PEr-Cc-P1.5-10	36	S-PEr-Sq-P1-10	56	S-PEr-Tp-Sd-10	76	S-PEr-Ta-P0-10	96	S-PEr-Ta-P2-10
17	S-PEr-Cc-P1.5-26	37	S-PEr-Sq-P1-26	57	S-PEr-Tp-Sd-26	77	S-PEr-Ta-P0-26	97	S-PEr-Ta-P2-26
18	S-PEr-Cc-P1.5-38	38	S-PEr-Sq-P1-38	58	S-PEr-Tp-Sd-38	78	S-PEr-Ta-P0-38	98	S-PEr-Ta-P2-38
19	S-PEr-Cc-P1.5-50	39	S-PEr-Sq-P1-50	59	S-PEr-Tp-Sd-50	79	S-PEr-Ta-P0-50	99	S-PEr-Ta-P2-50
20	S-PEr-Cc-P1.5-59	40	S-PEr-Sq-P1-59	60	S-PEr-Tp-Sd-59	80	S-PEr-Ta-P0-59	100	S-PEr-Ta-P2-59

Group2: LLDPE pellets

No.	Code name	No.	Code name	No.	Code name	No.	Code name	No.	Code name
1	S-PEp-Cc-P0-10*	11	S-PEp-Cc-P0-10	21	S-PEp-Sq-P0-10	31	S-PEp-Tp-P0-10	41	S-PEp-Ta-P0-10
2	S-PEp-Cc-P0-26*	12	S-PEp-Cc-P0-26	22	S-PEp-Sq-P0-26	32	S-PEp-Tp-P0-26	42	S-PEp-Ta-P0-26
3	S-PEp-Cc-P0-38*	13	S-PEp-Cc-P0-38	23	S-PEp-Sq-P0-38	33	S-PEp-Tp-P0-38	43	S-PEp-Ta-P0-38
4	S-PEp-Cc-P0-50*	14	S-PEp-Cc-P0-50	24	S-PEp-Sq-P0-50	34	S-PEp-Tp-P0-50	44	S-PEp-Ta-P0-50
5	S-PEp-Cc-P0-59*	15	S-PEp-Cc-P0-59	25	S-PEp-Sq-P0-59	35	S-PEp-Tp-P0-59	45	S-PEp-Ta-P0-59
6	S-PEp-Cc-P1-10*	16	S-PEp-Cc-P1-10	26	S-PEp-Sq-P1-10	36	S-PEp-Tp-P1-10	46	S-PEp-Ta-P1-10
7	S-PEp-Cc-P1-26*	17	S-PEp-Cc-P1-26	27	S-PEp-Sq-P1-26	37	S-PEp-Tp-P1-26	47	S-PEp-Ta-P1-26
8	S-PEp-Cc-P1-38*	18	S-PEp-Cc-P1-38	28	S-PEp-Sq-P1-38	38	S-PEp-Tp-P1-38	48	S-PEp-Ta-P1-38
9	S-PEp-Cc-P1-50*	19	S-PEp-Cc-P1-50	29	S-PEp-Sq-P1-50	39	S-PEp-Tp-P1-50	49	S-PEp-Ta-P1-50
10	S-PEp-Cc-P1-59*	20	S-PEp-Cc-P1-59	30	S-PEp-Sq-P1-59	40	S-PEp-Tp-P1-59	50	S-PEp-Ta-P1-59

Group 3: gypsum powder

No.	Code name	No.	Code name	No.	Code name	No.	Code name
1	S-GSM-Cc-P0-10NP	11	S-GSM-Cc-P0.6-38NP	21	S-GSM-Sq-P0-59HP	31	S-GSM-Tp-P0.6-38HP
2	S-GSM-Cc-P0-26NP	12	S-GSM-Cc-P0.6-50NP	22	S-GSM-Sq-P0.6-26HP	32	S-GSM-Tp-P0.6-50HP
3	S-GSM-Cc-P0-38NP	13	S-GSM-Cc-P0.6-59NP	23	S-GSM-Sq-P0.6-38HP	33	S-GSM-Tp-P0.6-59HP
4	S-GSM-Cc-P0-50NP	14	S-GSM-Cc-P0.6-26HP	24	S-GSM-Sq-P0.6-50HP	34	S-GSM-Ta-P0-26HP
5	S-GSM-Cc-P0-59NP	15	S-GSM-Cc-P0.6-38HP	25	S-GSM-Sq-P0.6-59HP	35	S-GSM-Ta-P0-38HP
6	S-GSM-Cc-P0-10HP	16	S-GSM-Cc-P0.6-50HP	26	S-GSM-Tp-P0-26HP	36	S-GSM-Ta-P0-50HP
7	S-GSM-Cc-P0-26HP	17	S-GSM-Cc-P0.6-59HP	27	S-GSM-Tp-P0-38HP	37	S-GSM-Ta-P0-59HP
8	S-GSM-Cc-P0-38HP	18	S-GSM-Sq-P0-26HP	28	S-GSM-Tp-P0-50HP	38	S-GSM-Ta-P0.6-26HP
9	S-GSM-Cc-P0-50HP	19	S-GSM-Sq-P0-38HP	29	S-GSM-Tp-P0-59HP	39	S-GSM-Ta-P0.6-38HP
10	S-GSM-Cc-P0-59HP	20	S-GSM-Sq-P0-50HP	30	S-GSM-Tp-P0.6-26HP	40	S-GSM-Ta-P0.6-50HP
						41	S-GSM-Ta-P0.6-59HP

Group 4: with lubricant

No.	Code name	No.	Code name	No.	Code name	No.	Code name
1	S-PEpSr-Cc-P0-10	6	S-PEpSr-Cc-P1-10	11	S-GSMSr-Cc-P0-26HP	16	S-GSMSr-Cc-P0.6-38HP
2	S-PEpSr-Cc-P0-26	7	S-PEpSr-Cc-P1-26	12	S-GSMSr-Cc-P0-38HP	17	S-GSMSr-Cc-P0.6-50HP
3	S-PEpSr-Cc-P0-38	8	S-PEpSr-Cc-P1-38	13	S-GSMSr-Cc-P0-50HP	18	S-GSMSr-Cc-P0.6-59HP
4	S-PEpSr-Cc-P0-50	9	S-PEpSr-Cc-P1-50	14	S-GSMSr-Cc-P0-59HP		
5	S-PEpSr-Cc-P0-59	10	S-PEpSr-Cc-P1-59	15	S-GSMSr-Cc-P0.6-26HP		

NOTE: Code system A-B-C-D-nX

A = Type of feeder (S = Screw feeder, R = Rotary table feeder)

B = Type of material

where PEr = LLDPE resin; PEpSr = LLDPE pellets & 0.5 wt% stearic acid

PEp = LLDPE pellets; GSMSr = Gypsum powder & 0.5 wt% stearic acid

GSM = Gypsum powder

C = Shape of outlet

where Cc = Circular, Sq = Square, Tp = Trapezoidal, Ta = Triangular

D = Applied back - pressure

where Pi = Pressure equal to i kg / cm^2 (i = 0, 0.6, 1, 1.5, 2) , Sd = Step - down pressure

n = Speed of screw (rpm) ; n = 10, 26, 38, 50, 59 rpm

* = No grounding

X = Lining of inside wall of the screw feeder for gypsum; NP = No paper lining, HP = Half paper lining

4.3.2 In the case of the rotary table feeder

The experimental conditions used in this work are as follows:

1. Type of test material: linear low-density polyethylene (LLDPE) resin and gypsum powder
2. The vertical gap between the coarse scraping plate and turntable surface: 0.38, 1.20, 1.95 mm
3. The insertion depth of the fine scraping plate from the turntable edge in the radial direction: 12.0, 15.0, 19.0 mm
4. Rotational speed of the turntable: 3, 6, 9, 10 rpm
5. Temperature in laboratory room: Temp. dry bulb 25 - 30 ^{o}C (air-conditioned)
   Temp. wet bulb 20 - 25 ^{o}C (air-conditioned)
6. Time of mixing in stearic acid with a V-shape mixer : 15 min (when it is used)
7. The rotational speed of the V-shape mixer for sample preparation: 31 rpm
8. Vibration frequency of the standard sieving (Hz): 5
9. Vibration time of the standard sieving: 20 min

List of experimental runs and code names for the rotary table feeder are as shown in Table 4.3.2

Table 4.3.2: List of experimental runs and code names

Group1: LLDPE resin

No.	Code name	No.	Code name	No.	Code name	No.	Code name	No.	Code name
1	R-PEr-F1-C1-3	9	R-PEr-F1-C3-3	17	R-PEr-F2-C1-3	25	R-PEr-F2-C3-3	33	R-PEr-F3-C2-3
2	R-PEr-F1-C1-6	10	R-PEr-F1-C3-6	18	R-PEr-F2-C1-6	26	R-PEr-F2-C3-6	34	R-PEr-F3-C2-6
3	R-PEr-F1-C1-9	11	R-PEr-F1-C3-9	19	R-PEr-F2-C1-9	27	R-PEr-F2-C3-9	35	R-PEr-F3-C2-9
4	R-PEr-F1-C1-10	12	R-PEr-F1-C3-10	20	R-PEr-F2-C1-10	28	R-PEr-F2-C3-10	36	R-PEr-F3-C2-10
5	R-PEr-F1-C2-3	13	R-PEr-F1-C3-3*	21	R-PEr-F2-C2-3	29	R-PEr-F3-C1-3	37	R-PEr-F3-C3-3
6	R-PEr-F1-C2-6	14	R-PEr-F1-C3-6*	22	R-PEr-F2-C2-6	30	R-PEr-F3-C1-6	38	R-PEr-F3-C3-6
7	R-PEr-F1-C2-9	15	R-PEr-F1-C3-9*	23	R-PEr-F2-C2-9	31	R-PEr-F3-C1-9	39	R-PEr-F3-C3-9
8	R-PEr-F1-C2-10	16	R-PEr-F1-C3-10*	24	R-PEr-F2-C2-10	32	R-PEr-F3-C1-10	40	R-PEr-F3-C3-10

Group 2: gypsum powder

No.	Code name	No.	Code name	No.	Code name	No.	Code name	No.	Code name
1	R-GSM-F1-C1-3	8	R-GSM-F1-C2-10	15	R-GSM-F2-C1-9	22	R-GSM-F2-C3-6	29	R-GSM-F3-C2-3
2	R-GSM-F1-C1-6	9	R-GSM-F1-C3-3	16	R-GSM-F2-C1-10	23	R-GSM-F2-C3-9	30	R-GSM-F3-C2-6
3	R-GSM-F1-C1-9	10	R-GSM-F1-C3-6	17	R-GSM-F2-C2-3	24	R-GSM-F2-C3-10	31	R-GSM-F3-C2-9
4	R-GSM-F1-C1-10	11	R-GSM-F1-C3-9	18	R-GSM-F2-C2-6	25	R-GSM-F3-C1-3	32	R-GSM-F3-C2-10
5	R-GSM-F1-C2-3	12	R-GSM-F1-C3-10	19	R-GSM-F2-C2-9	26	R-GSM-F3-C1-6	33	R-GSM-F3-C3-3
6	R-GSM-F1-C2-6	13	R-GSM-F2-C1-3	20	R-GSM-F2-C2-10	27	R-GSM-F3-C1-9	34	R-GSM-F3-C3-6
7	R-GSM-F1-C2-9	14	R-GSM-F2-C1-6	21	R-GSM-F2-C3-3	28	R-GSM-F3-C1-10	35	R-GSM-F3-C3-9
								36	R-GSM-F3-C3-10

Group 3: with lubricant

No.	Code name	No.	Code name	No.	Code name	No.	Code name
1	R-PErSr-F1-C3-3	3	R-PErSr-F1-C3-9	5	R-GSMSr-F1-C3-3	7	R-GSMSr-F1-C3-9
2	R-PErSr-F1-C3-6	4	R-PErSr-F1-C3-10	6	R-GSMSr-F1-C3-6	8	R-GSMSr-F1-C3-10

NOTE: Code system A-B-C-D-n

A = Type of feeder (S = Screw feeder, R = Rotary table feeder)

B = Type of material

where PEr = LLDPE resin PErSr = LLDPE resin & 0.5 wt% stearic acid

GSM = Gypsum powder GSMSr = Gypsum powder & 0.5 wt% stearic acid

C = The insertion depth of the fine scraping plate from the turntable edge in the radial direction where F1 = 12.0 mm, F2 = 15.0 mm, F3 = 19.0 mm

D = The vertical gap between the coarse scraping plate and turntable surface where C1 = 0.38 mm, C2 = 1.20 mm, C3 = 1.95 mm

n = Speed of turntable (rpm) ; n = 3, 6, 9, 10 rpm

* = no grounding

Remarks: It should be pointed out that the number of experiments on the screw feeder is larger than the rotary table feeder because LLDPE pellets are too large, so they cannot pass through the gap between the fine and coarse scarping plates. Thus, LLDPE pellet was not tested in the case of the rotary table feeder.

4.4 Experimental Procedure

4.4.1 In the case of the screw feeder

The experimental procedure excluding the analysis of data can be divided into 3 parts as follows:

4.4.1.1 Preparation

1. Switch on the ordinary electronic balance and warm up for at least 30 minutes.
2. Switch on the personal computer and boot the program used for the ordinary electronic balance.
3. Switch on the screw feeder and set it to “manual”.
4. Open the pneumatic back-pressure valve.

4.4.1.2 Procedure

1. Select and install the type of outlet to be tested.
2. Select the type of test material to investigate.
3. Insert a piece of poster paper to line the inner wall of the screw feeder body, right under the feed hopper (Only in the case of gypsum powder).
4. Place a collection vessel on the weighing platform of the ordinary electronic balance.
5. Pour a moderate amount of the test material into the feed hopper.
6. Set the screw speed by adjusting the speed-setting dial located on the control box.
7. Set the pneumatic back-pressure at a constant value at one of the following: 0, 1, 1.5 and 2 kg_f/cm^2
8. Do experiments by recording the cumulative mass versus time on the PC. (Refer to 4.4.1.3 below)
9. Return to step 6 or 7 until all of the rotational speed of the screw and the back-pressure have been investigated.
10. Return to step 1 or 2 until all experiments are completed.

Note: In the case of a test material, which is a mixture of two components, pre-mix in the V-shape mixer for about 15 minutes before starting the experiment.

4.4.1.3 Data acquisition

1. Fix the sampling interval for recording data, usually 1-second interval.
2. Start the software program upon the start of an experimental run.
3. Save the data file and stop the program when sufficient data has been recorded for the particular run.

4.4.2 In the case of the rotary table feeder

The experimental procedure excluding the analysis of data can be divided into 3 parts as follows:

4.4.2.1 Preparation

1. Switch on the analytical micro-balance and warm up for at least 30 minutes.
2. Switch on the personal computer and boot the program used for the analytical micro-balance.
3. Switch on the rotary table feeder.

4.4.2.2 Procedure

1. Select the type of test material to investigate.
2. Adjust the desired gap between the fine scraping plate and turntable and the gap between the coarse scraping plate and turntable.
3. Place a collection vessel on the weighing platform of the analytical micro-balance for weighing the cumulative mass versus time.
4. Pour moderate amount of the test material into the feed hopper (Shut the hopper gate while pouring the powder into the empty hopper).
5. Set up the table speed by adjusting the speed-setting dial located on the control box.
6. Do experiments by recording the cumulative mass versus time on the PC. (Refer to 4.4.2.3 below).
7. Return to step 5 until all of the rotational speed of the turntable have been investigated.
8. Return to step 1 or 2 until all experiments are completed.

Note: In the case of a test material, which is a mixture of two components, pre-mix in the V-shape mixer for about 15 minutes before starting the experiment.

4.4.2.3 Data acquisition

1. Fix the sampling interval for recording data, usually 1-second interval.
2. Start the software program upon the start of an experimental run.
3. Save the data file and stop the program when sufficient data has been recorded for the particular run.

4.5 Calculation of the Mass Flow Rate

To obtain the "instantaneous" mass flow rate from the recorded data on cumulative discharged mass versus time, it is necessary to differentiate the mass with respect to time. Either analytical differentiation or numerical differentiation of the fitted curve may be used. We are interested here only in numerical differentiation. The numerical method utilizes Taylor-series expansion. The Taylor series for a differentiable function *y = f(x) at* $(x_i + h)$ expanded about the point x_i is

$$y(x_i + h) = y_i + y_i' h + \frac{y_i'' h^2}{2!} + \frac{y_i''' h^3}{3!} + \ldots \tag{4.5.1}$$

where $h = \Delta x$ and y_i is the ordinate value corresponding to x_i. The function of y at point $(x_i - h)$ is similarly given by

$$y(x_i - h) = y_i - y_i' h + \frac{y_i'' h^2}{2!} - \frac{y_i''' h^3}{3!} + \ldots \tag{4.5.2}$$

Subtracting Eq.4.5.2 from Eq.4.5.1, we obtain

$$y_i' = \frac{y(x_i + h) - y(x_i - h)}{2h} - \left(\frac{1}{6} y_i''' h^2 + \ldots \right) \tag{4.5.3}$$

Looking at Figure 4.5.1 we see that if we designate equally spaced points to the right of x_i as x_{i+1}, x_{i+2}, and so on, and those to the left of x_i as x_{i-1}, x_{i-2} and identify the corresponding ordinates as y_{i+1}, y_{i+2}, y_{i-1}, and y_{i-2}, respectively, Eq. 4.5.3 can be rewritten in the approximate form

$$y'_i = \frac{y_{i+1} - y_{i-1}}{2h} \qquad (4.5.4)$$

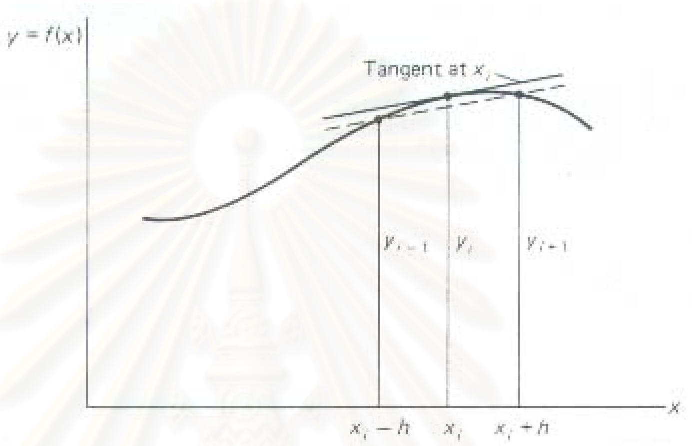


Fig.4.5.1: Approximation of the derivative at x_I

with error of order h^2. Eq.4.5.4 is called the “central–difference approximation” of *y'* at x_i. Graphically, the approximation represents the slope of the dashed line in Figure 4.5.2. The exact value of the derivative is represented by the solid line drawn tangent to the curve at x_i.

The approximate expression may be interpreted graphically as the slope of the line tangent to the curve at $x_{i+1/2}$ minus the slope of the line tangent to the curve at $x_{i-1/2}$ divided by h, where the slopes of the tangent lines are approximated by the expressions,

$$y'_{i+1/2} = \frac{y_{i+1} - y_i}{h} \qquad (4.5.5)$$

$$y'_{i-1/2} = \frac{y_i - y_{i-1}}{h} \qquad (4.5.6)$$

It has been shown that the central–difference expressions for the various derivatives involve values of the function on both sides of the point x at which the derivative of the function is desired. By utilizing the appropriate Taylor-series expansion, one can easily obtain a similar derivative expression at x_i and points to the right of x_i. It is known as the "forward-finite-difference" expression. In a similar manner, derivative expressions, which are calculated entirely in terms of the values of the function at point x_i and points to the left of x_i can be found. These are known as "backward-finite-difference" expressions. In numerical differentiation, forward-difference expressions are used when data to the left of a point at which a derivative is desired are not available, and backward-difference expressions are used when data to the right of the desired point are not available. Central-difference expressions, however, are more accurate than either forward- or backward–difference expressions. This can be seen by noting the order of the error in the summary of the differentiation formulas, which follows.

Central–Difference Expression with Error of Order h^2:

$$y_i' = \frac{y_{i+1} - y_{i-1}}{2h} \tag{4.5.7}$$

Forward–Difference Expression with Error of Order h:

$$y_i' = \frac{y_{i+1} - y_i}{h} \tag{4.5.8}$$

Backward–Difference Expression with Error of Order h:

$$y_i' = \frac{y_i - y_{i-1}}{h} \tag{4.5.9}$$

4.6 Statistical Analysis of Flow Data

After the experimental data have been averaged over a suitable short time interval in order to reduce noise effect, we generally calculate the instantaneous flow rate using the central-difference expression. Procedure for statistical analysis of flow rate data used in this work is shown in Figure 4.6.1.

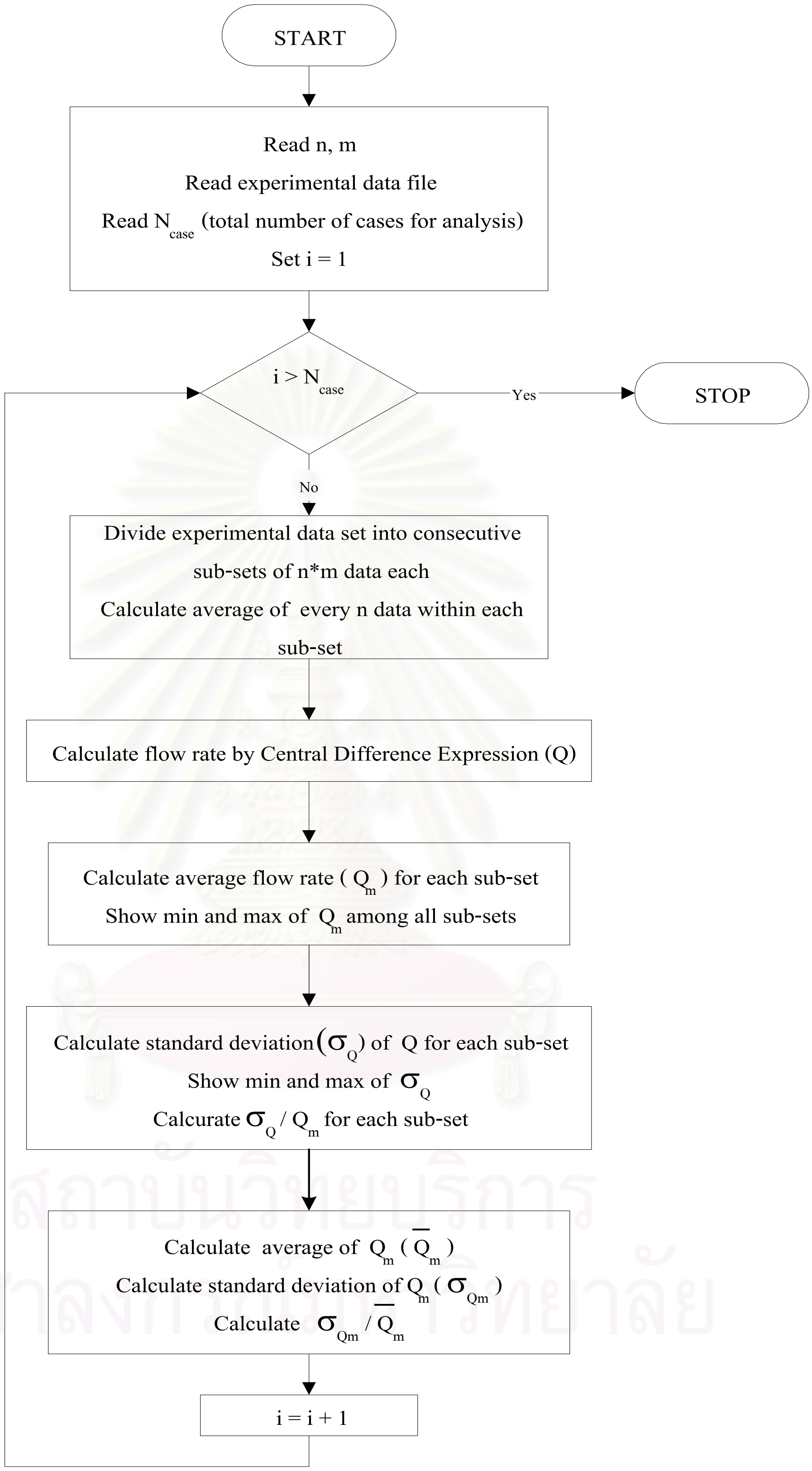


Fig.4.6.1: Flow chart of calculating experimental magnitude of flow fluctuation

The relevant formulas used are as follows:

Mean flow rate over the j^{th} time period:

$$Q_{mj} = \frac{\sum_{i=1}^{m} Q_{ij}}{m} \tag{4.6.1}$$

Standard deviation of flow rate over the j^{th} time period:

$$\sigma_Q = \left[\frac{\sum_{i=1}^{m} (Q_{ij} - Q_{mj})^2}{m-1}\right]^{1/2} \tag{4.6.2}$$

Mean flow rate over the entire experimental time:

$$\overline{Q}_m = \frac{\sum_{j=1}^{k} Q_{mj}}{k} \tag{4.6.3}$$

Standard deviation of Q_{mj} over the entire experimental time:

$$\sigma_{Qm} = \left[\frac{\sum_{j=1}^{k} (Q_{mj} - \overline{Q}_m)^2}{k-1}\right]^{1/2} \tag{4.6.4}$$

Figure 4.6.2, illustrates how the experimental mass data set is divided into consecutive sub-sets of n*m data each for use in statistical analysis of flow data.

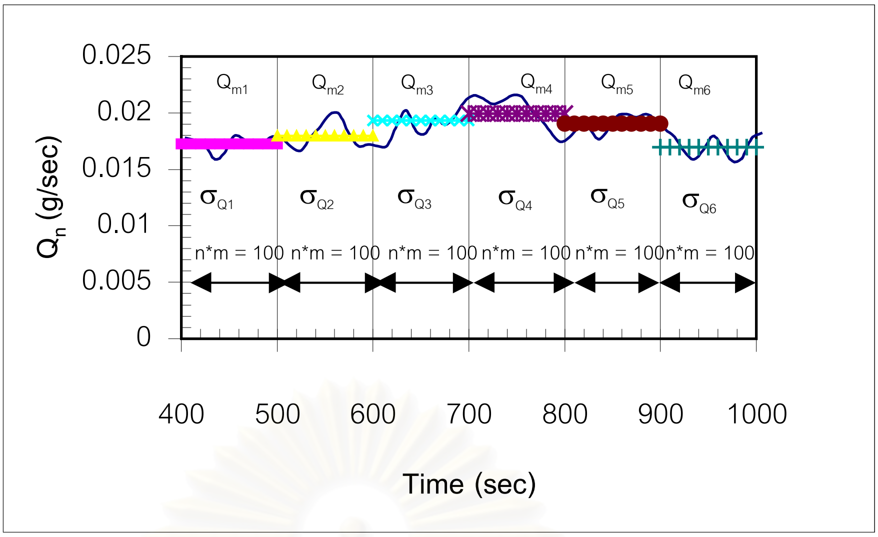


Fig.4.6.2: An illustration of statistical analysis of flow data

4.7 Resolution of Measurement Data

4.7.1 Analytical micro-balance

The investigated Micro Feeder can discharge powder at flow rates as small as low 0.1 cm^3/min. We used an analytical micro-balance for weighing the cumulative discharged material at 1-second intervals. Though the readability of the balance is 0.1 mg, there is also the effect of uneven impact caused by the powder falling down at some height from the chute. If the quantity of discharged powder during one time interval is smaller than the readability of the analytical micro-balance, the recorded mass value will not increase smoothly but incrementally even without any impact effect. The result is that the “apparent” instantaneous flow rate can fluctuate wildly. In this case, it is necessary either to lengthen the measurement time interval or better to smooth (average) the raw data on the accumulated mass over a suitable time interval before calculating the “instantaneous” flow rate. However, this could not completely eliminate the impact effect, not to mention the random noise. Thus it might be more meaningful to consider the mean value of the instantaneous flow rate over a sufficiently but not overly long time period of, say, 100 seconds.

4.7.2 Ordinary electronic balance

The readability of this balance is 2 grams. The same reasoning given in 4.7.1 also applies here, so the same approach has been adopted.

CHAPTER 5

RESULTS AND DISCUSSION

In this research, after cumulative mass data have been smoothed over a suitable short time interval we calculate the instantaneous flow rate by the numerical differentiation method.

5.1 Effect of Data Smoothing Interval and Finite Difference Scheme on the instantaneous Flow Rate

5.1.1 Effect of data smoothing interval on the instantaneous flow rate

Because of the inevitable impact effect and the limit on the readability of the electronic balances, smoothing of instant raw data before calculating the instantaneous flow rate is absolutely necessary. From Figure 5.1.1 (screw feeder) and 5.1.3 (rotary table feeder), we see that the random fluctuation around a linear increase in the collected mass versus time was reduced when the instant values of the collected mass was smoothed in advance by averaging them over a short time interval. The resulting instantaneous flow rate versus time for both cases of high and low flow rates exhibited less fluctuation as the smoothing interval was lengthened from every 1 to 10 seconds. Refer to Figure 5.1.2 (screw feeder) and 5.1.4 (rotary table feeder). In the case of a very low flow rate, the theoretical continuous linear increase in the cumulative mass versus time would show up as a stepwise increase because of the limited readability (resolution of the electronic balance combined with the digitization of weight signal). In this case the impact effect would be less than the case of high flow rate. On the other hand, when the flow rate is high, the stepwise effect of readability would become less because the increase in mass per second was more rapid. In contrast, the impact effect caused by the drop of discharged material via the chute onto the weighing platform from a height of around 700 mm for the case of the screw feeder and 400 mm for the case of the rotary table feeder would become more powerful and caused greater vibration in the detected values. As a consequence, the calculated instantaneous flow rate would fluctuate significantly without any data smoothing. This is the reason that the fluctuation of the flow rate was reduced when the smoothing time interval (m) was lengthened.

In this work the standard deviation (σ_Q) of the flow rate Q over a suitable time interval (nm), which is sufficiently longer than the smoothing time interval (m) but is sufficiently smaller than the experimental run time, was adopted as an indicator of the degree of fluctuation of the instantaneous flow rate. Since the magnitude of the flow rate investigated was also varied, a more suitable indicator of the flow variability should be the ratio of σ_Q to Q_m over the same time interval (nm).

In conclusion, it is necessary to carry out data smoothing over a suitable time interval (m) in order to reduce the combined effect of readability and impact forces. However, if the smoothing interval m is too long, then crucial information on the flow variability (instantaneous flow rate) will be lost. It has been found that the suitable value of m should be around 4 to 10 (seconds), as can be seen from Figures 5.1.2 and 5.1.4

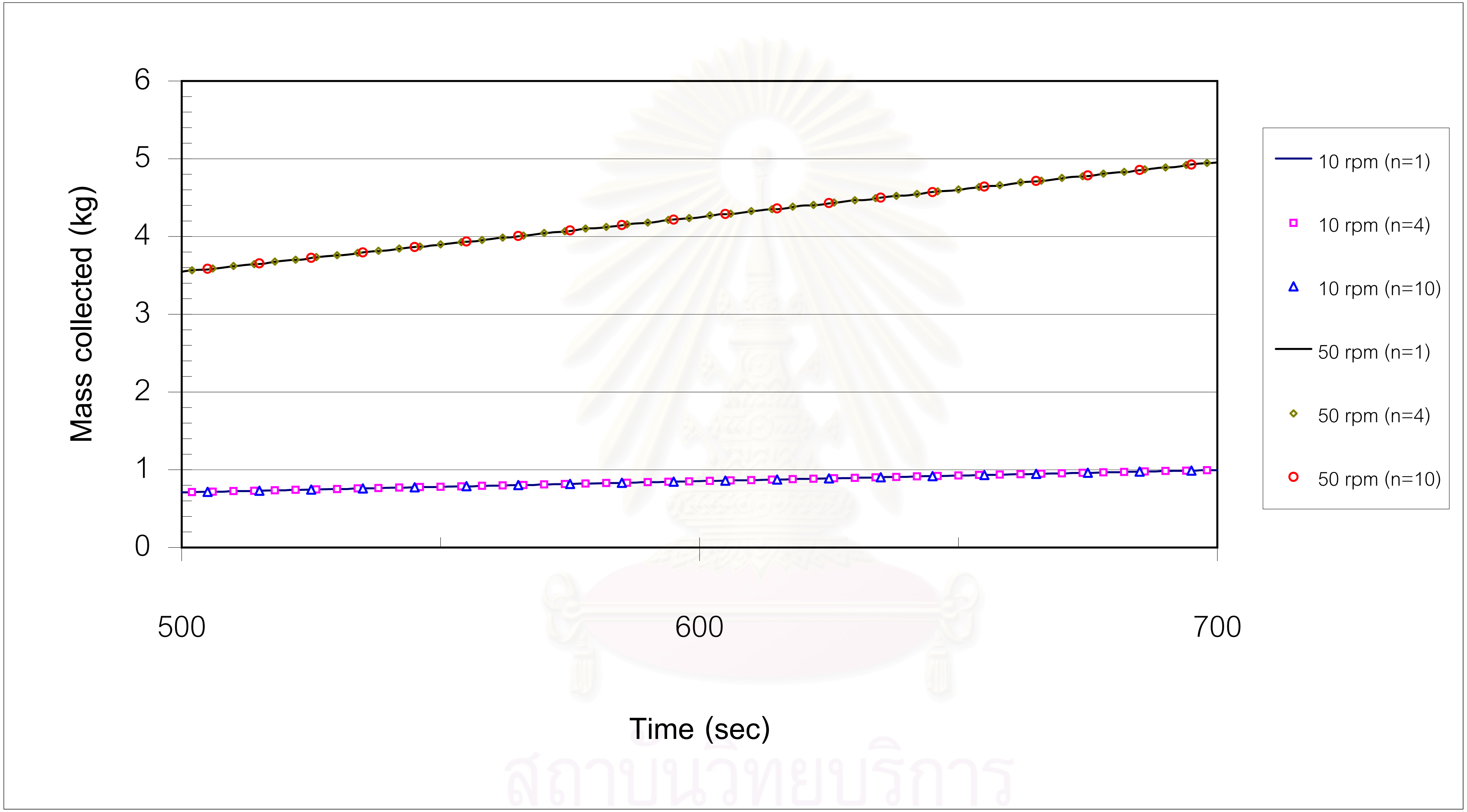
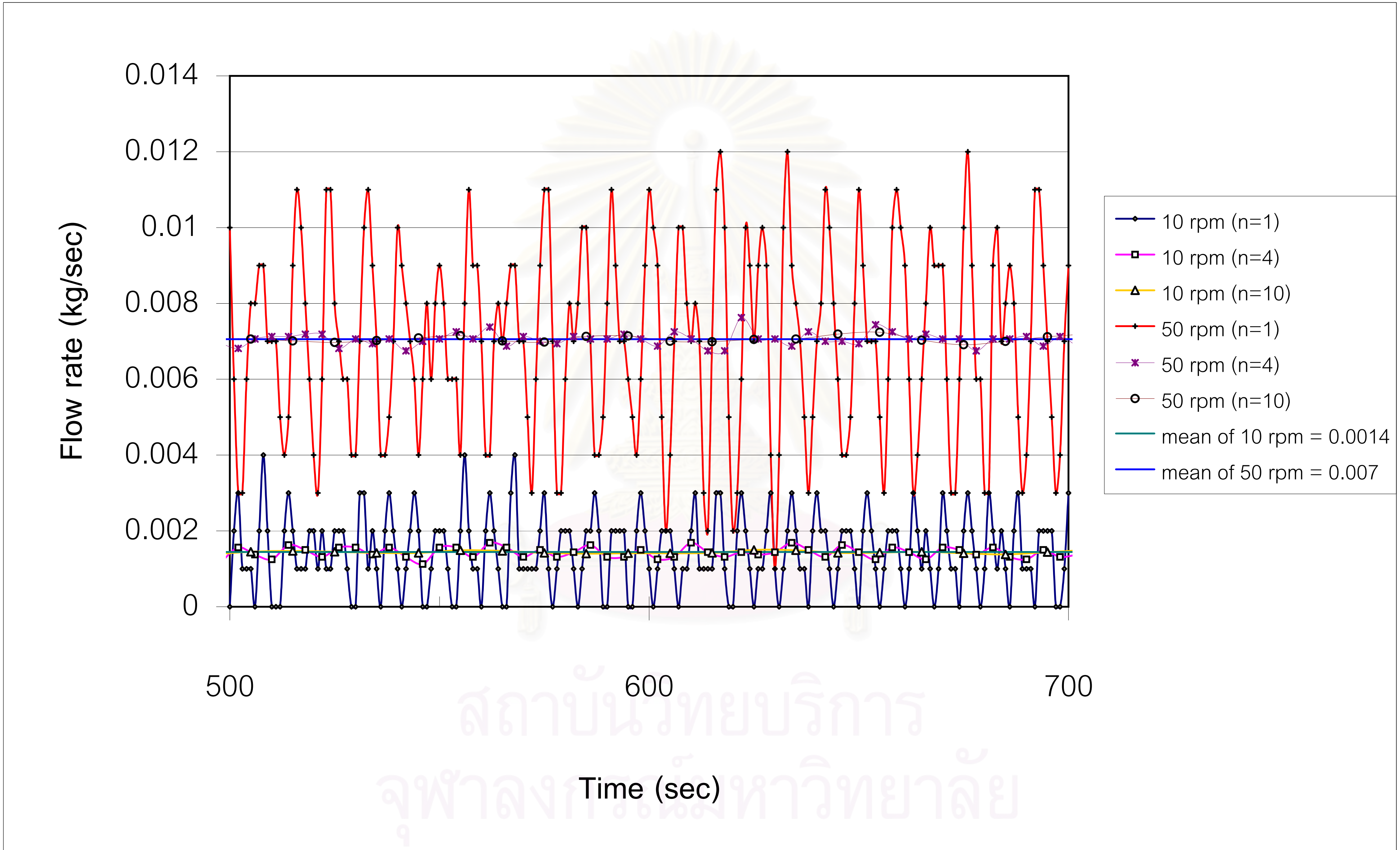
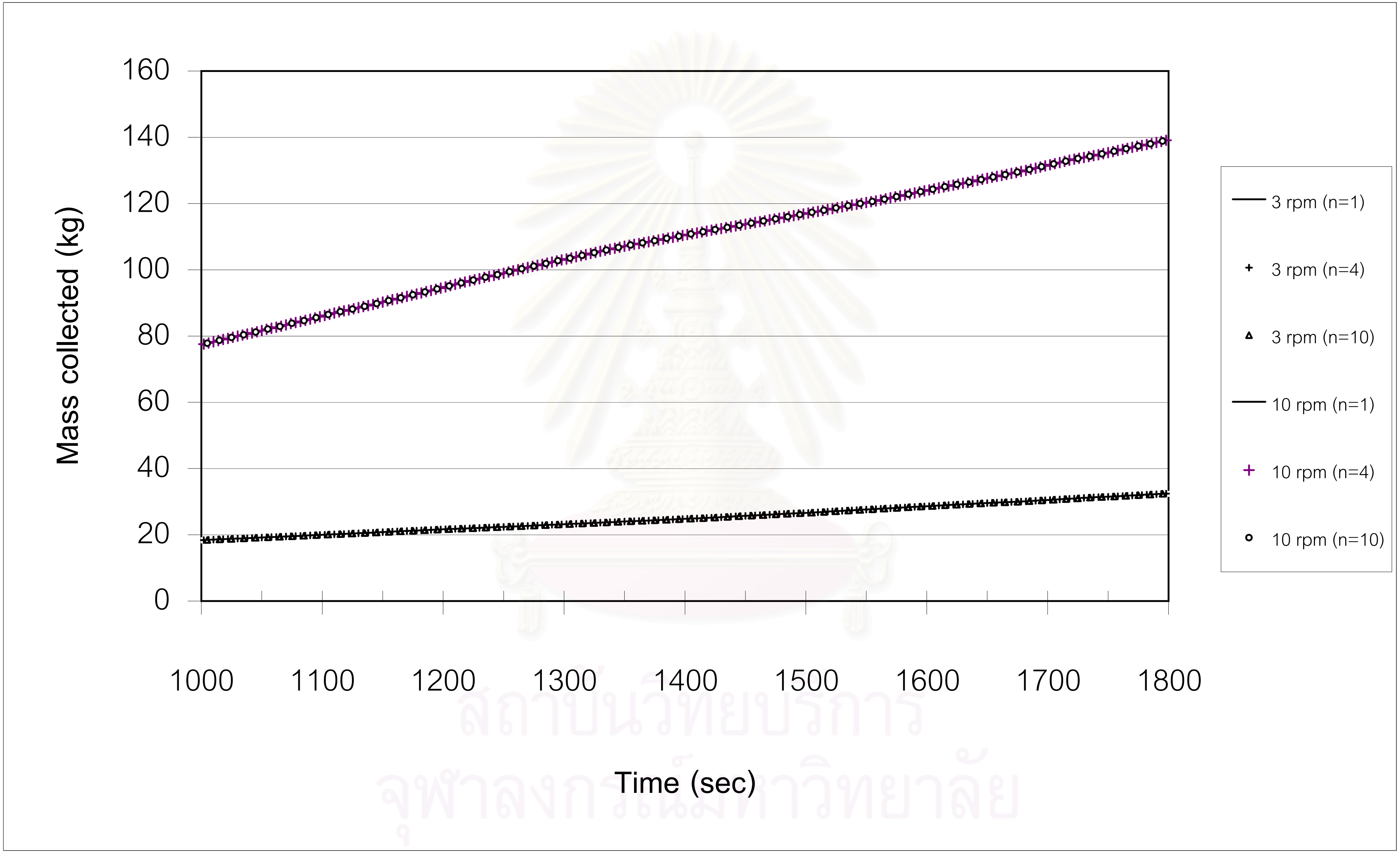
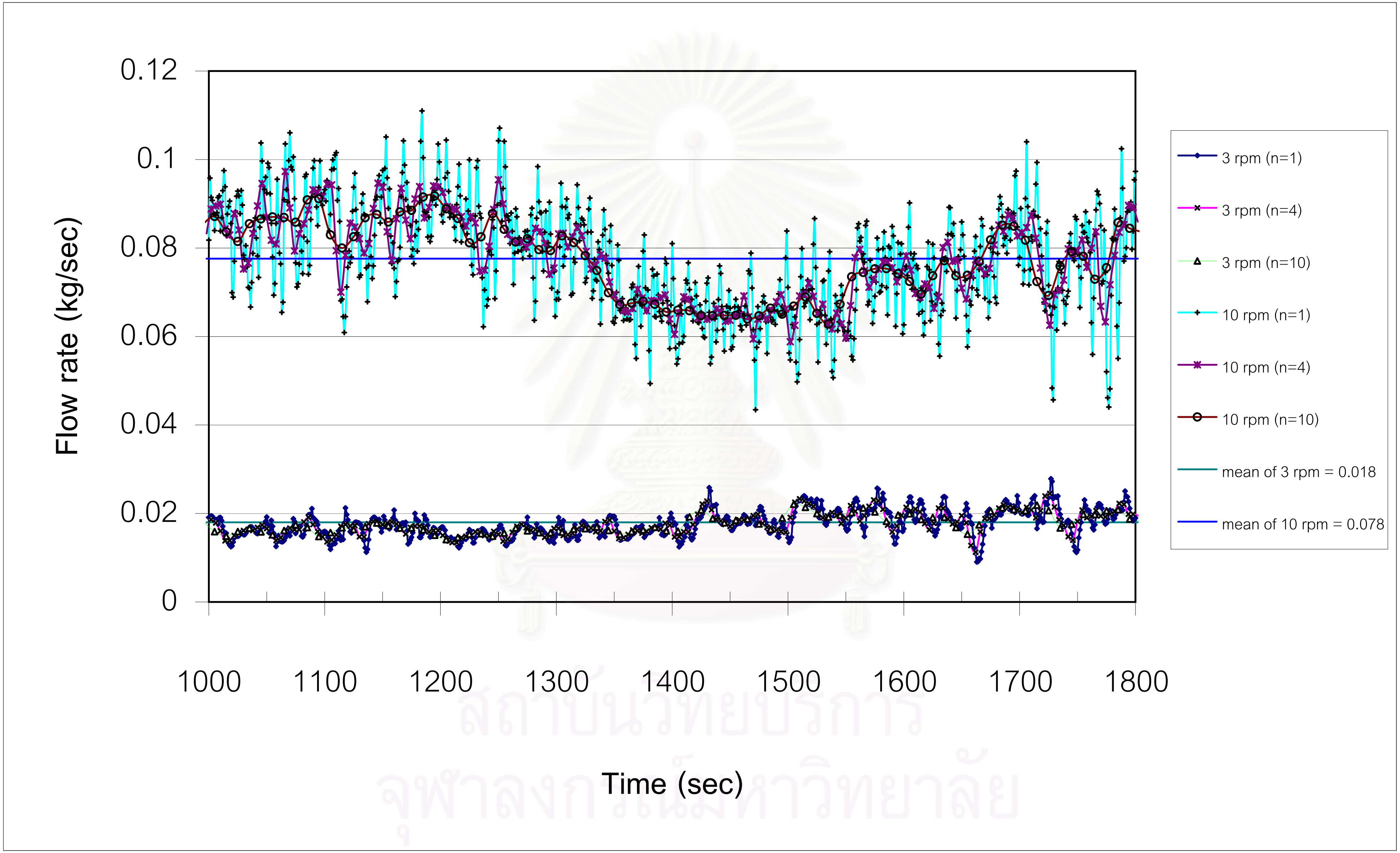


Fig.5.1.1: An example of the smoothing of collected mass data (Effect of n for S-PEr-Tp-P2-10 and S-PEr-Tp-P2-50)


0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Flow rate (kg/sec)
500
600
700
Time (sec)
10 rpm (n=1)
10 rpm (n=4)
10 rpm (n=10)
50 rpm (n=1)
50 rpm (n=4)
50 rpm (n=10)
mean of 10 rpm = 0.0014
mean of 50 rpm = 0.007


Mass collected (kg)
0
20
40
60
80
100
120
140
160
1000
1100
1200
1300
1400
1500
1600
1700
1800
Time (sec)
3 rpm (n=1)
3 rpm (n=4)
3 rpm (n=10)
10 rpm (n=1)
10 rpm (n=4)
10 rpm (n=10)



Flow rate (kg/sec)
0.12
0.1
0.08
0.06
0.04
0.02
0
1000
1100
1200
1300
1400
1500
1600
1700
1800
Time (sec)
3 rpm (n=1)
3 rpm (n=4)
3 rpm (n=10)
10 rpm (n=1)
10 rpm (n=4)
10 rpm (n=10)
mean of 3 rpm = 0.018
mean of 10 rpm = 0.078

5.1.2 Effect of finite difference formula used

Figure 5.1.5 illustrates the instantaneous flow rate calculated using the central-difference, forward-difference and backward-difference expressions for the case of m = 10, n = 10. The results agree with the well-known fact that the central-difference expression is more accurate than either the forward- or backward-difference expressions (See section 4.5). Though not shown graphically here for other experimental conditions and different combination of m and n, the central-difference formula has been found to be more reliable and it has been adopted in all calculations of the flow rate in this work.

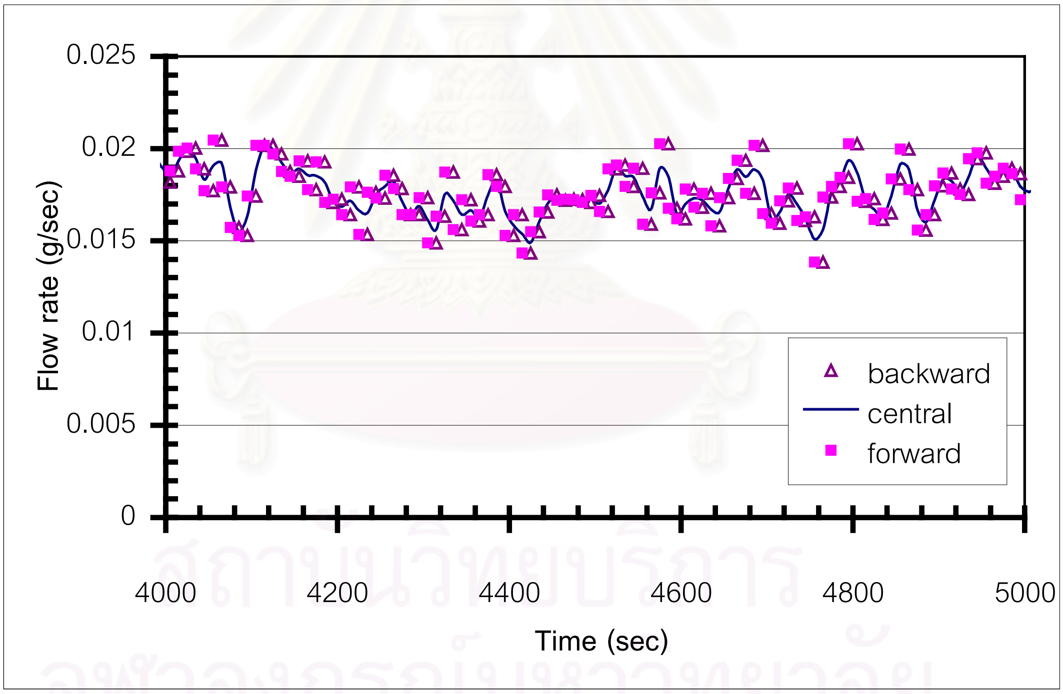


Fig.5.1.5: An example of the effect of finite difference formula
(R-PEr-F1-C3-3; m = 10, n = 10)

5.1.3 Suitable time interval (nm)

In steady continuous mixing operation, two or more streams are continuously mixed together to maintain a fixed composition (volume, mass, or mole basis) of the combined stream. To minimize the undesirable fluctuation in the resulting composition, each feeder for the component streams must have minimum flow variation in the short, medium and long terms. The short-term variation is reflected in the fluctuation of the instantaneous flow rate (σ_Q or σ_Q / Q_m). In steady-state operation, the long-term variation will be determined by the operational stability of the feeder over a long period of time without any drifting of its zero point, decrease in readability and so on.

As mentioned in section 5.1.1, short-term flow variation can be indicated, after proper data smoothing, by the value of σ_Q and/or σ_Q / Q_m over a suitable time period (nm). Because of constraints on time and test materials, it is not feasible to investigate the long-term flow variation of the screw feeder, nor rotary table feeder. Nevertheless, it is interesting and useful to study the medium-term flow variation of either feeder over a period of, say 10,000 seconds. In the experiments, the maximum length of the test period will be determined by the flow rate of interest and the maximum weighing capacity of the electronic balance used.

To find out the medium-term flow variation, we first divide the total test period by nm to obtain the number of time samples k. As defined by equation (4.6.1),(4.6.2), (4.6.3) and (4.6.4), we calculate Q_{mj} for each period of length nm, and then $\overline{Q}_m$ and σ_{Qm} for the total test period using the values of Q_{mj} (j = 1, 2, 3,..., k). Figure 5.1.6 (screw feeder) and Figure 5.1.7 (rotary table feeder) are presented graphically comparison the values of $\sigma_{Qm}/\overline{Q}_m$ at the same smoothing time interval (n) between the case of nm = 100 and nm = 1000 (seconds).

As expected, at the same n the values of $\sigma_{Qm}/\overline{Q}_m$ for nm = 1000 are always smaller than the corresponding values for nm = 100. This is because $\overline{Q}_m$ is independent of k and nm but σ_{Qm} generally becomes smaller as k becomes smaller (nm becomes bigger). On the other hand, when nm becomes too big, there will be little information left on the medium-term flow variation versus time interval because the values of σ_{Qm}, whose number is equal to k, will become much less. Thus it is better to adopt nm = 100 (seconds) in this work. Since this indicator serves as a reference only, we should make the choice that gives a higher value of $\sigma_{Qm}/\overline{Q}_m$ when comparing between two different types of feeders.

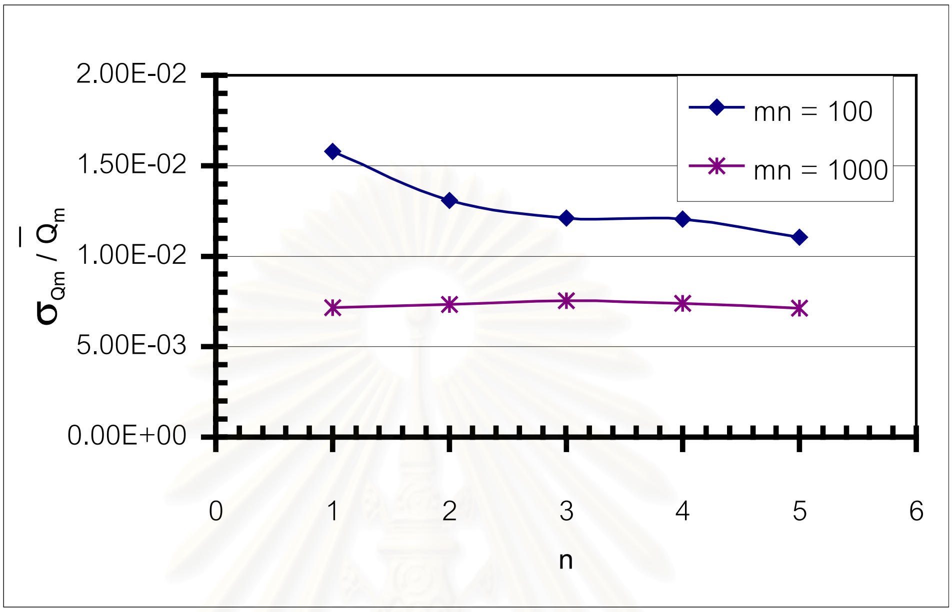


Fig.5.1.6: An example of effect of the time interval (mn)

(From S-PEr-Tp-P2-10)

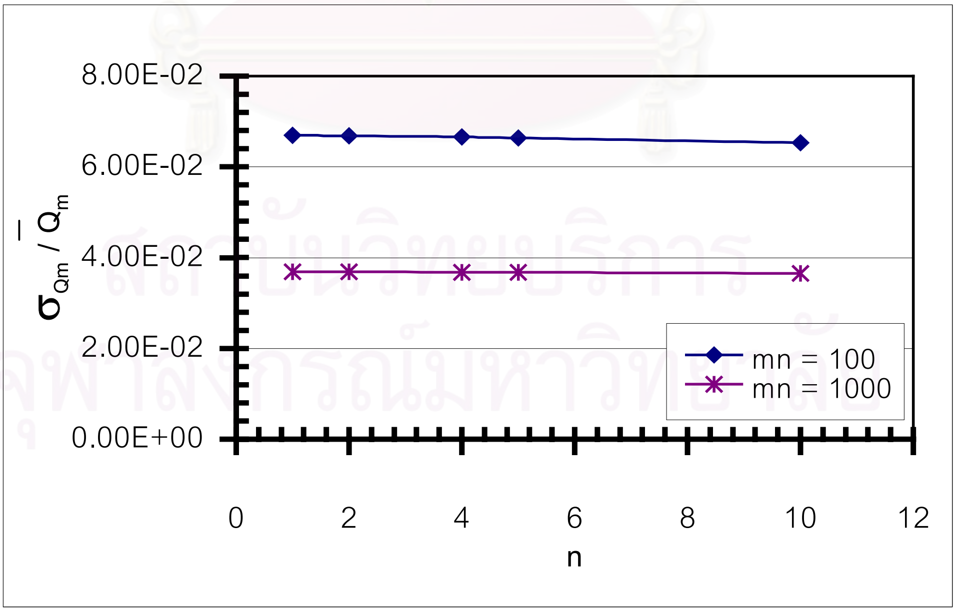


Fig.5.1.7: An example of effect of the time interval (mn)

(From R-PEr-F1-C3-3)

5.2 Effect of Static Electricity and Adhesion

5.2.1 Effect of static electricity

Figure 5.2.1 shows the observed room relative humidity (R.H.) and instantaneous flow rate of LLDPE resin as a function of time. It can be seen that the fluctuation of the flow rate in the initial period (up to about 3000 sec) in which R.H. ranged from 72 to 75% was visibly less than the subsequent period in which R.H. ranged from 70 to 72%. As the LLDPE resin particles rub against a different kind of material, say, the wall, static electricity was generated. It is a well-known fact that, when the surrounding air is more humid, less electrostatic charge will remain on the particles. Thus Figure 5.2.1 strongly suggests that static electricity played a significant role on the flow rate fluctuation. (See section 3.5.1)

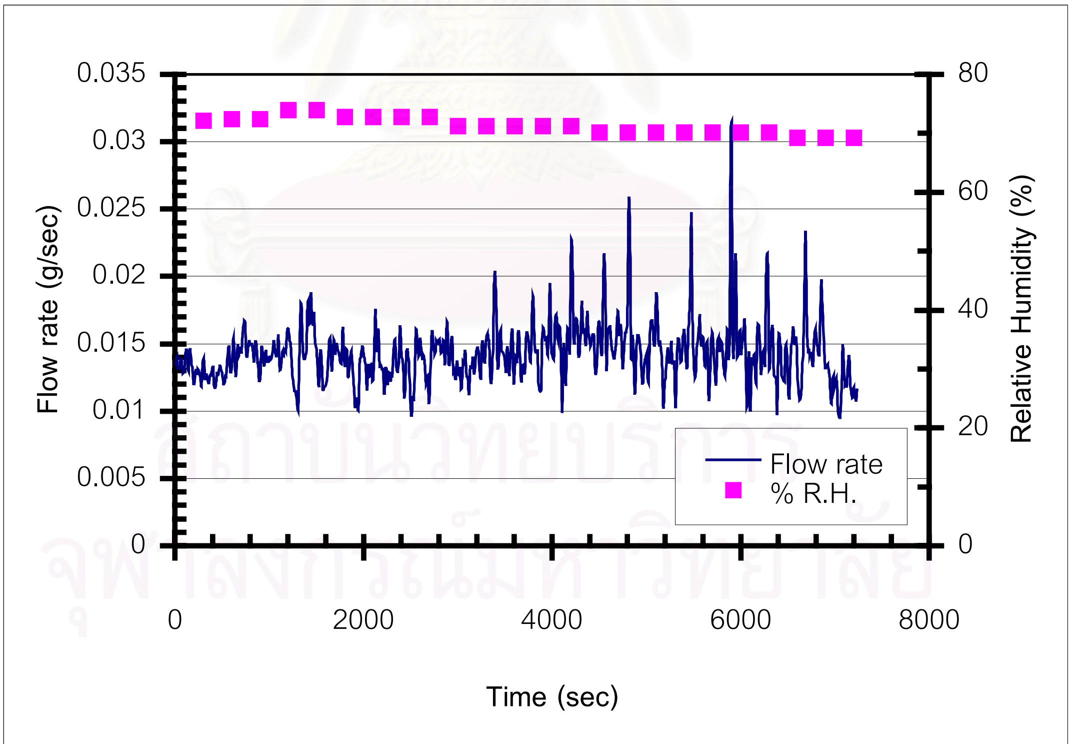


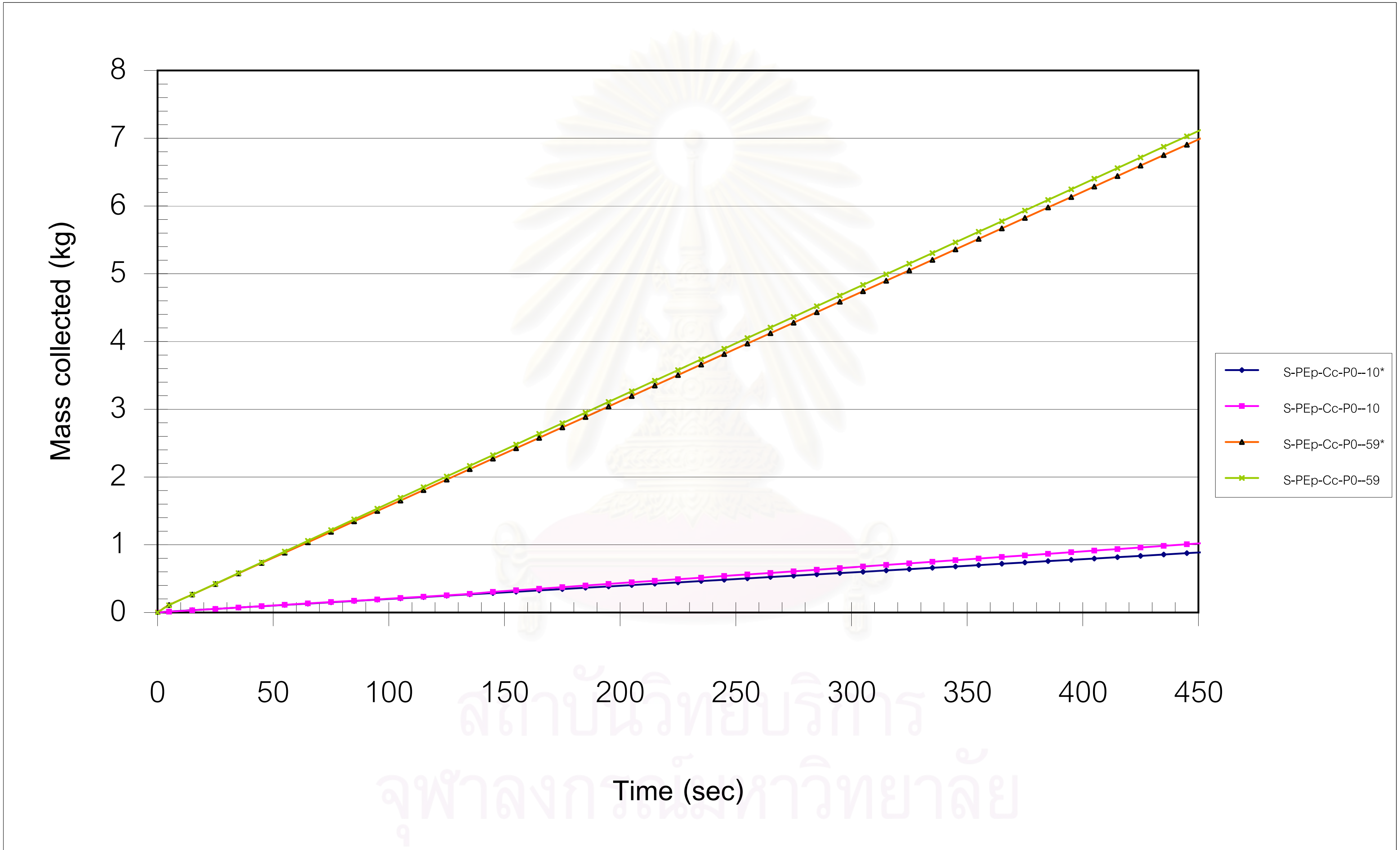
Fig.5.2.1: An example of effect of static electricity

(R-PEr-F1-C3-3x; n = 10, m = 10)

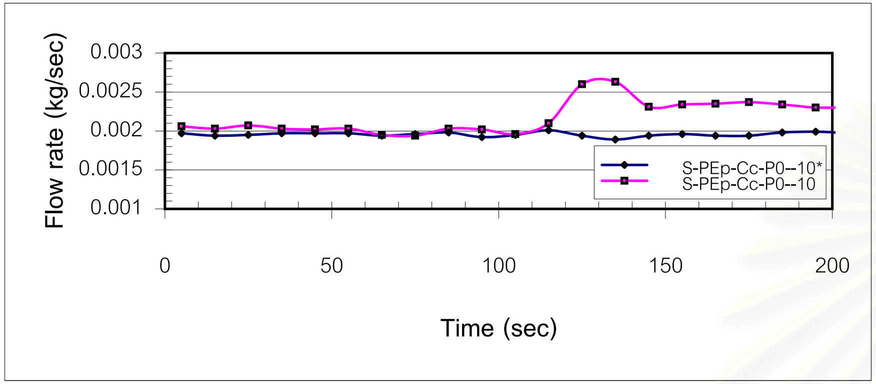
5.2.2 Effect of grounding

Figures 5.2.2 (screw feeder) and 5.2.4 (rotary table feeder) show the observed relation between the collected mass and time with and without grounding. Generally the collected mass increased when grounding was added. The exception is the effect of grounding at a high speed of the turntable in the case of rotary table feeder. These results can be explained by the fact that when the speed of turntable was high, the thickness of the resulting particle layer was increased. Thus grounding of the surface of the instrument cannot effectively get rid of the electrostatic charges in the layer. As an example, Figure 5.2.3 compares the effect of grounding at a high and low flow rate. As illustrated in Figure 5.2.3c and 5.2.3d, when the discharge flow rate was high, grounding produced a slightly enhanced effect on the flow rate. On the other hand, Figure 5.2.3a and 5.2.3b shows that, at a low flow rate, grounding initially had little effect on the discharge flow rate but without grounding the electrostatic effect became quite remarkable. After some initial period, the discharge flow rate was significantly increased in the case of grounding, as shown in Figure 5.2.3b. Though it is not clear how the grounding enhanced the discharge flow rate of the screw feeder, the results shows that grounding of the feeder system reduced the buildup of electrostatic charge, thus contributing not only to safety from dust explosion but also to an increased flow rate, especially when the flow rate was low.

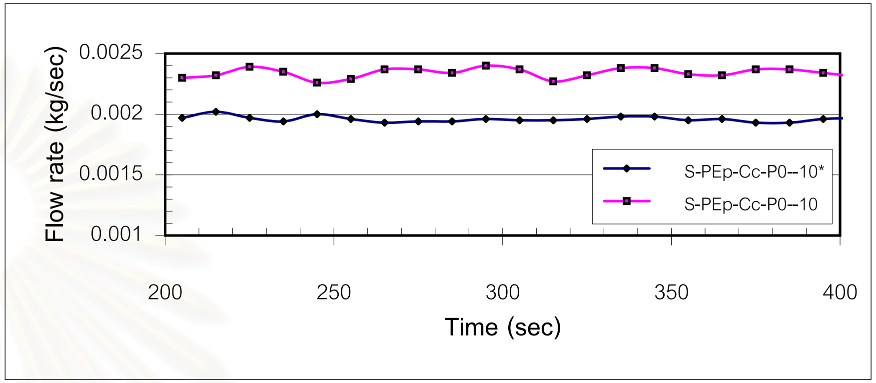
Similarly, Figure 5.2.5 shows that the favorable effect of grounding was more pronounced when the discharge flow rate was low in the case of the rotary table feeder. As explained above, the trend contradicts the effect of grounding when the discharge flow rate was high. These results agree with the relation between the collected mass and time. Therefore, all of the subsequent experimental runs would be carried out with grounding of the feeder system.



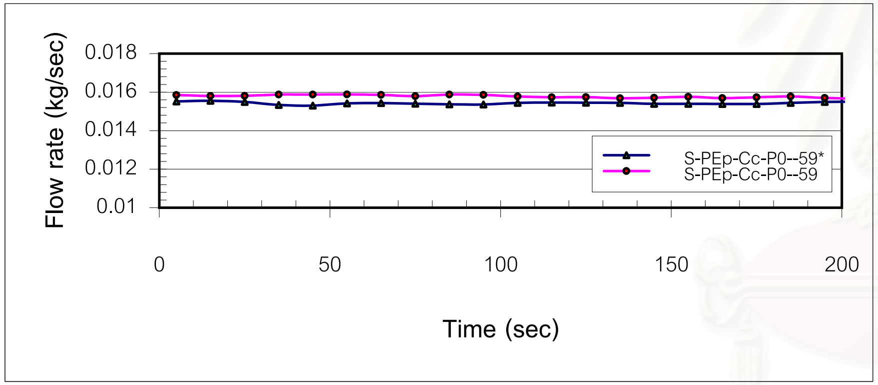
Mass collected (kg)
0
1
2
3
4
5
6
7
8
0
50
100
150
200
250
300
350
400
450
Time (sec)
S-PEp-Cc-P0--10*
S-PEp-Cc-P0--10
S-PEp-Cc-P0--59*
S-PEp-Cc-P0--59



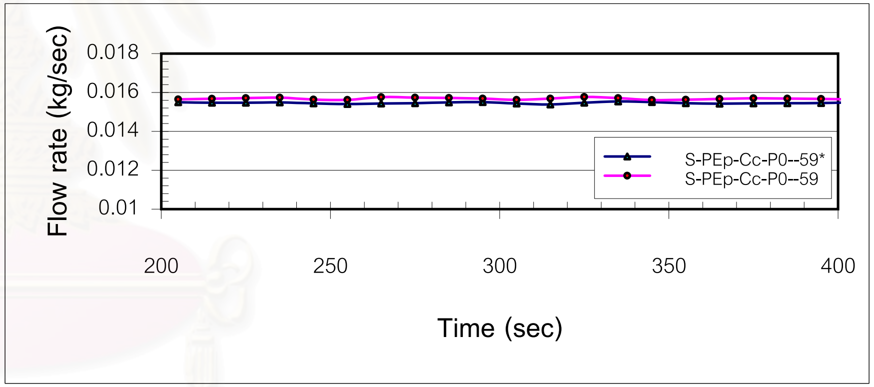
(a)



(b)



(C)



(d)

Fig.5.2.3: An example of grounding effect (S-PEp-Cc-P0-10, -10*, -59 and -59*)

(a) Low flow rate, initial period (b) Low flow rate, subsequent period

(c) High flow rate, initial period (d) High flow rate, subsequent period

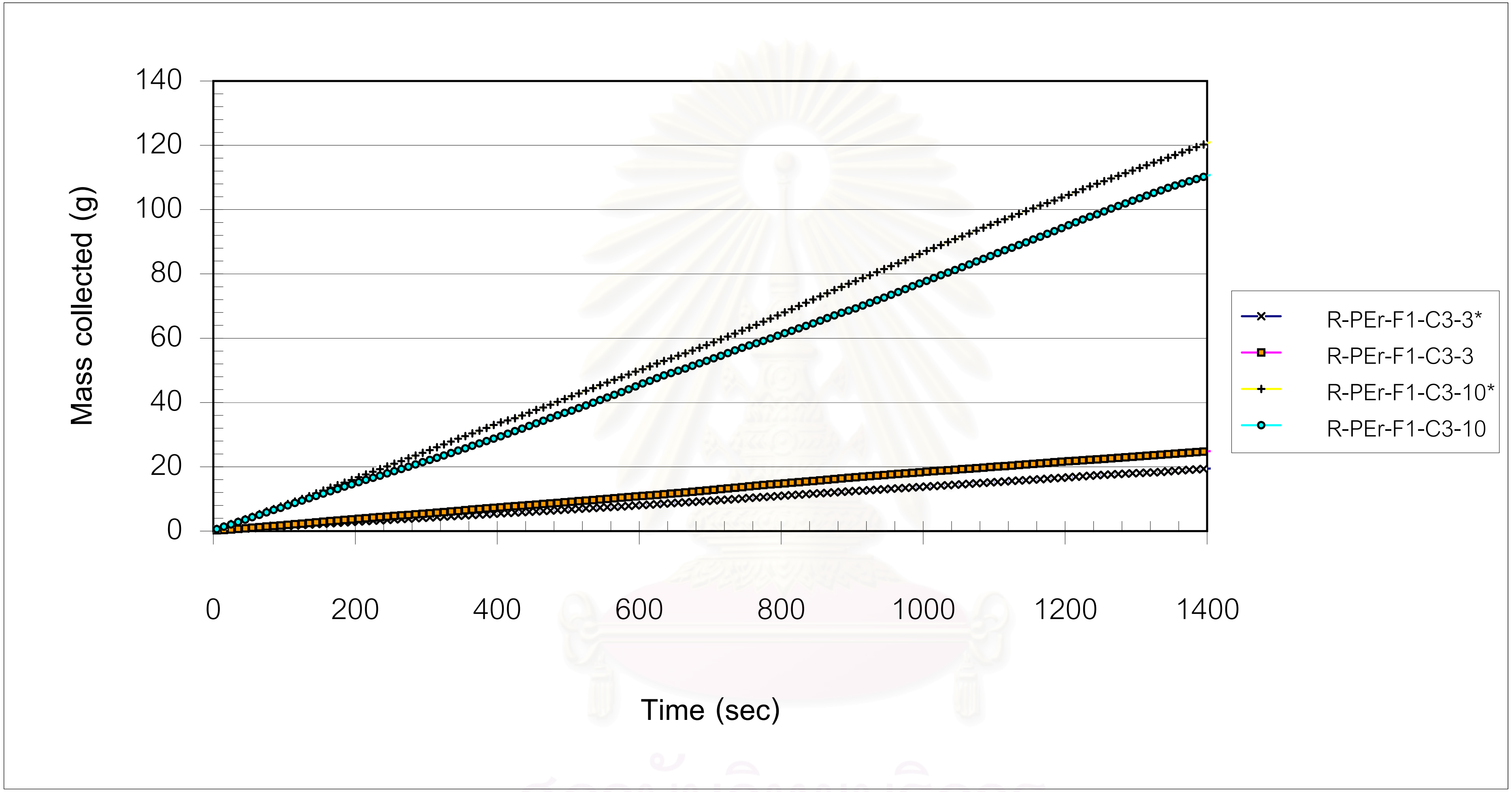
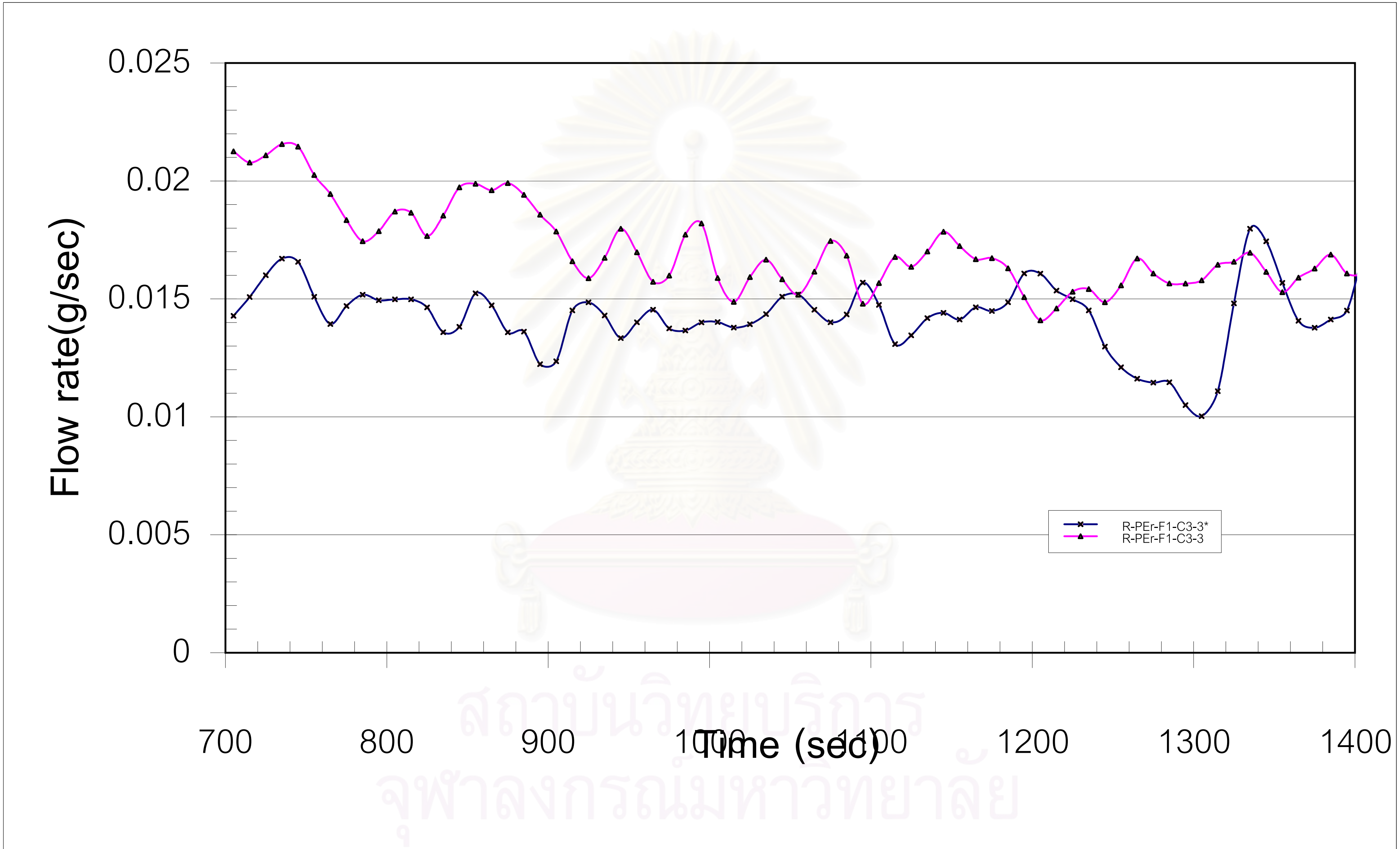


Fig.5.2.4: An example of grounding effect in the case of rotary table feeder (R-PEr-F1-C3-3*, -3, -10* and -10)


0.025
0.02
0.015
0.01
0.005
0
Flow rate(g/sec)
700
800
900
1000
1100
1200
1300
1400
Time (sec)
R-PEr-F1-C3-3*
R-PEr-F1-C3-3

5.3 Effect of Factors on the Fluctuation of Discharge Flow Rate of the Screw Feeder

5.3.1 Linear low density polyethylene (LLDPE)

5.3.1.1 LLDPE resin

5.3.1.1.1 Type of discharge outlet

As shown in Table 5.3.1, the trapezoidal outlet got a minimum value in both types of ranking. These results can be explained by the fact that the front width of the opening was small enough to control the local discharge rate below the average flow rate. This forced the LLDPE resin particles to be conveyed beyond the pitch of the screw before being completely discharged, thus resulting in elimination of the pulsing flow. The same conclusions are reached in Table 5.3.2, when considering the number of time interval (k). Here $\sigma_{Qm}/\overline{Q}_m$ was used to indicate the medium-term flow variation.

5.3.1.1.2 Effect of solid lubricant

When a mixture of LLDPE resin and 0.5 wt% stearic acid was fed to the screw feeder, it was found that the heat generated from the frictional effect melted the stearic acid which coated the cylindrical wall and the blade of the screw. This coated film could not be cleaned up after each experimental condition, so the case of LLDPE resin with stearic acid was not pursued.

Table 5.3.1: Ranking of the outlet type in terms of $\sigma_{Qm}/\overline{Q}_m$ (S-PEr-C-D-n)

Type 1: Ranking by points (1 point means the least flow variation)

Speed(rpm)	Rank of aperture shape (points)																			
	Circular					Square					Trapezoidal					Triangular				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
10	4	4	2	4	4	2	2	3	3	2	1	1	1	1	1	3	3	4	2	3
26	2	4	3	4	4	3	3	4	3	3	1	1	1	1	1	4	2	2	2	2
38	2	2	3	4	4	4	3	2	3	3	1	1	1	1	1	3	4	4	2	2
50	4	4	3	4	3	3	3	4	3	4	1	1	1	1	1	2	2	2	2	2
59	4	1	2	2	4	3	4	3	4	3	1	3	1	3	1	2	2	4	1	2
Sum	16	15	13	18	19	15	15	16	16	15	5	7	5	7	5	14	13	16	9	11

Note: 1 = no back pressure, 2 = step-down back pressure,

3 = back pressure of 1 kg / cm^2, 4 = back pressure of 1.5 kg / cm^2,

5 = back pressure of 2 kg / cm^2

Type 2: Variance (B^2) and standard deviation $\sigma_{Qm}/\overline{Q}_m$(B) (From S-PEr-C-P0-n)

Speed(rpm)	Shape of aperture							
	Circular		Square		Trapezoidal		Triangular	
	B	B^2	B	B^2	B	B^2	B	B^2
10	1.444E-01	2.085E-02	9.544E-02	9.108E-03	2.743E-02	7.526E-04	1.098E-01	1.205E-02
26	9.317E-02	8.681E-03	9.798E-02	9.600E-03	1.845E-02	3.404E-04	1.015E-01	1.029E-02
38	5.171E-02	2.674E-03	8.080E-02	6.528E-03	1.941E-02	3.766E-04	8.005E-02	6.407E-03
50	9.991E-02	9.983E-03	8.165E-02	6.666E-03	1.557E-02	2.423E-04	5.007E-02	2.507E-03
59	1.143E-01	1.306E-02	6.596E-02	4.351E-03	8.503E-03	7.230E-05	1.799E-02	3.236E-04
Sum	5.035E-01	5.525E-02	4.218E-01	3.625E-02	8.936E-02	1.784E-03	3.593E-01	3.158E-02
$(\text{Sum } B^2)^{1/2}$		2.351E-01		1.904E-01		4.224E-02		1.777E-01

Table 5.3.2: Ranking the outlet type in terms of σ_Q / Q_m (S-PEr-C-P2-n)

Outlet Discharge	Time sample no (k)													Total	$\sigma_{Qm}/\overline{Q}_m$
	1	2	3	4	5	6	7	8	9	10	11	12	13		
circular	4	4	2	4	4	2	3	3	4	4	3	4	4	45	4
square	2	3	4	1	1	1	4	4	1	3	4	1	2	31	3
trapezoidal	1	1	1	2	2	4	2	1	2	2	1	2	1	22	1
triangular	3	2	3	3	3	3	1	2	3	1	2	3	3	32	2

5.3.1.2 LLDPE pellets

5.3.1.2.1 Type of Discharge Outlet

As shown in Table 5.3.3, the circular outlet got a minimum value at no back pressure in ranking by points. These results can be explained by the fact that LLDPE pellets were large particles. Therefore discharge through the circular outlet provided the smoothest flow because the circular outlet has no small corners. In contrast when back pressure was applied, the square outlet got a minimum value. It can be explained by the fact that when LLDPE pellets became more densely packed, discharge through the square outlet provided the smoothest flow because the square outlet has a longer length of each side than the front arc of the circular outlet.

Table 5.3.3: Ranking of the outlet type in terms of $\sigma_{Qm}/\ \overline{Q}_m$(S-PEp-C-D-n)

Type 1: Ranking by points (1 point means the least flow variation)

Speed(rpm)	Rank of aperture shape(points)							
	Circular		Square		Trapezoidal		Triangular	
	1	2	1	2	1	2	1	2
10	2	2	1	3	4	1	3	4
26	1	2	3	1	2	4	4	3
38	1	4	3	1	2	3	4	2
50	3	3	1	1	2	2	4	4
59	1	1	2	4	4	3	3	2
Sum	8	12	10	10	14	13	18	15

Note: 1 = no back pressure, 2 = back pressure of 1 kg/cm^2

Type 2: Variance (B^2) and standard deviation $\sigma_{Qm}\ /\ \overline{Q}_m$(B) (From S-PEp-C-P0-n)

Speed(rpm)	Shape of aperture							
	Circular		Square		Trapezoidal		Triangular	
	B	B^2	B	B^2	B	B^2	B	B^2
10	2.650E-02	7.023E-04	1.046E-02	1.094E-04	1.593E-01	2.538E-02	3.408E-02	1.162E-03
26	7.266E-03	5.279E-05	1.152E-02	1.327E-04	9.208E-03	8.479E-05	1.700E-02	2.890E-04
38	1.481E-03	2.195E-06	1.068E-02	1.140E-04	5.171E-03	2.674E-05	1.682E-02	2.828E-04
50	5.279E-03	2.787E-05	3.635E-03	1.321E-05	4.172E-03	1.741E-05	2.555E-02	6.529E-04
59	6.279E-03	3.942E-05	8.225E-03	6.764E-05	8.620E-02	7.430E-03	1.829E-02	3.346E-04
Sum	4.680E-02	8.245E-04	4.452E-02	4.370E-04	2.641E-01	3.294E-02	1.117E-01	2.721E-03
$(\text{Sum } B^2)^{1/2}$		2.871E-02		2.091E-02		1.815E-01		5.216E-02

5.3.1.2.2 Effect of solid Lubricant

The effect of lubricant particles on the fluctuation of discharge flow rate is illustrated in Figure 5.3.1. Fluctuation of the flow rate was generally reduced after stearic acid was pre-mixed with LLDPE pellets in the case of back pressure of 1 kg/cm^2. The trend apparently contradicted the effect of stearic acid in the case of no back pressure. When back pressure was applied, the opening area was throttled and LLDPE pellets always fully occupied the whole opening area. In conclusion, the lubricating effect of stearic acid, on the LLDPE pellets provided a smoother flow, and pulsing was reduced.

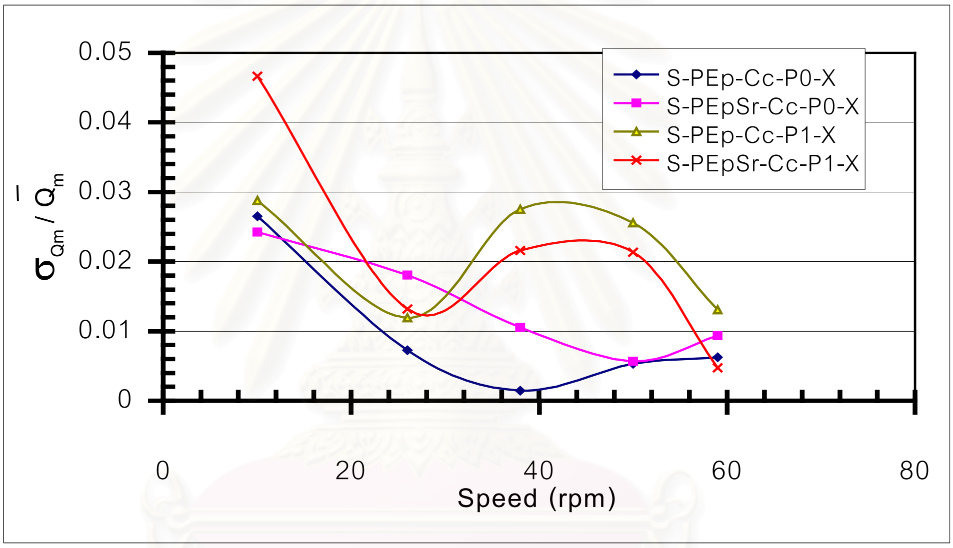


Fig.5.3.1: An example of the effect of stearic acid lubricant (S-PEp-Cc-P0-n, S-PEpSr-Cc-P0-n, S-PEp-Cc-P1-n and S-PEpSr-Cc-P1-n)

5.3.2 Gypsum powder

5.3.2.1 Type of discharge outlet

As shown in Table 5.3.4, the circular outlet got a minimum value at no back pressure in both of types of ranking. These results can be explained by the fact that gypsum particles have high cohesiveness and poor flowability. Therefore discharge through the circular outlet provided the smoothest flow because the circular outlet has no small corners. When back pressure was applied, the trapezoidal outlet got a minimum value. It can be explained by the fact that when the opening area was throttled, gypsum particles become more densely packed and their flow behavior resembled that of LLDPE resin.

Table 5.3.4: Ranking of the outlet type in terms of $\sigma_{Qm}/\overline{Q}_m$(S-GSM-C-D-n)

Type 1: Ranking by points (1 point means the least flow variation)

Speed(rpm)	Rank of aperture shape							
	Circular		Square		Trapezoidal		Triangular	
	1	2	1	2	1	2	1	2
26	4	3	1	4	2	1	3	2
38	1	1	2	3	4	2	3	4
50	1	2	4	4	2	1	3	3
59	2	2	3	1	1	3	4	4
Sum	8	8	10	12	9	7	13	13

Note: 1 = no back pressure , 2 = back pressure of 0.6 kg/cm^2

Type 2: Variance (B^2) and standard deviation $\sigma_{Qm}/\overline{Q}_m$(B)
(From S-GSM-C-P0-n)

Speed(rpm)	Shape of aperture							
	Circular		Square		Trapezoidal		Triangular	
	B	B^2	B	B^2	B	B^2	B	B^2
10	8.449E-02	7.138E-03	4.412E-02	1.947E-03	7.696E-02	5.923E-03	7.945E-02	6.313E-03
26	6.722E-03	4.518E-05	5.687E-02	3.235E-03	1.203E-01	1.446E-02	9.249E-02	8.554E-03
38	4.662E-03	2.174E-05	1.447E-01	2.095E-02	3.018E-02	9.111E-04	1.249E-01	1.559E-02
50	5.468E-02	2.990E-03	6.784E-02	4.602E-03	2.261E-02	5.110E-04	1.292E-01	1.668E-02
59	1.506E-01	1.020E-02	3.136E-01	3.073E-02	2.500E-01	2.181E-02	4.260E-01	4.714E-02
$(Sum\ B^2)^{1/2}$		1.010E-01		1.753E-01		1.477E-01		2.171E-01

5.3.2.2 Effect of solid lubricant

The lubricating effect of stearic acid on gypsum powder is shown in Figure 5.3.2. It can be seen that the fluctuation of the flow rate was increased after stearic acid was pre-mixed into gypsum powder. These results can be explained by the fact that the addition of lubricant contributed to the reduction of friction between gypsum powder and the surface of the screw as well as the inner cylinder wall. The reducing effect was more pronounced on the wall which has less surface area across the flow direction. So the particles had a relatively higher tender to stick on the screw surface during each screw evolution. Thus more slippage occurred on the inner well compared to the case of pure gypsum and thus contributed to more fluctuation of the flow .

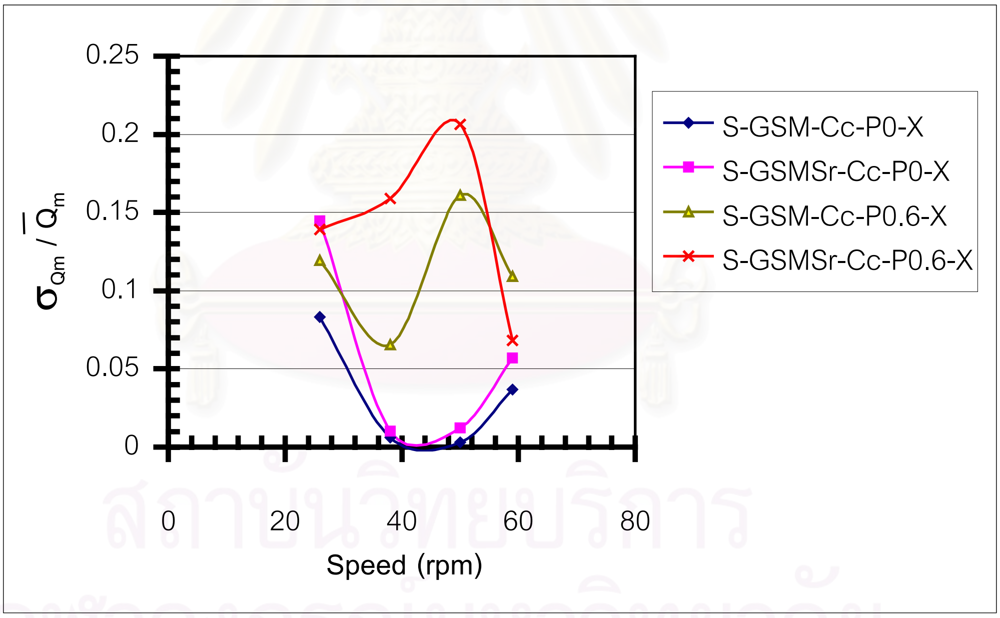


Fig.5.3.2: An example of the effect of stearic acid lubricant (S-GSM-Cc-P0-n, S-GSMSr-Cc-P0-n, S-GSM-Cc-P0.6-n and S-GSMSr-Cc-P0.6-n)

5.4 Effect of Factors on the Fluctuation of Discharge Flow Rate of the Rotary Table Feeder

5.4.1 Linear low density polyethylene (LLDPE) resin

5.4.1.1 Effect of the gaps between the scraping plates and the turntable

From Table 5.4.1, the insertion depth of the fine scraping plate from the turntable edge in the radial direction equalling 12.0 mm and the vertical gap between the coarse scraping plate and the turntable surface equalling 1.95 mm yielded a minimum value in both of types of ranking. These results can be explained by the fact that when the vertical gap between the coarse scraping plate and the turntable surface was maximum at 1.95 mm, even the largest resin particles could pass smoothly under the clearance and no temporary partial blocking caused by the scraping through of the largest particles occurred. On the other hand, when the insertion depth of the fine scraping plate from the turntable edge in the radial direction was greater than 12.0 mm, more LLDPE resin was discharged, causing some particles to fall over and out of the underneath chute. Thus the flow fluctuation tended to decrease when the insertion depth was decreased. Similar results are presented in Table 5.4.2, when considering the effect of the number of time samples (k). Here $\sigma_{Qm}/\overline{Q}_m$ was used to indicate the medium-term flow variation.

Table 5.4.1: Ranking of the scraping plates

Type 1: Ranking by points (1 point means the least flow variation)

Speed(rpm)	Rank of fine and coarse plates (points)																	
	Insertion depth of fine scraping plate(mm)									Gap of coarse scraping plate (mm)								
	12.0			15.0			19.0			0.60			1.20			1.95		
	I	II	III	I	II	III	I	II	III	IV	V	VI	IV	V	VI	IV	V	VI
26	3	2	1	3	2	1	3	2	1	2	1	3	1	2	3	2	1	3
38	3	2	1	3	2	1	3	2	1	2	1	3	2	3	1	3	2	1
50	3	2	1	3	2	1	3	2	1	2	3	1	3	2	1	2	3	1
59	3	2	1	3	1	2	3	1	2	2	1	3	3	2	1	2	3	1
Sum	12	8	4	12	7	5	12	7	5	8	6	10	9	9	6	9	9	6

Note: Gap of coarse scraping plate (mm): I = 0.60 mm , II = 1.20 mm , III = 1.95 mm

Insertion depth of fine scraping plate (mm): IV = 12.0 mm , V = 15.0 mm , VI = 19.0 mm

Type 2: Variance (B^2) and standard deviation $\sigma_{Qm} / \overline{Q}_m(B)$

speed(rpm)	Insertion depth of fine scraping plate 19.0 mm					
	I		II		III	
	B	B^2	B	B^2	B	B^2
3	4.015E-01	1.612E-01	1.646E-01	2.709E-02	8.456E-02	7.151E-03
6	6.881E-01	4.735E-01	4.800E-02	2.304E-03	2.091E-02	4.371E-04
9	3.672E-01	1.349E-01	8.547E-02	7.304E-03	2.334E-02	5.447E-04
10	3.517E-01	1.237E-01	4.887E-02	2.389E-03	7.100E-02	5.041E-03
$(\text{sum } B^2)^{1/2}$		8.933E-01		3.909E-02		1.317E-02

Note: Gap of coarse scraping plate (mm): I = 0.60 mm, II = 1.20 mm, III = 1.95 mm

Table 5.4.2: Ranking of the coarse scraping plate in terms of σ_Q / Q_m

The gap of coarse scraping plate	k																		Total	$\sigma_{Qm}/\bar{Q}_m$
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
C1	3	3	2	3	3	3	3	1	2	3	2	3	3	2	2	2	2	3	40	3
C2	2	2	1	2	1	2	1	3	3	2	1	1	2	3	3	1	3	2	30	2
C3	1	1	3	1	2	1	2	2	1	1	3	2	1	1	1	3	1	1	26	1

Note: Gap of coarse scraping plate (mm): C1 = 0.60 mm , C2 = 1.20 mm , C3 = 1.95 mm

5.4.1.2 Effect of solid lubricant

The lubricating effect of stearic acid on LLDPE resin is shown in Figure 5.4.1. It can be seen that the fluctuation of the flow rate was increased when the stearic acid was pre-mixed into LLDPE resin. These results can be explained by the fact that the addition of the lubricant contributed to the reduction of friction between the resin particles and the surface of the turntable. The flowability of the mixture become higher then that of pure LLDPE resins. The particles tended to slip more easily on the surface of the turntable during each turntable evolution, thus resulting in more discharge flow fluctuation than the case of pure LLDPE resin.

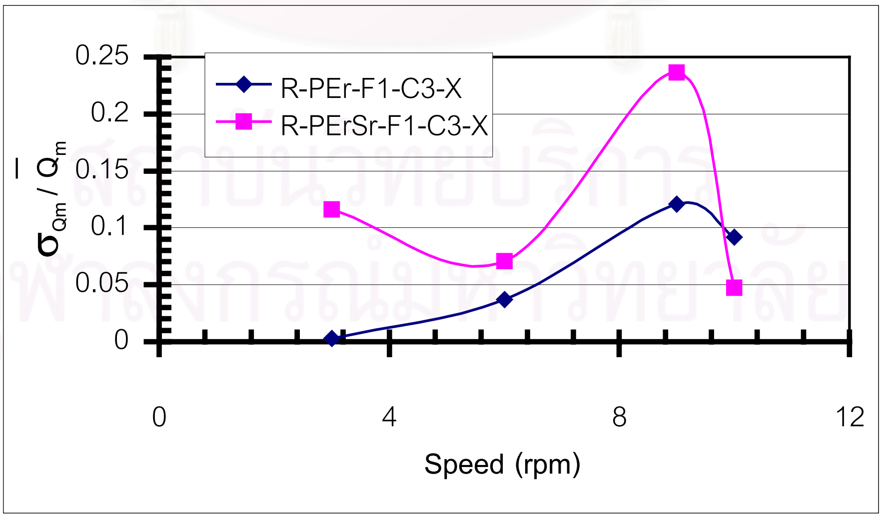


Fig.5.4.1: An example of the effect of stearic acid lubricant
(R-PEr-F1-C3-n and R-PErSr-F1-C3-n)

Remark: LLDPE pellets are too large, so they cannot pass through the vertical gap between the coarse scarping plate and the turntable. Thus LLDPE pellets were not tested in the case of the rotary table feeder.

5.4.2 Gypsum Powder

5.4.2.1 Effect of the gap and insertion depth of the scraping plates

From table 5.4.3, it can be seen that similar conclusions to the case of LLDPE resin are applicable to the case of gypsum powder. The other words, is the insertion depth of the fine scraping plate from the turntable edge in the radial direction equalling 12.0 mm and the vertical gap between the coarse scraping plate and the turntable surface equalling 1.95 mm yielded the best flow characteristics.

Table 5.4.3: Ranking of the scraping plates

Type 1: Ranking by points (1 point means the least flow variation)

Speed(rpm)	Ranking of fine and coarse plates (points)																	
	Insertion depth of fine scraping plate (mm)									Gap of coarse scraping plate (mm)								
	12.0			15.0			19.0			0.60			1.20			1.95		
	I	II	III	I	II	III	I	II	III	IV	V	VI	IV	V	VI	IV	V	VI
3	3	2	1	3	2	1	3	2	1	3	1	2	1	3	2	1	2	3
6	3	2	1	3	2	1	3	2	1	3	1	2	2	1	3	1	2	3
9	3	2	1	3	2	1	2	3	1	3	2	1	2	1	3	1	3	2
10	3	2	1	2	1	3	3	2	1	2	1	3	3	2	1	1	3	2
Sum	12	8	4	11	7	6	11	9	4	11	5	8	8	7	9	4	10	10

Note: Gap of coarse scraping plate (mm): I = 0.60 mm , II = 1.20 mm , III = 1.95 mm ,

Insertion depth of fine scraping plate (mm): IV = 12.0 mm , V = 15.0 mm , VI= 19.0 mm

Type 2: Variance (B^2) and standard deviation $\sigma_{Qm} / \overline{Q}_m(B)$

speed(rpm)	Insection depth of fine scraping plate 19.0 mm					
	I		II		III	
	B	B^2	B	B^2	B	B^2
3	3.612E-01	1.305E-01	2.058E-01	4.233E-02	8.482E-02	7.195E-03
6	4.340E-01	1.883E-01	2.544E-01	6.473E-02	3.039E-02	9.234E-04
9	1.114E-01	1.241E-02	1.471E-01	2.164E-02	1.317E-02	1.735E-04
10	4.223E-01	1.783E-01	6.971E-02	4.859E-03	6.151E-02	3.784E-03
$(\text{sum } B^2)^{1/2}$		5.095E-01		1.336E-01		1.208E-02

Note: Gap of coarse scraping plate (mm): I = 0.60 mm, II = 1.20 mm, III = 1.95 mm

5.4.2.2 Effect of solid lubricant

The lubricating effect of stearic acid on gypsum powder is shown in Figure 5.4.2. It can be seen that the fluctuation of the flow rate was increased when gypsum powder was pre-mixed with stearic acid. These similar results can be explained as in the case of LLDPE resin.

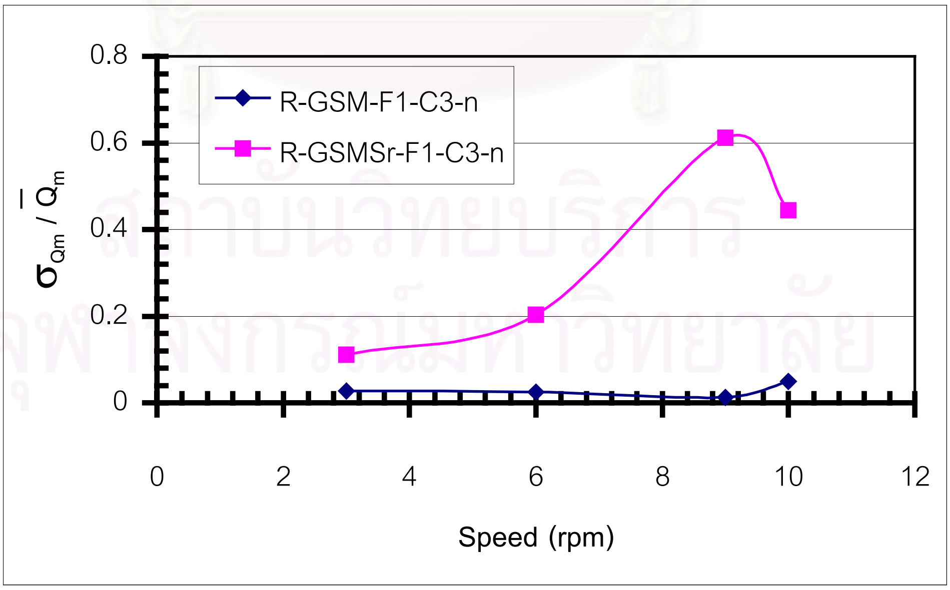


Fig.5.4.2: An example of the effect of stearic acid lubricant (R-GSM-F1-C3-n and R-GSMSr-F1-C3-n)

5.5 Improvement of Screw Feeder for Gypsum Powder

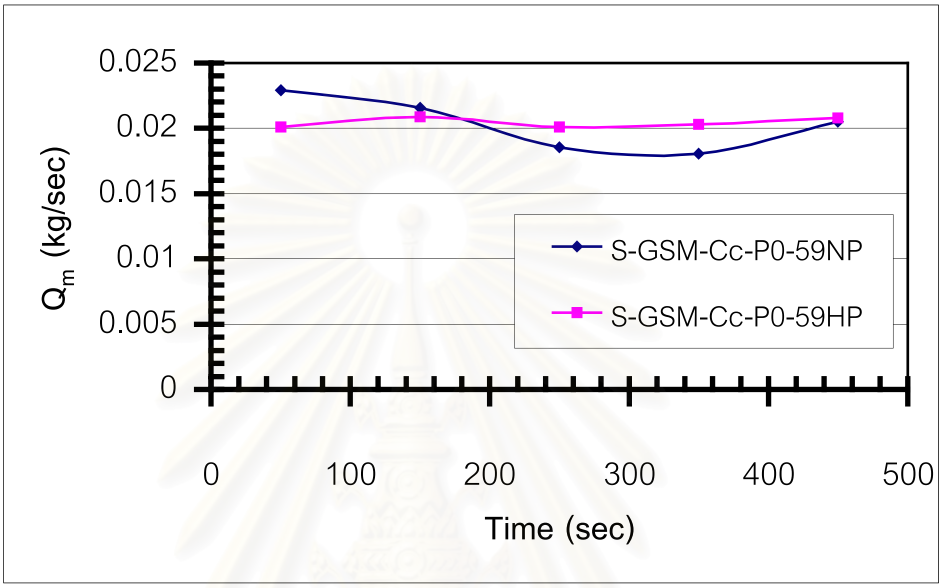
5.5.1 Rationale for the improvement of screw feeder

Gypsum powder has high cohesiveness, poor flowability and low adhesiveness to polished stainless steel. So it tended to bridge in the hopper when fed by the screw feeder. The problem is solved by agitating the material in the hopper. Since the screw surface has more curvature and larger area across the flow direction than the straight cylindrical wall, gypsum powder between the screw blades has a tendency to rotate like a solid lump during each screw evolution. Therefore, forward movement of the powder would not be smooth, thus resulting in poor discharge characteristics. One way to overcome this problem is to reduce the screw surface area by using a coil screw. An easier way is to increase the particle-wall friction by increasing the surface roughness of the cylindrical wall. Here the problem is solved by lining the inner wall with a piece of drawing paper. The tested lengths of the piece of paper in the axial direction were either about half or full length of the cylindrical inner wall. (See Figure 5.5.1)

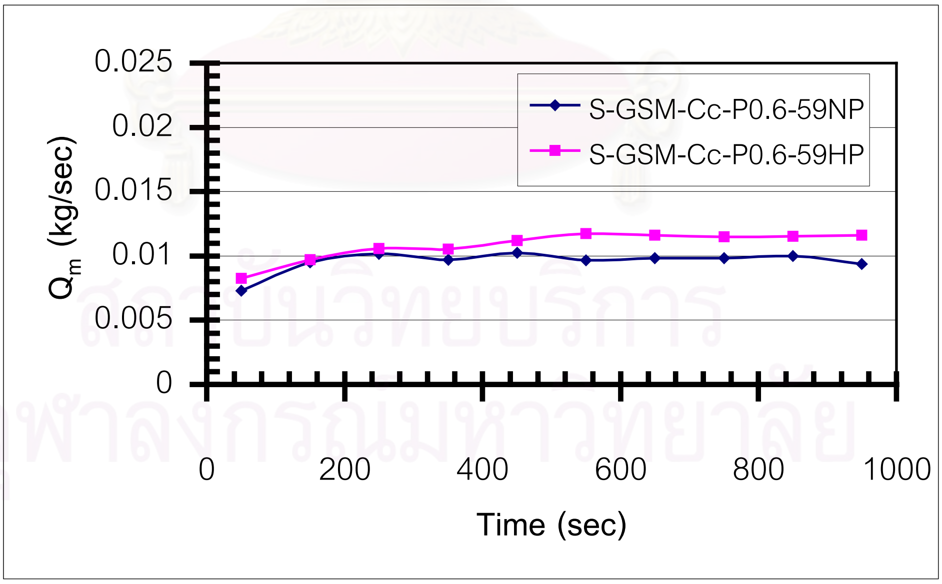
Fig.5.5.1: Lining of inner wall with a piece of half-length paper

5.5.2 Results from improvement of screw feeder

The experimental results confirmed that discharge flow rate of gypsum powder was improved when lining of the inner wall was carried out. Figure 5.5.2 compares the observed flow rates in the case of no back pressure and back pressure of 0.6 kg/cm^2.



a) No back pressure



b) Back pressure of 0.6 kg/cm^2

Fig.5.5.2: An example of lining results of inner wall

a) No back pressure b) Back pressure of 0.6 kg/cm^2

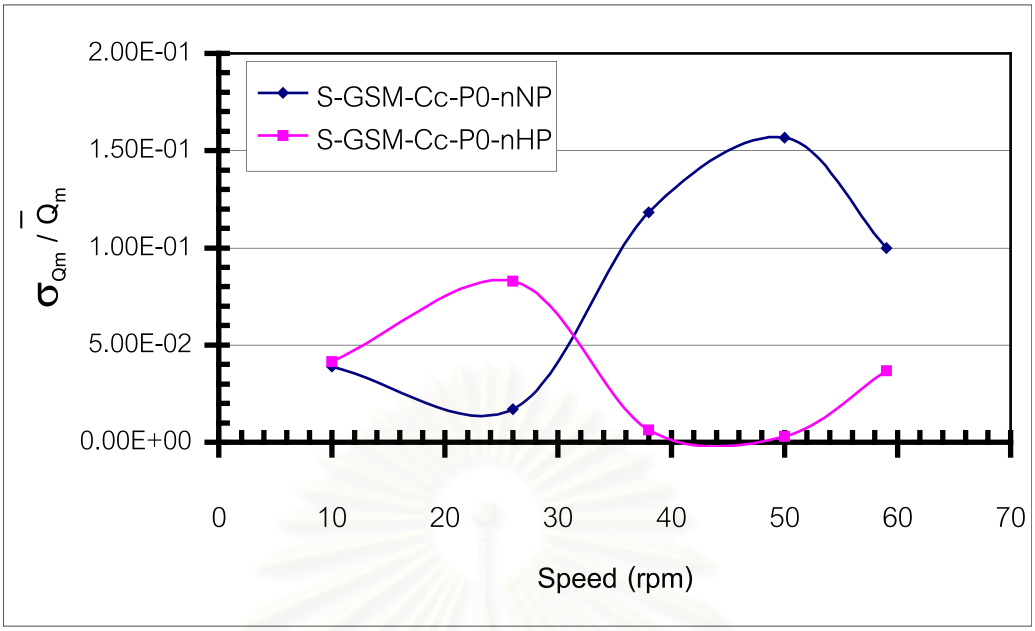
From Figure 5.5.2, it can be seen that in both cases of no lining and half-length lining, discharge under back pressure always gave significantly less flow rate than no pressure. The results mean that when back pressure of 0.6 kg/cm^2 was applied, the gypsum particles become more densely packed and cohesiveness. Thus their flow was retarded.

When comparing the discharge flow rate of no lining and half-length lining, it was found that the case of no lining generally gave slightly less flow rate than the case of half-length lining under both no back pressure and back pressure of 0.6 kg/cm^2. These results confirm that when the particle-wall friction was increased by the lining underneath the feed hopper, gypsum powder was packed more nearly uniformly between the screw blades under the hopper thus leading to a slightly higher flow rate.

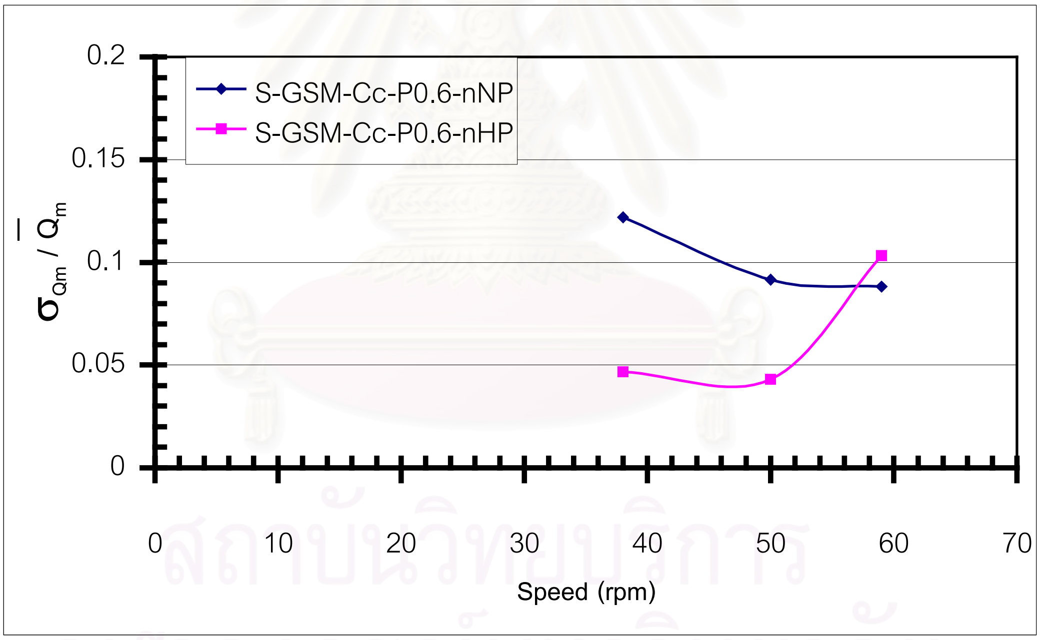
By the way, when the particle-wall friction was increased too much by lining the full length of inner wall with a piece of paper, the resulting frictional forces exerted as the screw was rotated become excessive and pieces of the adhesive tapes either slipped off and the piece of paper was ripped off. Thus lining the full length of the inner wall with a piece of paper could not be used in the present experiment.

5.5.3 Comparison of lining effect

Figure 5.5.3 shows the values of $\sigma_{Qm} / \overline{Q}_m$ at various screw speeds. Obviously, in the case of no back pressure, the half-length lining generally gave less flow variation compared to the case of no lining. Even in the case of 0.6 kg/cm^2 back pressure, the half-length lining generally gave less flow variation than the case of no lining. These results can be explained by the fact that when the particle-wall friction was increased, gypsum powder was not rotate in lumps during each screw evolution. Thus flow was smoother in the case half-length lining of the inner wall.



(a) No back pressure



(b) Back pressure of 0.6kg/cm^2

Fig.5.5.3: An example of effect of improvement of screw feeder

a) No back pressure b) Back pressure of 0.6 kg/cm^2

5.6 Summary

5.6.1 Discharge flow characteristics of LLDPE resin, pellets and gypsum powder

5.6.1.1 Screw feeder

From table 5.6.1, it can be seen that in the case of screw feeder with the same circular outlet port LLDPE resin gave the lowest mass flow rate at the same rotational speed of 50 rpm than gypsum powder under both the absence and presence back pressure. These results can be explained by the fact that gypsum powder (ρ = 0.826 g/cm^3) has the highest aerated density and LLDPE resin (ρ = 0.383 g/cm^3) the lowest density compared to LLDPE pellets (ρ = 0.538 g/cm^3). As a consequence, LLDPE resin and gypsum powder gave the lowest and highest mass flow rate when the speed of the screw was equal. As for the flow variation, when the screw feeder was used, LLDPE pellets however gave the least flow variation and gypsum powder the highest both in the absence and presence of back pressure. These results can be explained by the fact that gypsum powder has relatively high cohesiveness, poor flowability and low adhesiveness to polished stainless steel than LLDPE resin. Since the screw surface has more curvature and larger area across the flow direction than the straight cylindrical wall, gypsum powder between the screw blades has a tendency to rotate like a solid lump during each screw evolution. Therefore, forward movement of the powder would not be smooth, thus resulting in poor discharge characteristics. For in the case of back pressure of 1.0 kg/cm^2, LLDPE pellets also gave less flow variation than LLDPE resin. These results can be explained by the fact that the size distribution of LLDPE resin is wider.

It should be pointed out that gypsum powder cannot be operated at a back pressure of 1.0 kg/cm^2 because the increased cohesive property of gypsum under pressure compared to the little change in friction coefficients under pressure causes the discharge flow rate to stop under the back pressure of 1.0 kg/cm^2.

Table 5.6.1: Comparison of $\overline{Q}_m$ and standard deviation σ_{Qm} / $\overline{Q}_m$(S-PEr-Cc-P0-50 and S-PEr-Cc-P1-50, S-PEp-Cc-P0-50 S-PEp-Cc-P1-50, S-GSM-Cc-P0-50NP S-GSM-Cc-P0.6-50NP)

Test material	Back pressure(kg/cm^2)	$\overline{Q}_m$(kg/sec)	$\sigma_{Qm}/\overline{Q}_m$
LLDPE resin	0	7.362E-03	6.362E-02
	1	6.838E-03	7.527E-02
LLDPE pellets	0	1.415E-02	3.799E-03
	1	1.290E-02	2.630E-02
Gypsum	0	1.876E-02	1.566E-01
	0.6	8.935E-03	9.167E-02

5.6.1.2 Rotary table feeder

From table 5.6.2, it can be seen that when rotary table feeder was used, LLDPE resin gave less flow rate than gypsum powder at both speeds of 3 and 9 rpm. As for the flow variation, LLDPE resin unexpectedly gave more flow variation than gypsum powder at both speeds. These results can be explained by the fact that the size distribution of LLDPE resin is wider, its average size is larger and some of the largest resin particles could not pass smoothly under the clearance between the coarse scraping plate and the turntable. Thus in the case of rotary table feeder, LLDPE resin gave less flow rate but greater flow variation than gypsum powder.

Table 5.6.2: Comparison of $\overline{Q}_m$ and σ_{Qm} / $\overline{Q}_m$(R-PEr-F1-C3-3 and R-GSM-F1-C3-9)

Test material	Speed(rpm)	$\overline{Q}_m$(kg/sec)	$\sigma_{Qm}/\overline{Q}_m$
LLDPE resin	3	1.792E-02	6.526E-02
	9	7.076E-02	7.061E-02
Gypsum	3	9.188E-02	2.743E-02
	9	3.444E-01	1.201E-02

5.6.2 Discharge flow characteristics of the present two feeders

The tested screw feeder has a nominal discharge rate between 0.5 - 1.5 liter/min, so it is suitable for feeding particles at a higher flow rate. In contrast the rotary table feeder has a nominal discharge rate between 0.1 - 20 cm^3/min, thus it is suitable for feeding particles at a much lower flow rate.

In the experiments, the screw feeder was used for feeding LLDPE resin between 1.0 - 9.0 g/sec, LLDPE pellets between 1.0 - 17.0 g/sec and gypsum between 6.0 - 22.0 g/sec. The rotary table feeder was used for feeding LLDPE resin between 3.5×10^{-4} - 0.12 g/sec and gypsum between 1.3×10^{-3} – 0.6 g/sec.

From table 5.6.3, the screw feeder is more suitable for smoothly feeding LLDPE resin at high flow rate (about 8.13 g/sec with $\sigma_{Qm} / \overline{Q}_m$ of 5.01×10^{-3}) under no back pressure and at medium flow rate (about 5.51 g/sec with σ_{Qm} / Q_m of 6.80×10^{-3}) under back pressure of 1 kg/cm^2. Similarly, it is more suitable for feeding LLDPE pellets at medium flow rate (about 10 g/sec with σ_{Qm} / Q_m of 1.14×10^{-3}) under no back pressure and at relatively low flow rate (about 6.44 g/sec with σ_{Qm} / Q_m of 3.25×10^{-3}) at back pressure of 1 kg/cm^2. These results came from the fact that when the flow rate was relatively low, LLDPE pellets could flow more smoothly because the pellets are much larger than the resin. The screw feeder is suitable for feeding gypsum powder at relatively high flow rate under no back pressure (about 17.5 g/sec with σ_{Qm} / Q_m of 3.01×10^{-3} but not suitable for feeding gypsum powder under back pressure of 0.6 kg/cm^2 or higher.

Table 5.6.3: Comparison of discharge flow variation in the case of screw feeder

Speed(rpm)	$\sigma_{Qm}/\overline{Q}_m$					
	I	II	III	IV	V	VI
10	2.958E-02	2.247E-02	2.809E-02	2.738E-02	4.150E-02	-
26	2.001E-02	7.756E-03	7.172E-03	3.247E-03	8.314E-02	3.025E-02
38	2.215E-02	6.805E-03	1.143E-03	4.450E-03	6.306E-03	2.112E-02
50	1.552E-02	1.364E-02	3.799E-03	3.582E-03	3.010E-03	1.025E-01
59	5.008E-03	9.937E-03	4.846E-03	1.725E-02	3.678E-02	1.492E-01

NOTE: I = S-PEr-Tp-P0-n, II = S-PEr-Tp-P1-n, III = S-PEp-Cc-P0-n,

IV = S-PEp-Sq-P1-n, V = S-GSM-Cc-P0-nHP and VI = S-GSM-Tp-P0.6-nHP

From Figure 5.6.1, the rotary table feeder more suitable for feeding gypsum powder than LLDPE resin. In fact, it is more suitable for feeding gypsum powder at medium (about 2.4×10^{-1} g/sec with σ_{Qm} / $\overline{Q}_m$ is 2.44×10^{-2}) to relatively low flow rate (about 9.1×10^{-2} g/sec with σ_{Qm} / $\overline{Q}_m$ is 2.74×10^{-2}) under no pressure. These results can be explained by the fact that the size distribution of LLDPE resin is wider and some of the largest resin particles could not pass smoothly under the clearance. Thus the rotary table feeder is less suitable for feeding LLDPE resin than gypsum powder and can not be used for LLDPE pellets.

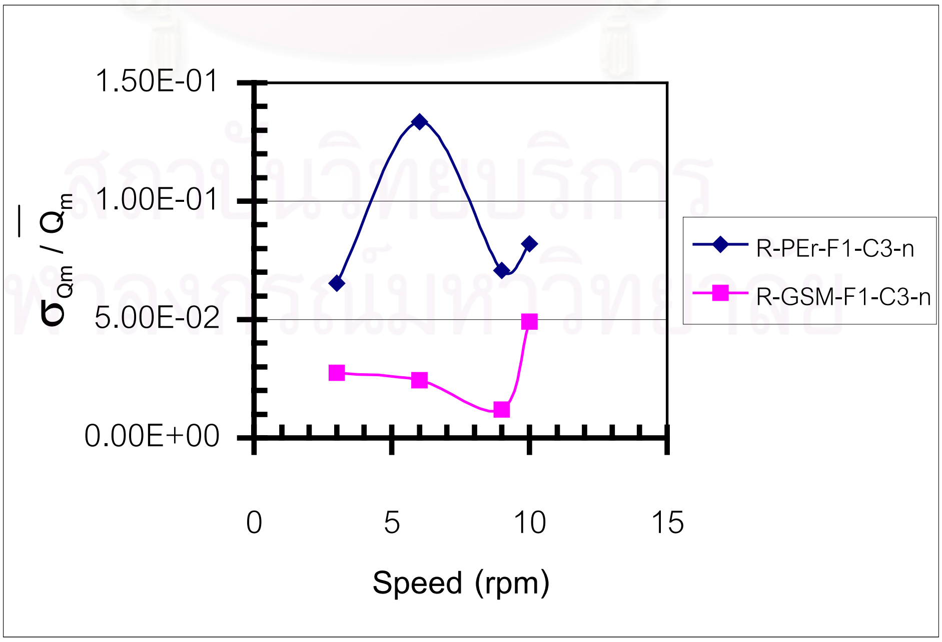


Fig.5.6.1: Comparison between flow variation in the case of the rotary table feeder

5.6.3 Suitable operating conditions

5.6.3.1 LLDPE resin

For LLDPE resin, the screw feeder at a speed of 50 rpm with back pressure of 2 kg/cm^2 and the trapezoidal outlet are most suitable. The flow rate and variation at this condition are 7.16 g/sec and 4.694x10^{-3}, respectively.

For LLDPE resin, the rotary table feeder is most suitable when the insertion depth of the fine scraping plate is 12.0 mm and the vertical gap between the coarse scraping plate and the turntable surface is 1.95 mm. The optimal rotational speed of the turntable is 3 rpm. The flow rate and flow variation at this condition is 1.8 g/sec and 6.526x10^{-2}, respectively.

5.6.3.2 LLDPE pellets

For pellets, the screw feeder at a speed of 38 rpm with no back pressure and the circular outlet are most suitable. The flow rate and flow variation at this condition is 1.10 g/sec and 1.143x10^{-3}, respectively.

5.6.3.3 Gypsum powder

For gypsum powder, the screw feeder at a speed of 50 rpm with no back pressure and the circular outlet are most suitable. The flow rate and flow variation at this condition is 17.5 g/sec and 3.010x10^{-3}, respectively.

The rotary table feeder is most suitable when the insertion depth of the fine scraping plate is 12.0 mm and the vertical gap between the coarse scraping plate and the turntable surface is 1.95 mm. The rotational speed of turntable is 9 rpm. The flow rate and flow variation at this condition is 3.444x10^{-1} g/sec and 1.201x10^{-2}, respectively.

CHAPTER 6

CONCLUSIONS

6.1 Conclusions

Factors affecting the smoothness of the discharge flow rate of the screw feeder and the rotary table feeder may be summarized as follows:

1. It is necessary to carry out time-smoothing of weight data over a suitable time interval (m) in order to reduce the combined effect of readability and impact forces.
2. The central-difference formula has been found to be the most reliable and it has been adopted in all calculations of the flow rate in this work.
3. We should make the choice that gives a lower value of $\sigma_{Qm}/\overline{Q}_m$ when comparing between two different types of feeders.
4. Static electricity played a significant role on the flow rate fluctuation.
5. Grounding of the feeder system reduced the buildup of electrostatic charge, thus contributing not only to safety from dust explosion but also to an increased flow rate, especially when the flow rate was very low.
6. For LLDPE resin, the screw feeder at a speed of 50 rpm with back pressure of 2 kg/cm^2 and the trapezoidal outlet gives the smoothest discharge flow. The average flow rate and flow variation at this condition is 7.16 g/sec and $4.6935x10^{-3}$, respectively. The rotary table feeder gives the smoothest flow when the insertion depth of the fine scraping plate from the turntable edge in the radial direction is 12.0 mm and the vertical gap between the coarse scraping plate and the turntable surface is 1.95 mm. The optimal rotational speed of the turntable is 3 rpm. The resulting flow rate and flow variation at this condition is about 1.8 g/sec and $6.5262x10^{-2}$, respectively.
7. For LLDPE pellets, the screw feeder at a speed of 38 rpm with no back pressure and the circular outlet gives the smoothest discharge flow. The flow rate and flow

variation at this condition is 1.10 g/sec and $1.1425x10^{-3}$, respectively. The rotary table feeder can not be used for LLDPE pellets.

8. For gypsum powder, the screw feeder at a speed of 50 rpm with no back pressure and the circular outlet gives the smoothest discharge flow. The flow rate and flow variation at this condition is 17.5 g/sec and $3.0098x10^{-3}$, respectively. The rotary table feeder gives the smoothest discharge flow when the insertion depth of the fine scraping plate from the turntable edge in the radial direction is 12.0 mm and the vertical gap between the coarse scraping plate and the turntable surface is 1.95 mm. The optimal rotational speed of turntable is 9 rpm. The flow rate and flow variation at this condition is 0.3444 g/sec and $1.2014x10^{-2}$, respectively.
9. Lining the inner wall with a piece of drawing paper, whose length in the axial direction beneath the feed hopper was about half length of the cylindrical inner wall, improves the smoothness of the gypsum powder in the case of the screw feeder.
10. In the case of the screw feeder, the lubricating effect of stearic acid on the LLDPE pellets provides a smoother flow and pulsing is reduced. The trend contradicts the effect of stearic acid in the case of gypsum powder. In the case of the rotary table feeder, the lubricating effect of stearic acid on the LLDPE powder and gypsum powder provides pulsing is increased.
11. The tested screw feeder is more suitable for high discharge flow rate and non-cohesive powder whereas the rotary table feeder is suited for low discharge flow rate.

6.2 Recommendation for future work

1. To effectively handle different types of materials, we should try different kinds of screws and also vary their pitches.
2. To investigate the effect of lubrication, we should try different types of lubricants and also vary their concentrations (% by wt).
3. Other types of feeders should similarly be investigated.

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APPENDICES

APPENDIX A

A1. Specification of equipment

A1.1 Powder Characteristics Tester

Model	PT - N
Company	Hosokawa Micron Corporation
Electric Supply	AC 100 v 50/60 Hz
Accessories	with 26 Parts
Electronic Balance	FA - 2000
Weight	89 kg

A1.2 Screw Feeder

Serial number	11 - T21 - 002
Company	AKATAKE ENGINEERING Co., Ltd.
Electric Supply	AC 220 v 50 Hz 1 Phase
Flow rates	0.5 - 1.5 lit/min.

A1.3 Micro Feeder

Model	MFOV - 1VO
Company	SANKYO PIO-TECH CO., LTD
Electric Supply	AC 100 v 50/60 Hz
Flow rates	0.1 – 20 cc/min.

A1.4 Vibro Standard Screen Shaker

Model	VSS-50
Company	Koei Sangyo Co., Ltd.
Electric Supply	AC 100 v, 100 w, 50/60 Hz
Dimensions	300 x 300 x 300 mm
Frequency	1,000 - 5,000 r.p.m.
Weight	22 kg

A1.5 V-shape Mixer

Model	VA - 5
Company	Tokuju Corporation
Electric Supply	100 - 110 v, 1 phase
Dimensions	700 x 600 x 370 mm
Frequency	31 r.p.m.

A1.6 Analytical micro-balance

Model	AB204 - s
Company	METTLER TOLEDO (TH) LTD.
Electric Supply	AC 220 v 50 Hz
Maximum capacity	210 g
Readability (s)	0.1 mg
Dimensions	190x290x339 mm

A1.7 Ordinary electronic balance

Model	BW – 15RB
Company	SIAM SCALES&ENGINEERING CO., LTD.
Electric Supply	AC 220 v 50 Hz
Maximum Capacity	15 kg
Readability (s)	0.2 g
Platform size	280 x 280 x 80 mm

APPENDIX B

B1. Size distribution data

B1.1 LLDPE resin

Size (mm)	Δm_1 (g)	Δm_2 (g)	Δm_3 (g)	Δm_4 (g)	Δm average (g)
106-150	0.06	0.00	0.06	0.09	0.05
150-250	1.36	1.12	1.19	1.9	1.39
250-355	1.18	2.24	1.17	0.9	1.37
355-850	18.17	18.90	18.36	20.59	19.01
850-1000	6.70	10.27	6.63	9.37	8.24
1000-2000	22.52	17.44	22.57	17.16	19.92
sum					49.99

B1.2 LLDPE pellets

Size (μm)	Δm_1 (g)	Δm_2 (g)	Δm_3 (g)	Δm_4 (g)	Δm average (g)
1180-2000	0.00	0.02	0.03	0.03	0.02
2000-2360	0.06	0.07	0.07	0.06	0.07
2360-3350	66.66	71.25	65.22	69	68.03
3350-5000	33.25	28.66	34.65	30.89	31.86
sum					99.98

B1.3 Gypsum powder

Size (μm)	Δm_1(g)	Δm_2(g)	Δm_3(g)	Δm_4(g)	Δm average (g)
0-45	0.90	1.81	1.51	1.81	1.51
45-75	6.67	8.16	6.32	6.87	7.00
75-106	7.20	6.58	7.04	6.95	6.94
106-150	3.26	2.00	2.68	2.39	2.58
150-250	4.81	4.72	5.19	5.05	4.94
250-355	1.62	1.25	1.54	1.61	1.50
sum					24.49

B1.4 stearic acid

Size low	Size high	%Under size			
(μm)	(μm)	1 st	2 nd	3 rd	Average
0.06	0.07	0.03	0.03	0.04	0.03
0.08	0.09	0.11	0.10	0.15	0.12
0.11	0.13	0.24	0.24	0.34	0.27
0.15	0.17	0.47	0.46	0.62	0.52
0.20	0.23	0.84	0.83	1.02	0.90
0.27	0.31	1.38	1.35	1.54	1.42
0.36	0.42	1.90	1.87	2.03	1.93
0.49	0.58	2.36	2.32	2.46	2.38
0.67	0.78	2.76	2.70	2.83	2.76
0.91	1.06	3.14	3.07	3.18	3.13
1.24	1.44	3.52	3.44	3.53	3.50
1.68	1.95	3.91	3.80	3.87	3.86
2.28	2.65	4.29	4.16	4.21	4.22
3.09	3.60	4.70	4.55	4.57	4.61
4.19	4.88	5.19	5.00	5.00	5.06
5.69	6.63	5.85	5.62	5.58	5.68
7.72	9.00	6.81	6.55	6.48	6.61
10.48	12.21	8.39	8.10	7.98	8.16
14.22	16.57	11.00	10.68	10.50	10.73
19.31	22.49	15.10	14.73	14.47	14.77
26.20	30.53	20.95	20.48	20.13	20.52
35.56	41.43	28.47	27.91	27.47	27.95
48.27	56.23	37.36	36.84	36.27	36.82
65.51	76.32	47.17	46.98	46.14	46.76
88.91	103.58	57.49	57.88	56.67	57.35
120.67	140.58	67.91	68.89	67.39	68.06
163.77	190.80	77.98	79.24	77.84	78.35
222.28	258.95	86.81	87.74	87.07	87.21
301.68	351.46	93.61	93.92	94.18	93.90
409.45	477.01	97.90	97.81	98.51	98.07
555.71	647.41	99.86	99.74	100.00	99.87
754.23	878.67	100.00	100.00	100.00	100.00

APPENDIX C

C1.1 Example of Experimental Data (S-PEp-Cc-P0-38; t_{total} = 793 data)

Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)
1	0.026	53	0.596	105	1.162	157	1.732	209	2.298	261	2.866	313	3.436	365	4	417	4.57
2	0.036	54	0.606	106	1.174	158	1.742	210	2.31	262	2.876	314	3.446	366	4.012	418	4.582
3	0.046	55	0.618	107	1.184	159	1.752	211	2.32	263	2.888	315	3.456	367	4.024	419	4.594
4	0.058	56	0.628	108	1.196	160	1.764	212	2.332	264	2.9	316	3.468	368	4.034	420	4.602
5	0.068	57	0.638	109	1.206	161	1.776	213	2.342	265	2.91	317	3.478	369	4.046	421	4.612
6	0.08	58	0.65	110	1.216	162	1.784	214	2.352	266	2.922	318	3.49	370	4.058	422	4.624
7	0.092	59	0.662	111	1.228	163	1.796	215	2.364	267	2.932	319	3.5	371	4.068	423	4.634
8	0.1	60	0.672	112	1.238	164	1.808	216	2.376	268	2.942	320	3.512	372	4.08	424	4.646
9	0.112	61	0.682	113	1.25	165	1.816	217	2.386	269	2.954	321	3.522	373	4.09	425	4.658
10	0.124	62	0.694	114	1.262	166	1.828	218	2.396	270	2.964	322	3.534	374	4.1	426	4.668
11	0.134	63	0.704	115	1.27	167	1.84	219	2.408	271	2.976	323	3.544	375	4.11	427	4.678
12	0.146	64	0.714	116	1.282	168	1.85	220	2.418	272	2.986	324	3.556	376	4.124	428	4.69
13	0.156	65	0.726	117	1.294	169	1.86	221	2.43	273	2.998	325	3.564	377	4.132	429	4.7
14	0.168	66	0.738	118	1.306	170	1.872	222	2.44	274	3.01	326	3.578	378	4.144	430	4.71
15	0.178	67	0.748	119	1.316	171	1.884	223	2.452	275	3.02	327	3.59	379	4.156	431	4.72
16	0.19	68	0.758	120	1.326	172	1.894	224	2.462	276	3.032	328	3.598	380	4.166	432	4.732
17	0.202	69	0.77	121	1.338	173	1.906	225	2.474	277	3.042	329	3.61	381	4.178	433	4.744
18	0.21	70	0.78	122	1.348	174	1.916	226	2.486	278	3.054	330	3.622	382	4.188	434	4.756
19	0.224	71	0.79	123	1.36	175	1.926	227	2.496	279	3.064	331	3.632	383	4.198	435	4.764
20	0.234	72	0.802	124	1.37	176	1.938	228	2.506	280	3.074	332	3.644	384	4.21	436	4.776
21	0.244	73	0.814	125	1.38	177	1.948	229	2.518	281	3.086	333	3.654	385	4.222	437	4.786
22	0.256	74	0.824	126	1.392	178	1.96	230	2.528	282	3.096	334	3.664	386	4.23	438	4.798
23	0.266	75	0.836	127	1.404	179	1.97	231	2.54	283	3.108	335	3.676	387	4.24	439	4.81
24	0.276	76	0.846	128	1.414	180	1.98	232	2.55	284	3.118	336	3.686	388	4.252	440	4.82
25	0.288	77	0.856	129	1.424	181	1.992	233	2.56	285	3.128	337	3.696	389	4.264	441	4.832
26	0.3	78	0.868	130	1.436	182	2.004	234	2.572	286	3.14	338	3.708	390	4.274	442	4.842
27	0.31	79	0.878	131	1.446	183	2.014	235	2.584	287	3.152	339	3.718	391	4.286	443	4.854
28	0.322	80	0.89	132	1.458	184	2.026	236	2.594	288	3.162	340	3.728	392	4.296	444	4.864
29	0.334	81	0.902	133	1.47	185	2.036	237	2.604	289	3.172	341	3.74	393	4.308	445	4.874
30	0.344	82	0.912	134	1.48	186	2.048	238	2.616	290	3.184	342	3.75	394	4.32	446	4.886
31	0.354	83	0.922	135	1.492	187	2.058	239	2.626	291	3.194	343	3.762	395	4.33	447	4.898
32	0.366	84	0.936	136	1.502	188	2.07	240	2.638	292	3.206	344	3.772	396	4.34	448	4.908
33	0.376	85	0.944	137	1.512	189	2.08	241	2.648	293	3.218	345	3.782	397	4.352	449	4.92
34	0.386	86	0.956	138	1.524	190	2.092	242	2.658	294	3.226	346	3.794	398	4.36	450	4.93
35	0.398	87	0.968	139	1.536	191	2.104	243	2.67	295	3.238	347	3.806	399	4.374	451	4.94
36	0.408	88	0.976	140	1.546	192	2.114	244	2.682	296	3.25	348	3.816	400	4.384	452	4.952
37	0.42	89	0.99	141	1.556	193	2.124	245	2.69	297	3.26	349	3.826	401	4.394	453	4.962
38	0.432	90	1	142	1.57	194	2.134	246	2.702	298	3.272	350	3.838	402	4.406	454	4.972
39	0.44	91	1.01	143	1.58	195	2.146	247	2.714	299	3.282	351	3.85	403	4.418	455	4.984
40	0.452	92	1.022	144	1.588	196	2.156	248	2.724	300	3.292	352	3.86	404	4.426	456	4.994
41	0.464	93	1.032	145	1.6	197	2.168	249	2.736	301	3.304	353	3.87	405	4.438	457	5.006
42	0.474	94	1.042	146	1.61	198	2.18	250	2.746	302	3.316	354	3.882	406	4.45	458	5.018
43	0.486	95	1.054	147	1.622	199	2.19	251	2.756	303	3.326	355	3.892	407	4.462	459	5.028
44	0.498	96	1.066	148	1.632	200	2.2	252	2.768	304	3.338	356	3.904	408	4.472	460	5.038
45	0.506	97	1.076	149	1.644	201	2.212	253	2.78	305	3.346	357	3.914	409	4.482	461	5.05
46	0.518	98	1.086	150	1.654	202	2.22	254	2.79	306	3.36	358	3.926	410	4.494	462	5.062
47	0.53	99	1.098	151	1.666	203	2.232	255	2.8	307	3.368	359	3.936	411	4.504	463	5.072
48	0.54	100	1.108	152	1.676	204	2.244	256	2.812	308	3.382	360	3.948	412	4.516	464	5.082
49	0.552	101	1.12	153	1.686	205	2.254	257	2.822	309	3.392	361	3.958	413	4.526	465	5.094
50	0.562	102	1.13	154	1.698	206	2.266	258	2.834	310	3.402	362	3.968	414	4.538	466	5.104
51	0.574	103	1.14	155	1.708	207	2.276	259	2.844	311	3.412	363	3.982	415	4.548	467	5.116
52	0.584	104	1.154	156	1.72	208	2.288	260	2.856	312	3.424	364	3.992	416	4.558	468	5.128

C1.1 Example of Experimental Data (continue)

Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)	Time (sec)	Collected mass (kg)
469	5.138	521	5.704	573	6.274	625	6.84	677	7.41	729	7.98	781	8.38
470	5.148	522	5.716	574	6.284	626	6.852	678	7.42	730	7.99	782	8.386
471	5.16	523	5.726	575	6.294	627	6.862	679	7.432	731	8	783	8.386
472	5.17	524	5.738	576	6.306	628	6.874	680	7.444	732	8.012	784	8.392
473	5.182	525	5.748	577	6.316	629	6.884	681	7.452	733	8.024	785	8.398
474	5.192	526	5.76	578	6.33	630	6.896	682	7.464	734	8.034	786	8.402
475	5.2	527	5.77	579	6.338	631	6.906	683	7.476	735	8.044	787	8.402
476	5.212	528	5.782	580	6.35	632	6.918	684	7.486	736	8.054	788	8.406
477	5.224	529	5.792	581	6.362	633	6.928	685	7.5	737	8.066	789	8.41
478	5.234	530	5.804	582	6.37	634	6.94	686	7.508	738	8.076	790	8.412
479	5.246	531	5.814	583	6.382	635	6.95	687	7.52	739	8.086	791	8.42
480	5.258	532	5.826	584	6.394	636	6.962	688	7.53	740	8.098	792	8.42
481	5.268	533	5.838	585	6.404	637	6.972	689	7.542	741	8.108		
482	5.28	534	5.846	586	6.416	638	6.982	690	7.552	742	8.118		
483	5.29	535	5.858	587	6.426	639	6.994	691	7.564	743	8.13		
484	5.302	536	5.868	588	6.438	640	7.006	692	7.574	744	8.14		
485	5.312	537	5.88	589	6.448	641	7.016	693	7.586	745	8.15		
486	5.324	538	5.89	590	6.458	642	7.028	694	7.596	746	8.16		
487	5.334	539	5.902	591	6.47	643	7.038	695	7.608	747	8.17		
488	5.346	540	5.912	592	6.48	644	7.048	696	7.618	748	8.178		
489	5.356	541	5.924	593	6.49	645	7.06	697	7.63	749	8.188		
490	5.366	542	5.934	594	6.502	646	7.072	698	7.64	750	8.198		
491	5.378	543	5.946	595	6.512	647	7.082	699	7.65	751	8.208		
492	5.388	544	5.956	596	6.524	648	7.094	700	7.662	752	8.214		
493	5.4	545	5.968	597	6.534	649	7.104	701	7.674	753	8.224		
494	5.41	546	5.978	598	6.546	650	7.114	702	7.682	754	8.232		
495	5.422	547	5.99	599	6.558	651	7.126	703	7.694	755	8.24		
496	5.432	548	6	600	6.568	652	7.136	704	7.706	756	8.248		
497	5.444	549	6.012	601	6.578	653	7.148	705	7.716	757	8.256		
498	5.454	550	6.022	602	6.59	654	7.158	706	7.728	758	8.262		
499	5.464	551	6.032	603	6.602	655	7.17	707	7.738	759	8.272		
500	5.476	552	6.044	604	6.612	656	7.18	708	7.748	760	8.278		
501	5.486	553	6.056	605	6.622	657	7.19	709	7.76	761	8.284		
502	5.498	554	6.066	606	6.634	658	7.202	710	7.772	762	8.292		
503	5.508	555	6.078	607	6.644	659	7.212	711	7.782	763	8.296		
504	5.518	556	6.088	608	6.654	660	7.224	712	7.794	764	8.302		
505	5.528	557	6.1	609	6.666	661	7.236	713	7.804	765	8.31		
506	5.542	558	6.11	610	6.676	662	7.246	714	7.816	766	8.314		
507	5.554	559	6.122	611	6.688	663	7.256	715	7.826	767	8.32		
508	5.562	560	6.132	612	6.7	664	7.268	716	7.838	768	8.324		
509	5.574	561	6.142	613	6.71	665	7.278	717	7.848	769	8.33		
510	5.584	562	6.154	614	6.72	666	7.29	718	7.86	770	8.334		
511	5.598	563	6.164	615	6.732	667	7.3	719	7.87	771	8.34		
512	5.606	564	6.174	616	6.742	668	7.312	720	7.88	772	8.344		
513	5.618	565	6.186	617	6.752	669	7.322	721	7.892	773	8.35		
514	5.628	566	6.198	618	6.764	670	7.334	722	7.902	774	8.354		
515	5.64	567	6.208	619	6.774	671	7.344	723	7.914	775	8.358		
516	5.65	568	6.218	620	6.786	672	7.354	724	7.924	776	8.364		
517	5.662	569	6.23	621	6.796	673	7.366	725	7.936	777	8.368		
518	5.67	570	6.24	622	6.808	674	7.378	726	7.946	778	8.374		
519	5.682	571	6.25	623	6.82	675	7.388	727	7.956	779	8.374		
520	5.694	572	6.262	624	6.83	676	7.4	728	7.968	780	8.376		

C1.2 Example of the calculation of magnitude of flow fluctuation

(S-PEp-Cc-P0-38; t_{total} = 793 data); n = 10, m = 10

Average Collected mass n = 10 (kg)	Average Collected mass n = 10 (kg) ;continue	Flow rate;Q (kg/sec)	Flow rate;Q continue	Q_m (m = 10) (kg/sec)	σ_Q (m = 10)	σ_Q/Q_m (m = 10)	$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\overline{Q}_m$
0.0742	5.6448	1.0990E-02	1.0930E-02						
0.1842	5.754	1.0950E-02	1.0930E-02	1.0935E-02	4.0346E-05	3.6896E-03	1.0925E-02	1.2482E-05	1.1425E-03
0.294	5.8634	1.0950E-02	1.0950E-02	1.0920E-02	3.7118E-05	3.3991E-03			
0.4032	5.973	1.0980E-02	1.0970E-02	1.0931E-02	2.9231E-05	2.6741E-03			
0.513	6.0828	1.0920E-02	1.0920E-02	1.0912E-02	3.1903E-05	2.9236E-03			
0.6228	6.1914	1.0880E-02	1.0880E-02	1.0911E-02	3.3813E-05	3.0990E-03			
0.7314	6.3004	1.0960E-02	1.0920E-02	1.0922E-02	2.5734E-05	2.3561E-03			
0.8404	6.4098	1.0950E-02	1.0900E-02	1.0945E-02	1.4337E-05	1.3099E-03			
0.9506	6.5184	1.0880E-02	1.0900E-02						
1.0594	6.6278	1.0890E-02	1.0920E-02						
1.1682	6.7368	1.0920E-02	1.0920E-02						
1.2772	6.8462	1.0970E-02	1.0950E-02						
1.3866	6.9558	1.0950E-02	1.0970E-02						
1.4966	7.0656	1.0890E-02	1.0940E-02						
1.6056	7.1746	1.0870E-02	1.0930E-02						
1.7144	7.2842	1.0890E-02	1.0950E-02						
1.823	7.3936	1.0950E-02	1.0940E-02						
1.9322	7.503	1.0970E-02	1.0960E-02						
2.042	7.6128	1.0900E-02	1.0940E-02						
2.1516	7.7218	1.0890E-02	1.0950E-02						
2.26	7.8318	1.0960E-02	1.0950E-02						
2.3694	7.9408	1.0950E-02	1.0880E-02						
2.4792	8.0494	1.0890E-02	1.0660E-02						
2.5884	8.154	1.0890E-02	9.7000E-03						
2.697	8.2434	1.0920E-02	7.8300E-03						
2.8062	8.3106	1.0970E-02	5.8400E-03						
2.9154	8.3602	1.0960E-02	4.3400E-03						
3.0256	8.3974	1.0910E-02							
3.1346		1.0940E-02							
3.2438		1.0920E-02							
3.3534		1.0920E-02							
3.4622		1.0920E-02							
3.5718		1.0840E-02							
3.6806		1.0880E-02							
3.7886		1.0940E-02							
3.8982		1.0940E-02							
4.0074		1.0910E-02							
4.117		1.0900E-02							
4.2256		1.0930E-02							
4.335		1.0940E-02							
4.4442		1.0890E-02							
4.5538		1.0840E-02							
4.662		1.0940E-02							
4.7706		1.0940E-02							
4.8808		1.0930E-02							
4.9894		1.0920E-02							
5.0994		1.0920E-02							
5.2078		1.0950E-02							
5.3178		1.0880E-02							
5.4268		1.0900E-02							
5.5354									

APPENDIX D

D1. Experimental magnitude of flow fluctuation

D1.1 In the case of S-PEr-Cc-P0-10 (t_{total} = 3593 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5900E-03	8.2000E-04	3.1880E-03	4.6883E-04	2.0051E+00	3.5517E-01	1.2431E-03	1.7952E-04	1.4441E-01
2	50	1.6000E-03	8.2500E-04	2.4401E-03	1.6170E-04	1.5251E+00	1.4781E-01	1.2433E-03	1.7995E-04	1.4474E-01
4	25	1.5975E-03	8.2250E-04	2.0746E-03	6.4348E-05	1.2987E+00	5.9444E-02	1.2433E-03	1.7882E-04	1.4383E-01
5	20	1.5980E-03	8.2400E-04	1.8510E-03	5.3311E-05	1.1583E+00	5.1085E-02	1.2433E-03	1.7795E-04	1.4313E-01
10	10	1.6040E-03	8.3100E-04	1.3372E-03	3.4059E-05	8.3367E-01	3.0685E-02	1.2434E-03	1.7842E-04	1.4349E-01

D1.2 In the case of S-PEr-Cc-P0-26 (t_{total} = 1199 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.0600E-03	2.8700E-03	3.0680E-03	6.3014E-04	7.5940E-01	2.0711E-01	3.8264E-03	3.5652E-04	9.3174E-02
2	50	4.0650E-03	2.8800E-03	1.9750E-03	3.1282E-04	4.8946E-01	9.0411E-02	3.8264E-03	3.5427E-04	9.2586E-02
4	25	4.1250E-03	2.8975E-03	1.0802E-03	1.8211E-04	2.7297E-01	5.2368E-02	3.8270E-03	3.4962E-04	9.1356E-02
5	20	4.1100E-03	2.9060E-03	8.9296E-04	1.4560E-04	2.2538E-01	3.7430E-02	3.8271E-03	3.4363E-04	8.9790E-02
10	10	4.0680E-03	2.9460E-03	2.3334E-04	4.9989E-05	7.9207E-02	1.2563E-02	3.8318E-03	3.2700E-04	8.5338E-02

D1.3 In the case of S-PEr-Cc-P0-38 (t_{total} = 813 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.2000E-03	5.4200E-03	1.5390E-02	1.6756E-03	2.8395E+00	2.7834E-01	5.9050E-03	3.0533E-04	5.1708E-02
2	50	6.1650E-03	5.2850E-03	7.7132E-03	1.0756E-03	1.3835E+00	1.7911E-01	5.9038E-03	3.0674E-04	5.1957E-02
4	25	6.1050E-03	5.4000E-03	4.1490E-03	3.8401E-04	7.6833E-01	6.4001E-02	5.9025E-03	2.8679E-04	4.8588E-02
5	20	6.0980E-03	5.1340E-03	2.4421E-03	1.6865E-04	4.2252E-01	2.8061E-02	5.9058E-03	3.2855E-04	5.5633E-02
10	10	6.1110E-03	5.1700E-03	1.5356E-03	9.3862E-05	2.5220E-01	1.5589E-02	5.8929E-03	3.3161E-04	5.6274E-02

D1.4 In the case of S-PEr-Cc-P0-50 (t_{total} = 712 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.6200E-03	6.0200E-03	4.0301E-03	7.7035E-04	6.6946E-01	1.0203E-01	7.1471E-03	7.1409E-04	9.9913E-02
2	50	7.6100E-03	5.9750E-03	3.0022E-03	3.7457E-04	5.0247E-01	4.9613E-02	7.1414E-03	7.1702E-04	1.0040E-01
4	25	7.6100E-03	5.9550E-03	2.3778E-03	1.4238E-04	3.9930E-01	1.8710E-02	7.1421E-03	7.0712E-04	9.9007E-02
5	20	7.6000E-03	5.9640E-03	2.3215E-03	1.0301E-04	3.8925E-01	1.3554E-02	7.1443E-03	6.9889E-04	9.7825E-02
10	10	7.6030E-03	6.4110E-03	7.4673E-04	4.7152E-05	1.1648E-01	6.2018E-03	7.3623E-03	4.6837E-04	6.3618E-02

D1.5 In the case of S-PEr-Cc-P0-59 (t_{total} = 540 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.3800E-03	6.9000E-03	2.3612E-03	7.7824E-04	2.6178E-01	8.6279E-02	8.5840E-03	9.8106E-04	1.1429E-01
2	50	9.3850E-03	6.9200E-03	1.3637E-03	3.6593E-04	1.5152E-01	4.0636E-02	8.5820E-03	9.6967E-04	1.1299E-01
4	25	9.3525E-03	6.9700E-03	1.0007E-03	2.0010E-04	1.4357E-01	2.2233E-02	8.5825E-03	9.3597E-04	1.0906E-01
5	20	9.3160E-03	6.9960E-03	1.0027E-03	1.6845E-04	1.4333E-01	1.8712E-02	8.5916E-03	9.1970E-04	1.0705E-01
10	10	9.2710E-03	7.1330E-03	9.9502E-04	9.5219E-05	1.3950E-01	1.0639E-02	8.6222E-03	8.5131E-04	9.8735E-02

D1.6 In the case of S-PEr-Cc-Sd-10 (t_{total} = 3505 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.7100E-03	1.0300E-03	4.5622E-03	4.4256E-04	2.6680E+00	3.6625E-01	1.2997E-03	1.3356E-04	1.0276E-01
2	50	1.7100E-03	1.0250E-03	2.3153E-03	1.6413E-04	1.3540E+00	1.3792E-01	1.3011E-03	1.3101E-04	1.0069E-01
4	25	1.7125E-03	1.0200E-03	1.0627E-03	5.0647E-05	6.2053E-01	4.6679E-02	1.3055E-03	1.2969E-04	9.9340E-02
5	20	1.7140E-03	1.0180E-03	1.0507E-03	3.7332E-05	6.1303E-01	2.9303E-02	1.3054E-03	1.2945E-04	9.9162E-02
10	10	1.6920E-03	1.0130E-03	8.0950E-04	1.6865E-05	4.7843E-01	1.4048E-02	1.3053E-03	1.2675E-04	9.7104E-02

D1.7 In the case of S-PEr-Cc-Sd-26 (t_{total} = 1445 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.8000E-03	2.5200E-03	1.0825E-03	7.1520E-04	3.0100E-01	2.0314E-01	3.4300E-03	3.2522E-04	9.4817E-02
2	50	3.8150E-03	2.5300E-03	6.2436E-04	2.5995E-04	1.6743E-01	8.0643E-02	3.4318E-03	3.2352E-04	9.4273E-02
4	25	3.8125E-03	2.5350E-03	4.0509E-04	1.2369E-04	1.1083E-01	3.6514E-02	3.4325E-03	3.2190E-04	9.3781E-02
5	20	3.8080E-03	2.5360E-03	3.3645E-04	8.7899E-05	9.2126E-02	2.5929E-02	3.4331E-03	3.2101E-04	9.3503E-02
10	10	3.7840E-03	2.5500E-03	2.0359E-04	3.3928E-05	6.5150E-02	1.0014E-02	3.4367E-03	3.1534E-04	9.1756E-02

D1.8 In the case of S-PEr-Cc-Sd-38 (t_{total} = 908 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.5300E-03	4.4600E-03	1.1584E-03	7.0324E-04	2.5972E-01	1.2740E-01	5.3033E-03	3.6073E-04	6.8019E-02
2	50	5.5300E-03	4.4600E-03	5.3059E-04	3.1928E-04	1.1897E-01	5.8156E-02	5.3050E-03	3.5916E-04	6.7702E-02
4	25	5.5300E-03	4.4725E-03	3.5543E-04	1.2103E-04	7.9469E-02	2.2056E-02	5.2900E-03	3.7495E-04	7.0879E-02
5	20	5.5260E-03	4.4760E-03	3.1573E-04	7.2111E-05	7.0539E-02	1.3135E-02	5.2910E-03	3.7351E-04	7.0594E-02
10	10	5.5260E-03	4.4930E-03	2.2351E-04	5.3375E-05	4.9746E-02	9.6589E-03	5.2973E-03	3.6617E-04	6.9125E-02

D1.9 In the case of S-PEr-Cc-Sd-50 (t_{total} = 720 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2500E-03	5.7800E-03	1.6960E-03	5.8006E-04	2.3392E-01	8.4433E-02	6.9214E-03	5.1696E-04	7.4690E-02
2	50	7.2550E-03	5.8050E-03	9.6559E-04	2.8230E-04	1.3309E-01	4.1092E-02	6.9250E-03	5.0824E-04	7.3392E-02
4	25	7.2525E-03	5.8475E-03	5.5671E-04	1.1308E-04	9.5204E-02	1.5904E-02	6.9321E-03	4.9330E-04	7.1161E-02
5	20	7.2460E-03	5.8640E-03	5.5780E-04	8.8852E-05	9.5123E-02	1.2497E-02	6.9357E-03	4.8752E-04	7.0292E-02
10	10	7.2320E-03	5.9470E-03	5.4269E-04	4.4672E-05	9.1254E-02	6.1941E-03	6.9263E-03	4.9415E-04	7.1344E-02

D1.10 In the case of S-PEr-Cc-Sd-59 (t_{total} = 541 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.4500E-03	7.8600E-03	9.4302E-04	6.1955E-04	1.1998E-01	6.5909E-02	9.0340E-03	6.7330E-04	7.4529E-02
2	50	9.4500E-03	7.8850E-03	8.1003E-04	2.7274E-04	1.0273E-01	2.9046E-02	9.0380E-03	6.6173E-04	7.3216E-02
4	25	9.4600E-03	7.9400E-03	7.9313E-04	1.1787E-04	9.9891E-02	1.2559E-02	9.0490E-03	6.3774E-04	7.0476E-02
5	20	9.4600E-03	7.9640E-03	7.8886E-04	1.0788E-04	9.9053E-02	1.1491E-02	9.0544E-03	6.2727E-04	6.9278E-02
10	10	9.4630E-03	8.0860E-03	7.6478E-04	4.6667E-05	9.4581E-02	4.9698E-03	9.0810E-03	5.7477E-04	6.3294E-02

D1.11 In the case of S-PEr-Cc-P1-10 (t_{total} = 3606 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3500E-03	8.5000E-04	1.2319E-03	9.4580E-04	1.1297E+00	7.2467E-01	1.1592E-03	1.0766E-04	9.2877E-02
2	50	1.3350E-03	8.4000E-04	6.9343E-04	5.0749E-04	6.1088E-01	4.0277E-01	1.1592E-03	1.0707E-04	9.2366E-02
4	25	1.2675E-03	8.3250E-04	3.1212E-04	8.9704E-05	2.5956E-01	8.5816E-02	1.1541E-03	1.0558E-04	9.1482E-02
5	20	1.2700E-03	8.3000E-04	3.0210E-04	8.8852E-05	2.4967E-01	8.1776E-02	1.1542E-03	1.0518E-04	9.1129E-02
10	10	1.2850E-03	8.2600E-04	2.0353E-04	2.5927E-05	1.6779E-01	2.7919E-02	1.1549E-03	1.0486E-04	9.0793E-02

D1.12 In the case of S-PEr-Cc-P1-26 (t_{total} = 1386 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.4900E-03	2.3900E-03	9.6290E-04	7.6877E-04	4.0289E-01	2.2413E-01	3.2631E-03	2.9618E-04	9.0767E-02
2	50	3.4900E-03	2.4150E-03	4.5628E-04	3.0288E-04	1.8893E-01	8.6784E-02	3.2658E-03	2.9012E-04	8.8837E-02
4	25	3.5025E-03	2.4400E-03	2.9946E-04	1.0123E-04	1.2273E-01	3.0537E-02	3.2673E-03	2.8465E-04	8.7121E-02
5	20	3.5080E-03	2.4420E-03	2.8149E-04	8.2692E-05	1.1527E-01	2.4967E-02	3.2678E-03	2.8386E-04	8.6865E-02
10	10	3.5010E-03	2.4610E-03	2.4924E-04	2.8304E-05	1.0128E-01	8.5692E-03	3.2730E-03	2.7731E-04	8.4728E-02

D1.13 In the case of S-PEr-Cc-P1-38 (t_{total} = 861 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.5000E-03	4.2000E-03	1.7552E-03	1.2713E-03	3.2794E-01	2.4831E-01	5.2200E-03	4.3051E-04	8.2474E-02
2	50	5.5000E-03	4.2150E-03	5.8902E-04	4.0721E-04	1.2279E-01	7.5408E-02	5.2213E-03	4.2624E-04	8.1635E-02
4	25	5.5300E-03	4.2250E-03	3.8401E-04	1.3020E-04	9.0889E-02	2.4101E-02	5.2266E-03	4.2589E-04	8.1486E-02
5	20	5.5260E-03	4.2340E-03	3.7619E-04	7.6667E-05	8.8850E-02	1.4187E-02	5.2278E-03	4.2199E-04	8.0721E-02
10	10	5.5330E-03	4.2750E-03	3.7848E-04	2.9458E-05	8.8534E-02	5.4481E-03	5.2383E-03	4.0868E-04	7.8019E-02

D1.14 In the case of S-PEr-Cc-P1-50 (t_{total} = 656 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.1700E-03	5.6500E-03	2.9827E-03	2.4431E-03	5.2791E-01	3.5052E-01	6.7967E-03	5.7681E-04	8.4866E-02
2	50	7.1650E-03	5.6750E-03	1.8086E-03	1.3921E-03	3.1870E-01	2.0246E-01	6.8025E-03	5.6799E-04	8.3497E-02
4	25	7.1625E-03	5.7225E-03	6.5924E-04	2.1615E-04	1.1520E-01	3.0955E-02	6.8146E-03	5.5064E-04	8.0803E-02
5	20	7.1580E-03	5.7300E-03	6.7383E-04	2.1580E-04	1.1760E-01	3.0809E-02	6.8157E-03	5.4682E-04	8.0230E-02
10	10	7.1630E-03	5.8160E-03	5.8035E-04	6.9833E-05	9.9785E-02	9.7655E-03	6.8380E-03	5.1470E-04	7.5270E-02

D1.15 In the case of S-PEr-Cc-P1-59 (t_{total} = 572 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.8900E-03	7.4700E-03	1.2346E-03	6.6507E-04	1.6528E-01	7.4811E-02	8.5120E-03	5.9726E-04	7.0167E-02
2	50	8.9000E-03	7.4950E-03	1.0208E-03	2.3690E-04	1.3620E-01	2.6618E-02	8.5150E-03	5.8631E-04	6.8856E-02
4	25	8.9075E-03	7.5500E-03	9.7076E-04	1.1984E-04	1.2858E-01	1.3454E-02	8.5275E-03	5.6336E-04	6.6064E-02
5	20	8.9100E-03	7.5800E-03	9.5043E-04	1.1079E-04	1.2539E-01	1.2434E-02	8.5336E-03	5.5033E-04	6.4489E-02
10	10	8.9170E-03	7.7230E-03	9.0078E-04	4.6440E-05	1.1664E-01	5.2080E-03	8.5602E-03	4.8699E-04	5.6890E-02

D1.16 In the case of S-PEr-Cc-P1.5-10 (t_{total} = 3583 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4500E-03	6.7000E-04	4.0110E-03	6.0394E-04	2.7662E+00	7.3855E-01	9.4200E-04	1.5839E-04	1.6814E-01
2	50	1.4350E-03	6.7000E-04	2.8007E-03	3.4047E-04	1.9517E+00	4.3006E-01	9.4229E-04	1.5471E-04	1.6418E-01
4	25	1.4225E-03	6.7000E-04	1.7192E-03	6.7315E-05	1.2086E+00	8.8829E-02	9.4257E-04	1.5272E-04	1.6203E-01
5	20	1.4220E-03	6.6600E-04	1.5334E-03	5.7161E-05	1.0784E+00	7.9150E-02	9.4240E-04	1.5295E-04	1.6230E-01
10	10	1.4010E-03	6.6400E-04	1.0974E-03	2.4518E-05	7.8333E-01	2.9084E-02	9.4234E-04	1.5015E-04	1.5934E-01

D1.17 In the case of S-PEr-Cc-P1.5-26 (t_{total} = 1357 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.8300E-03	2.5100E-03	1.3968E-03	7.0173E-04	4.3380E-01	2.0340E-01	3.3185E-03	3.3791E-04	1.0183E-01
2	50	3.8250E-03	2.5100E-03	8.6106E-04	3.1788E-04	2.6741E-01	9.3083E-02	3.3185E-03	3.3609E-04	1.0128E-01
4	25	3.8050E-03	2.5150E-03	5.8304E-04	1.3731E-04	1.8023E-01	4.3869E-02	3.3194E-03	3.3089E-04	9.9684E-02
5	20	3.7960E-03	2.5200E-03	5.4397E-04	9.8729E-05	1.4442E-01	3.1543E-02	3.3205E-03	3.2844E-04	9.8914E-02
10	10	3.7680E-03	2.5520E-03	4.8306E-04	3.7653E-05	1.2820E-01	1.0721E-02	3.3252E-03	3.1648E-04	9.5177E-02

D1.18 In the case of S-PEr-Cc-P1.5-38 (t_{total} = 901 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.3500E-03	3.8900E-03	1.7850E-03	1.5757E-03	4.0506E-01	3.0497E-01	5.0575E-03	5.0059E-04	9.8980E-02
2	50	5.3650E-03	3.8900E-03	6.4870E-04	4.7405E-04	1.5317E-01	8.9618E-02	5.0581E-03	4.9987E-04	9.8825E-02
4	25	5.3500E-03	3.9100E-03	4.2508E-04	1.6089E-04	1.0872E-01	3.1286E-02	5.0634E-03	4.9359E-04	9.7480E-02
5	20	5.3520E-03	3.9180E-03	4.0823E-04	1.3788E-04	1.0419E-01	2.5772E-02	5.0648E-03	4.9016E-04	9.6778E-02
10	10	5.3540E-03	3.9830E-03	4.0765E-04	2.8304E-05	1.0235E-01	5.2875E-03	5.0770E-03	4.6822E-04	9.2225E-02

D1.19 In the case of S-PEr-Cc-P1.5-50 (t_{total} = 660 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.0900E-03	5.8400E-03	1.7355E-03	1.5954E-03	2.9580E-01	2.2745E-01	6.7967E-03	4.7911E-04	7.0492E-02
2	50	7.0500E-03	5.8400E-03	1.1328E-03	8.8991E-04	1.8544E-01	1.2841E-01	6.8008E-03	4.7783E-04	7.0261E-02
4	25	7.0675E-03	5.8850E-03	5.9284E-04	2.0767E-04	1.0074E-01	2.9647E-02	6.8083E-03	4.5724E-04	6.7159E-02
5	20	7.0660E-03	5.9060E-03	5.6855E-04	1.2421E-04	9.6266E-02	1.7764E-02	6.8113E-03	4.4879E-04	6.5888E-02
10	10	7.0560E-03	5.9720E-03	5.5271E-04	5.2292E-05	9.2550E-02	7.4458E-03	6.8300E-03	4.2442E-04	6.2140E-02

D1.20 In the case of S-PEr-Cc-P1.5-50 (t_{total} = 644 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.3400E-03	5.7600E-03	1.8754E-03	1.4163E-03	2.8148E-01	2.0859E-01	6.8850E-03	5.8078E-04	8.4355E-02
2	50	7.3300E-03	5.7600E-03	1.1428E-03	9.6665E-04	1.9840E-01	1.3857E-01	6.8825E-03	5.7663E-04	8.3781E-02
4	25	7.2900E-03	5.7875E-03	6.0623E-04	3.3399E-04	1.0475E-01	4.6942E-02	6.8808E-03	5.5895E-04	8.1233E-02
5	20	7.2840E-03	5.8140E-03	4.8891E-04	1.3702E-04	8.4092E-02	1.9250E-02	6.8857E-03	5.4901E-04	7.9732E-02
10	10	7.2900E-03	5.8820E-03	4.7611E-04	6.2681E-05	8.0944E-02	8.7033E-03	6.9040E-03	5.2328E-04	7.5793E-02

D1.21 In the case of S-PEr-Cc-P1.5-59 (t_{total} = 2379 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0400E-03	4.0000E-05	1.1545E-03	1.9695E-04	4.9237E+00	7.7560E-01	8.4130E-04	2.2572E-04	2.6829E-01
2	50	1.0300E-03	4.0000E-05	7.5290E-04	1.1693E-04	2.9233E+00	4.4930E-01	8.4130E-04	2.2496E-04	2.6739E-01
4	25	1.0250E-03	4.0000E-05	5.8013E-04	8.2443E-05	2.0611E+00	1.3466E-01	8.4109E-04	2.2414E-04	2.6649E-01
5	20	1.0340E-03	4.0000E-05	5.4086E-04	7.3413E-05	1.8353E+00	1.0185E-01	8.4078E-04	2.2404E-04	2.6647E-01
10	10	1.0510E-03	3.1000E-05	4.3719E-04	3.3599E-05	1.4700E+00	4.4918E-02	8.3957E-04	2.2565E-04	2.6877E-01

D1.22 In the case of S-PEr-Cc-P2-10 (t_{total} = 1325 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.4300E-03	2.1400E-03	1.2743E-03	1.0804E-03	5.4777E-01	3.3053E-01	3.1708E-03	3.8342E-04	1.2092E-01
2	50	3.4350E-03	2.1550E-03	5.5698E-04	3.1233E-04	1.6701E-01	1.0886E-01	3.1727E-03	3.7878E-04	1.1939E-01
4	25	3.4450E-03	2.1625E-03	3.6577E-04	1.3975E-04	1.0959E-01	4.6780E-02	3.1752E-03	3.7667E-04	1.1863E-01
5	20	3.4480E-03	2.1640E-03	2.8713E-04	9.8065E-05	8.5966E-02	3.2820E-02	3.1765E-03	3.7530E-04	1.1815E-01
10	10	3.4510E-03	2.1910E-03	1.6244E-04	3.8528E-05	7.4141E-02	1.2851E-02	3.1825E-03	3.6668E-04	1.1522E-01

D1.23 In the case of S-PEr-Cc-P2-26 (t_{total} = 874 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.7300E-03	3.7600E-03	2.9823E-03	1.3409E-03	6.4053E-01	2.4831E-01	5.1538E-03	5.9869E-04	1.1617E-01
2	50	5.6700E-03	3.7850E-03	1.2210E-03	4.2929E-04	2.7380E-01	7.9793E-02	5.1569E-03	5.8648E-04	1.1373E-01
4	25	5.5850E-03	3.8200E-03	8.6299E-04	1.3463E-04	1.9076E-01	2.5094E-02	5.1628E-03	5.7195E-04	1.1078E-01
5	20	5.6100E-03	3.8580E-03	7.3120E-04	6.7777E-05	1.8138E-01	1.2631E-02	5.1675E-03	5.5942E-04	1.0826E-01
10	10	5.7130E-03	3.9810E-03	6.2916E-04	3.5103E-05	1.3647E-01	6.5381E-03	5.1874E-03	5.2260E-04	1.0074E-01

D1.24 In the case of S-PEr-Cc-P2-38 (t_{total} = 614 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.6300E-03	6.4400E-03	1.5343E-03	1.1429E-03	2.0846E-01	1.4979E-01	7.3117E-03	4.4025E-04	6.0211E-02
2	50	7.6350E-03	6.4650E-03	8.9501E-04	5.4681E-04	1.3844E-01	7.1619E-02	7.3158E-03	4.3000E-04	5.8777E-02
4	25	7.6375E-03	6.5100E-03	7.5663E-04	1.4128E-04	1.1623E-01	1.8664E-02	7.3238E-03	4.1385E-04	5.6508E-02
5	20	7.6480E-03	6.5300E-03	7.3469E-04	1.3252E-04	1.1251E-01	1.7515E-02	7.3270E-03	4.0676E-04	5.5515E-02
10	10	7.6600E-03	6.6320E-03	6.6951E-04	8.1302E-05	1.0095E-01	1.0739E-02	7.3496E-03	4.1283E-04	5.6171E-02

D1.25 In the case of S-PEr-Cc-P2-59 (t_{total} = 544 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.2200E-03	6.8000E-03	4.1184E-03	9.0224E-04	4.4668E-01	1.0359E-01	8.4620E-03	9.5140E-04	1.1243E-01
2	50	9.2350E-03	6.8300E-03	2.8178E-03	4.9407E-04	3.0512E-01	5.6190E-02	8.4690E-03	9.4024E-04	1.1102E-01
4	25	9.2500E-03	6.9025E-03	1.4675E-03	2.0310E-04	1.5865E-01	2.2995E-02	8.4835E-03	9.1082E-04	1.0736E-01
5	20	9.2480E-03	6.9400E-03	1.5548E-03	1.6318E-04	1.6812E-01	1.8484E-02	8.4908E-03	8.9404E-04	1.0530E-01
10	10	9.2530E-03	7.1200E-03	1.0480E-03	9.1433E-05	1.4695E-01	1.0371E-02	8.5236E-03	8.1568E-04	9.5697E-02

D1.26 In the case of S-PEr-Sq-P0-10 (t_{total} = 3553 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5200E-03	1.0700E-03	6.4346E-04	4.6482E-04	5.6755E-01	3.4645E-01	1.3983E-03	1.3345E-04	9.5438E-02
2	50	1.5150E-03	1.0700E-03	3.4092E-04	1.7613E-04	2.4088E-01	1.2671E-01	1.3980E-03	1.3392E-04	9.5797E-02
4	25	1.5250E-03	1.0700E-03	2.5202E-04	5.7054E-05	1.7174E-01	4.7545E-02	1.3984E-03	1.3337E-04	9.5372E-02
5	20	1.5280E-03	1.0700E-03	2.3442E-04	4.2846E-05	1.5990E-01	3.5586E-02	1.3985E-03	1.3334E-04	9.5342E-02
10	10	1.5280E-03	1.0690E-03	1.5072E-04	1.9465E-05	1.0359E-01	1.6180E-02	1.3990E-03	1.3298E-04	9.5052E-02

D1.27 In the case of S-PEr-Sq-P0-26 (t_{total} = 1368 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.9500E-03	2.6600E-03	9.2791E-04	6.4948E-04	2.5332E-01	1.7649E-01	3.6454E-03	3.5718E-04	9.7981E-02
2	50	3.9450E-03	2.6600E-03	4.8815E-04	2.3013E-04	1.3070E-01	8.4237E-02	3.6462E-03	3.5710E-04	9.7939E-02
4	25	3.9425E-03	2.6750E-03	2.6578E-04	1.0975E-04	7.4862E-02	3.8092E-02	3.6487E-03	3.5171E-04	9.6394E-02
5	20	3.9440E-03	2.6800E-03	2.2756E-04	9.7980E-05	6.2158E-02	2.9430E-02	3.6497E-03	3.5006E-04	9.5914E-02
10	10	3.9440E-03	2.7040E-03	1.7456E-04	4.2635E-05	5.4652E-02	1.1529E-02	3.6542E-03	3.4267E-04	9.3775E-02

D1.28 In the case of S-PEr-Sq-P0-38 (t_{total} = 933 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.6000E-03	4.3100E-03	9.2872E-04	6.8638E-04	2.1548E-01	1.2345E-01	5.3600E-03	4.3307E-04	8.0797E-02
2	50	5.5950E-03	4.3150E-03	4.7886E-04	2.6992E-04	1.0056E-01	4.8547E-02	5.3617E-03	4.3049E-04	8.0291E-02
4	25	5.5950E-03	4.3275E-03	3.5780E-04	1.3248E-04	8.2681E-02	2.3796E-02	5.3661E-03	4.2485E-04	7.9173E-02
5	20	5.6000E-03	4.3320E-03	3.5042E-04	8.5199E-05	8.0892E-02	1.5291E-02	5.3682E-03	4.2264E-04	7.8730E-02
10	10	5.5800E-03	4.3690E-03	3.3547E-04	3.0623E-05	7.6785E-02	5.5117E-03	5.3751E-03	4.0788E-04	7.5883E-02

D1.29 In the case of S-PEr-Sq-P0-50 (t_{total} = 750 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2500E-03	5.6800E-03	1.7545E-03	8.7755E-04	2.4200E-01	1.2121E-01	6.9157E-03	5.6465E-04	8.1647E-02
2	50	7.2500E-03	5.6950E-03	1.1157E-03	3.8346E-04	1.5390E-01	5.3111E-02	6.9179E-03	5.5823E-04	8.0694E-02
4	25	7.2525E-03	5.7250E-03	5.8505E-04	1.0986E-04	8.6994E-02	1.5227E-02	6.9257E-03	5.4650E-04	7.8909E-02
5	20	7.2500E-03	5.7380E-03	4.9738E-04	7.1554E-05	8.5959E-02	9.9160E-03	6.9283E-03	5.4132E-04	7.8132E-02
10	10	7.2490E-03	5.8240E-03	5.1104E-04	2.7669E-05	8.7747E-02	3.8317E-03	6.9439E-03	5.1048E-04	7.3515E-02

D1.30 In the case of S-PEr-Sq-P0-59 (t_{total} = 681 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.0600E-03	6.7000E-03	1.0493E-03	6.1455E-04	1.5661E-01	7.8688E-02	7.7267E-03	5.0965E-04	6.5960E-02
2	50	8.0800E-03	6.7150E-03	9.1614E-04	2.4749E-04	1.3643E-01	3.1072E-02	7.7342E-03	5.0678E-04	6.5525E-02
4	25	8.1650E-03	6.7600E-03	8.9626E-04	8.0687E-05	1.3258E-01	1.0311E-02	7.7563E-03	5.0153E-04	6.4661E-02
5	20	8.1860E-03	6.7840E-03	8.9154E-04	6.0035E-05	1.3142E-01	7.6732E-03	7.7643E-03	4.9577E-04	6.3853E-02
10	10	8.2750E-03	6.9030E-03	8.5477E-04	3.3483E-05	1.2383E-01	4.2757E-03	7.8020E-03	4.6693E-04	5.9847E-02

D1.31 In the case of S-PEr-Sq-Sd-10 (t_{total} = 3005 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4800E-03	1.0000E-03	1.6581E-03	4.7737E-04	1.1760E+00	3.8821E-01	1.3313E-03	1.2373E-04	9.2935E-02
2	50	1.4900E-03	1.0050E-03	1.1323E-03	1.4498E-04	8.0023E-01	1.2945E-01	1.3312E-03	1.2377E-04	9.2982E-02
4	25	1.4850E-03	1.0050E-03	8.2756E-04	5.9621E-05	5.8485E-01	5.3233E-02	1.3284E-03	1.2481E-04	9.3956E-02
5	20	1.4840E-03	1.0060E-03	7.3384E-04	4.8558E-05	5.1752E-01	4.0250E-02	1.3285E-03	1.2471E-04	9.3877E-02
10	10	1.5180E-03	1.0170E-03	4.5179E-04	1.3984E-05	3.3540E-01	1.1351E-02	1.3290E-03	1.2634E-04	9.5060E-02

D1.32 In the case of S-PEr-Sq-Sd-26 (t_{total} = 1294 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.1200E-03	3.0400E-03	8.9803E-04	6.8579E-04	2.5574E-01	1.6645E-01	3.8933E-03	3.0764E-04	7.9017E-02
2	50	4.1300E-03	3.0500E-03	5.0598E-04	2.8235E-04	1.2524E-01	7.1030E-02	3.8946E-03	3.0611E-04	7.8598E-02
4	25	4.1475E-03	3.0550E-03	3.0729E-04	1.0383E-04	7.5132E-02	2.6590E-02	3.8973E-03	3.0469E-04	7.8181E-02
5	20	4.1480E-03	3.0560E-03	2.4722E-04	8.3376E-05	6.0535E-02	2.1346E-02	3.8980E-03	3.0344E-04	7.7844E-02
10	10	4.1420E-03	3.0880E-03	1.8498E-04	3.4705E-05	5.9903E-02	8.8669E-03	3.9029E-03	2.9308E-04	7.5092E-02

D1.33 In the case of S-PEr-Sq-Sd-38 (t_{total} = 844 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.2400E-03	4.5400E-03	1.0581E-03	7.6350E-04	2.3306E-01	1.2255E-01	5.9113E-03	5.8682E-04	9.9271E-02
2	50	6.2350E-03	4.5550E-03	5.6535E-04	3.0055E-04	1.2412E-01	4.8204E-02	5.9138E-03	5.8157E-04	9.8342E-02
4	25	6.2300E-03	4.5725E-03	4.1758E-04	1.2975E-04	9.1325E-02	2.0827E-02	5.9184E-03	5.7438E-04	9.7049E-02
5	20	6.2340E-03	4.5840E-03	4.1598E-04	9.0169E-05	9.0745E-02	1.4464E-02	5.9218E-03	5.7092E-04	9.6410E-02
10	10	6.2420E-03	4.6500E-03	3.9836E-04	3.6953E-05	8.5668E-02	5.9805E-03	5.9364E-03	5.4847E-04	9.2391E-02

D1.34 In the case of S-PEr-Sq-Sd-50 (t_{total} = 659 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.4800E-03	6.4700E-03	1.0294E-03	7.0058E-04	1.5911E-01	9.7167E-02	7.2033E-03	3.7302E-04	5.1785E-02
2	50	7.4850E-03	6.4950E-03	7.1158E-04	3.1820E-04	1.0956E-01	4.4164E-02	7.2083E-03	3.6370E-04	5.0455E-02
4	25	7.4900E-03	6.5275E-03	5.9896E-04	1.2274E-04	9.1759E-02	1.7041E-02	7.2167E-03	3.5344E-04	4.8975E-02
5	20	7.4940E-03	6.5460E-03	5.8317E-04	8.7515E-05	8.9088E-02	1.2152E-02	7.2210E-03	3.4709E-04	4.8066E-02
10	10	7.5010E-03	6.6310E-03	5.4009E-04	4.5019E-05	8.1449E-02	6.2474E-03	7.2390E-03	3.1668E-04	4.3746E-02

D1.35 In the case of S-PEr-Sq-Sd-59 (t_{total} = 566 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0260E-02	7.3400E-03	8.3630E-04	5.9764E-04	1.1328E-01	5.9290E-02	8.9280E-03	1.2282E-03	1.3757E-01
2	50	1.0255E-02	7.3650E-03	6.5116E-04	3.1719E-04	8.8412E-02	3.1468E-02	8.9360E-03	1.2171E-03	1.3621E-01
4	25	1.0248E-02	7.3950E-03	6.0400E-04	1.3025E-04	8.1677E-02	1.2906E-02	8.9525E-03	1.2045E-03	1.3454E-01
5	20	1.0250E-02	7.4140E-03	5.8949E-04	9.9916E-05	7.9510E-02	9.8985E-03	8.9604E-03	1.1981E-03	1.3371E-01
10	10	1.0254E-02	7.4920E-03	5.5457E-04	5.2873E-05	7.4022E-02	5.2391E-03	8.9970E-03	1.1654E-03	1.2953E-01

D1.36 In the case of S-PEr-Sq-P1-10 (t_{total} = 3000 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4400E-03	8.1000E-04	1.8494E-03	8.3333E-04	1.5284E+00	6.6667E-01	1.1659E-03	1.5190E-04	1.3029E-01
2	50	1.4550E-03	8.0500E-04	7.7705E-04	4.2246E-04	8.7922E-01	3.4069E-01	1.1655E-03	1.5356E-04	1.3175E-01
4	25	1.4550E-03	8.2500E-04	4.5897E-04	8.8388E-05	3.5787E-01	8.2662E-02	1.1662E-03	1.5194E-04	1.3029E-01
5	20	1.4460E-03	8.2200E-04	3.9958E-04	1.0002E-04	3.1217E-01	8.7125E-02	1.1662E-03	1.5129E-04	1.2973E-01
10	10	1.4460E-03	8.2300E-04	2.9953E-04	2.4037E-05	2.3492E-01	2.1085E-02	1.1668E-03	1.5109E-04	1.2949E-01

D1.37 In the case of S-PEr-Sq-P1-26 (t_{total} = 1437 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.4300E-03	2.3300E-03	2.1059E-03	1.2689E-03	7.2961E-01	3.8334E-01	3.2071E-03	3.1267E-04	9.7491E-02
2	50	3.4250E-03	2.3400E-03	8.5267E-04	4.0089E-04	2.5453E-01	1.1791E-01	3.2071E-03	3.1022E-04	9.6728E-02
4	25	3.4125E-03	2.3525E-03	4.8914E-04	1.7238E-04	1.4601E-01	5.5666E-02	3.2088E-03	3.0429E-04	9.4832E-02
5	20	3.4100E-03	2.3560E-03	4.5141E-04	1.1304E-04	1.3451E-01	3.5211E-02	3.2099E-03	3.0276E-04	9.4321E-02
10	10	3.3990E-03	2.3720E-03	1.8246E-04	4.9710E-05	5.6275E-02	1.4647E-02	3.2137E-03	2.9698E-04	9.2412E-02

D1.38 In the case of S-PEr-Sq-P1-38 (t_{total} = 905 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.8000E-03	4.5500E-03	1.2412E-03	9.1337E-04	2.2283E-01	1.5775E-01	5.5389E-03	3.8573E-04	6.9640E-02
2	50	5.8100E-03	4.5700E-03	5.7152E-04	3.3810E-04	1.2506E-01	5.9472E-02	5.5411E-03	3.8064E-04	6.8694E-02
4	25	5.8125E-03	4.5850E-03	5.0450E-04	1.1267E-04	1.1003E-01	2.0031E-02	5.5416E-03	4.0101E-04	7.2364E-02
5	20	5.8180E-03	4.5980E-03	4.9681E-04	9.4568E-05	1.0805E-01	1.6732E-02	5.5438E-03	3.9653E-04	7.1527E-02
10	10	5.8220E-03	4.6740E-03	4.8546E-04	3.8715E-05	1.0386E-01	6.6993E-03	5.5551E-03	3.7092E-04	6.6770E-02

D1.39 In the case of S-PEr-Sq-P1-50 (t_{total} = 736 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.6200E-03	5.8200E-03	1.2519E-03	9.2829E-04	1.9747E-01	1.2516E-01	7.2229E-03	6.3226E-04	8.7536E-02
2	50	7.6250E-03	5.8250E-03	8.5751E-04	5.0023E-04	1.4721E-01	6.8012E-02	7.2221E-03	6.3267E-04	8.7601E-02
4	25	7.6275E-03	5.8800E-03	7.1203E-04	1.3293E-04	1.1369E-01	1.8061E-02	7.2211E-03	6.1315E-04	8.4911E-02
5	20	7.6200E-03	5.9040E-03	7.7642E-04	1.0583E-04	1.1473E-01	1.3888E-02	7.2186E-03	6.0549E-04	8.3880E-02
10	10	7.6070E-03	6.0280E-03	1.1064E-03	4.8774E-05	1.6166E-01	6.4117E-03	7.2036E-03	5.7949E-04	8.0445E-02

D1.40 In the case of S-PEr-Sq-P1-59 (t_{total} = 618 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.4300E-03	6.7100E-03	1.2496E-03	7.1485E-04	1.8623E-01	8.7071E-02	8.0150E-03	6.4785E-04	8.0830E-02
2	50	8.4350E-03	6.7300E-03	9.8696E-04	3.6774E-04	1.4665E-01	4.4764E-02	8.0200E-03	6.4092E-04	7.9915E-02
4	25	8.4250E-03	6.7825E-03	9.1289E-04	1.7630E-04	1.3460E-01	2.1619E-02	8.0292E-03	6.2007E-04	7.7227E-02
5	20	8.4180E-03	6.8100E-03	8.9939E-04	1.4428E-04	1.3207E-01	1.7751E-02	8.0330E-03	6.0866E-04	7.5769E-02
10	10	8.4100E-03	6.9350E-03	8.9682E-04	6.1860E-05	1.2932E-01	7.4837E-03	8.0252E-03	6.1928E-04	7.7167E-02

D1.41 In the case of S-PEr-Sq-P1.5-10 (t_{total} = 3019 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0400E-03	5.7000E-04	8.0773E-04	5.7656E-04	1.1763E+00	5.9439E-01	9.2267E-04	1.1896E-04	1.2893E-01
2	50	1.0250E-03	5.7500E-04	4.8086E-04	2.2728E-04	6.1648E-01	2.9146E-01	9.2267E-04	1.1900E-04	1.2898E-01
4	25	1.0300E-03	5.8500E-04	2.4707E-04	7.5519E-05	3.2191E-01	7.9078E-02	9.2342E-04	1.1741E-04	1.2715E-01
5	20	1.0300E-03	5.9400E-04	2.1414E-04	5.7271E-05	2.7956E-01	6.0337E-02	9.2380E-04	1.1656E-04	1.2617E-01
10	10	1.0130E-03	6.1200E-04	1.0567E-04	2.4518E-05	1.2567E-01	2.4690E-02	9.2145E-04	1.1440E-04	1.2416E-01

D1.42 In the case of S-PEr-Sq-P1.5-26 (t_{total} = 1413 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.7900E-03	2.4200E-03	9.5874E-04	7.4203E-04	3.2266E-01	2.0785E-01	3.4443E-03	3.4720E-04	1.0081E-01
2	50	3.7850E-03	2.4250E-03	5.5787E-04	2.7110E-04	1.5078E-01	7.6045E-02	3.4450E-03	3.4597E-04	1.0043E-01
4	25	3.7800E-03	2.4375E-03	3.2775E-04	1.0352E-04	8.8582E-02	2.9017E-02	3.4466E-03	3.4204E-04	9.9239E-02
5	20	3.7760E-03	2.4440E-03	2.3979E-04	8.7923E-05	6.4738E-02	2.4670E-02	3.4477E-03	3.4017E-04	9.8666E-02
10	10	3.7850E-03	2.4710E-03	1.6183E-04	3.4721E-05	6.5490E-02	9.7668E-03	3.4347E-03	3.3922E-04	9.8762E-02

D1.43 In the case of S-PEr-Sq-P1.5-38 (t_{total} = 845 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.5500E-03	4.5200E-03	1.4115E-03	9.0448E-04	3.0076E-01	1.6475E-01	5.3650E-03	3.5408E-04	6.5998E-02
2	50	5.5450E-03	4.5350E-03	5.7590E-04	3.2341E-04	1.2699E-01	5.8801E-02	5.3656E-03	3.4769E-04	6.4800E-02
4	25	5.5450E-03	4.5525E-03	4.1445E-04	1.3125E-04	9.1038E-02	2.3885E-02	5.3684E-03	3.4103E-04	6.3525E-02
5	20	5.5420E-03	4.5640E-03	3.9723E-04	9.2133E-05	8.7036E-02	1.6764E-02	5.3703E-03	3.3677E-04	6.2710E-02
10	10	5.5550E-03	4.6050E-03	3.6170E-04	4.9261E-05	7.8545E-02	8.9631E-03	5.3799E-03	3.2254E-04	5.9954E-02

D1.44 In the case of S-PEr-Sq-P1.5-50 (t_{total} = 649 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.0000E-03	6.6200E-03	1.6508E-03	1.0060E-03	2.2338E-01	1.2718E-01	7.5550E-03	5.0409E-04	6.6723E-02
2	50	7.9800E-03	6.6500E-03	9.5431E-04	5.2838E-04	1.4351E-01	6.6714E-02	7.5625E-03	4.8841E-04	6.4584E-02
4	25	7.9550E-03	6.6900E-03	8.3062E-04	1.6390E-04	1.2416E-01	2.0603E-02	7.5746E-03	4.7083E-04	6.2159E-02
5	20	7.9620E-03	6.7120E-03	8.2779E-04	1.1423E-04	1.2333E-01	1.4347E-02	7.5777E-03	4.6339E-04	6.1152E-02
10	10	7.9570E-03	6.8120E-03	8.1349E-04	9.0086E-05	1.1942E-01	1.1326E-02	7.5945E-03	4.2615E-04	5.6113E-02

D1.45 In the case of S-PEr-Sq-P1.5-59 (t_{total} = 576 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.3300E-03	7.4800E-03	1.2430E-03	7.9512E-04	1.6618E-01	8.6333E-02	8.8820E-03	7.8865E-04	8.8792E-02
2	50	9.3200E-03	7.5100E-03	1.1225E-03	3.7119E-04	1.4947E-01	4.0281E-02	8.8890E-03	7.7574E-04	8.7270E-02
4	25	9.3100E-03	7.5925E-03	1.0857E-03	2.2032E-04	1.4300E-01	2.3896E-02	8.9030E-03	7.3829E-04	8.2926E-02
5	20	9.3120E-03	7.6340E-03	1.0729E-03	1.8144E-04	1.4054E-01	1.9684E-02	8.9100E-03	7.1960E-04	8.0763E-02
10	10	9.3150E-03	7.8030E-03	1.0234E-03	8.5121E-05	1.3116E-01	9.2392E-03	8.9398E-03	6.4386E-04	7.2022E-02

D1.46 In the case of S-PEr-Sq-P2-10 (t_{total} = 2513 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3700E-03	8.3000E-04	1.7822E-03	6.0394E-04	1.4425E+00	7.2764E-01	1.1840E-03	1.4056E-04	1.1872E-01
2	50	1.3600E-03	8.3500E-04	9.7522E-04	2.7944E-04	7.8841E-01	3.3466E-01	1.1840E-03	1.3815E-04	1.1668E-01
4	25	1.3650E-03	8.3000E-04	2.8584E-04	1.2640E-04	2.2201E-01	1.1918E-01	1.1835E-03	1.3679E-04	1.1558E-01
5	20	1.3560E-03	8.3000E-04	2.7395E-04	1.1154E-04	2.1269E-01	9.9950E-02	1.1833E-03	1.3641E-04	1.1528E-01
10	10	1.3540E-03	8.3400E-04	1.6363E-04	2.6013E-05	1.2665E-01	2.3414E-02	1.1829E-03	1.3708E-04	1.1588E-01

D1.47 In the case of S-PEr-Sq-P2-26 (t_{total} = 1435 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.5100E-03	2.5100E-03	2.4964E-03	1.2900E-03	7.5454E-01	3.8508E-01	3.2129E-03	2.8591E-04	8.8990E-02
2	50	3.5150E-03	2.5050E-03	1.6268E-03	3.9087E-04	4.6281E-01	1.1479E-01	3.2132E-03	2.8607E-04	8.9030E-02
4	25	3.4925E-03	2.5100E-03	1.1566E-03	1.5658E-04	3.3116E-01	4.6292E-02	3.2141E-03	2.8458E-04	8.8541E-02
5	20	3.4820E-03	2.5080E-03	1.1503E-03	8.0289E-05	3.3036E-01	2.3802E-02	3.2151E-03	2.8492E-04	8.8620E-02
10	10	3.4530E-03	2.5080E-03	9.2837E-04	3.0203E-05	2.6886E-01	8.8494E-03	3.2184E-03	2.8316E-04	8.7980E-02

D1.48 In the case of S-PEr-Sq-P2-38 (t_{total} = 865 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.4800E-03	4.1200E-03	1.6029E-03	9.8760E-04	2.9894E-01	1.9827E-01	5.1463E-03	4.3556E-04	8.4636E-02
2	50	5.4900E-03	4.1250E-03	5.7357E-04	2.8767E-04	1.2381E-01	5.6628E-02	5.1494E-03	4.3459E-04	8.4396E-02
4	25	5.4875E-03	4.1450E-03	4.5918E-04	1.3622E-04	1.1078E-01	2.6450E-02	5.1534E-03	4.2854E-04	8.3156E-02
5	20	5.4940E-03	4.1580E-03	4.5115E-04	1.0692E-04	1.0850E-01	2.0761E-02	5.1563E-03	4.2454E-04	8.2334E-02
10	10	5.4990E-03	4.2200E-03	4.4545E-04	4.1952E-05	1.0556E-01	7.8621E-03	5.1685E-03	4.0525E-04	7.8407E-02

D1.49 In the case of S-PEr-Sq-P2-50 (t_{total} = 674 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.0400E-03	5.7100E-03	1.4163E-03	1.0088E-03	2.4804E-01	1.4456E-01	6.7783E-03	5.2442E-04	7.7367E-02
2	50	7.0450E-03	5.7100E-03	9.0260E-04	5.0749E-04	1.5807E-01	7.2396E-02	6.7817E-03	5.2595E-04	7.7555E-02
4	25	7.0300E-03	5.7350E-03	6.3232E-04	1.6210E-04	1.1026E-01	2.3298E-02	6.7863E-03	5.1569E-04	7.5991E-02
5	20	7.0360E-03	5.7600E-03	6.3206E-04	1.3209E-04	1.0973E-01	1.9001E-02	6.7910E-03	5.0594E-04	7.4502E-02
10	10	7.0330E-03	5.8470E-03	6.2274E-04	5.7048E-05	1.0651E-01	8.1625E-03	6.8057E-03	4.7026E-04	6.9098E-02

D1.50 In the case of S-PEr-Sq-P2-59 (t_{total} = 515 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.6100E-03	7.3100E-03	1.5935E-03	1.2567E-03	2.1799E-01	1.3341E-01	9.0600E-03	9.8084E-04	1.0826E-01
2	50	9.5950E-03	7.3800E-03	1.2156E-03	9.1836E-04	1.6471E-01	9.7543E-02	9.0690E-03	9.4650E-04	1.0437E-01
4	25	9.5625E-03	7.4800E-03	9.0368E-04	3.8886E-04	1.2081E-01	4.0857E-02	9.0850E-03	8.9915E-04	9.8970E-02
5	20	9.5500E-03	7.5100E-03	8.0982E-04	2.1458E-04	1.0783E-01	2.2503E-02	9.0928E-03	8.8672E-04	9.7519E-02
10	10	9.5360E-03	7.6660E-03	8.3432E-04	9.2111E-05	1.0883E-01	9.7699E-03	9.0195E-03	9.0355E-04	1.0018E-01

D1.51 In the case of S-PEr-Tp-P0-10 (t_{total} = 3608 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3200E-03	1.1100E-03	9.8350E-04	4.3993E-04	7.9099E-01	3.6060E-01	1.2239E-03	3.3575E-05	2.7433E-02
2	50	1.3550E-03	1.1100E-03	6.8900E-04	1.5980E-04	5.0849E-01	1.3152E-01	1.2239E-03	3.7074E-05	3.0292E-02
4	25	1.3675E-03	1.1225E-03	4.6187E-04	4.1615E-05	3.3774E-01	3.4824E-02	1.2241E-03	3.8301E-05	3.1290E-02
5	20	1.3660E-03	1.1260E-03	4.0383E-04	3.5482E-05	2.9563E-01	2.9617E-02	1.2242E-03	3.7880E-05	3.0944E-02
10	10	1.3640E-03	1.1460E-03	2.6180E-04	7.8881E-06	1.9193E-01	6.3206E-03	1.2248E-03	3.6226E-05	2.9578E-02

D1.52 In the case of S-PEr-Tp-P0-26 (t_{total} = 1284 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.8300E-03	3.5900E-03	8.7755E-04	6.2893E-04	2.3339E-01	1.6638E-01	3.7433E-03	6.9063E-05	1.8450E-02
2	50	3.8250E-03	3.6050E-03	4.1293E-04	2.5132E-04	1.0953E-01	6.8667E-02	3.7438E-03	6.6268E-05	1.7701E-02
4	25	3.8275E-03	3.6175E-03	2.3629E-04	8.6527E-05	6.2718E-02	2.3625E-02	3.7446E-03	6.2938E-05	1.6808E-02
5	20	3.8280E-03	3.6180E-03	1.8693E-04	6.6775E-05	4.9742E-02	1.8456E-02	3.7438E-03	6.2723E-05	1.6754E-02
10	10	3.8330E-03	3.5960E-03	3.3056E-04	2.2509E-05	9.1925E-02	5.9675E-03	3.7367E-03	7.4759E-05	2.0007E-02

D1.53 In the case of S-PEr-Tp-P0-38 (t_{total} = 1022 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.7700E-03	5.4700E-03	2.2838E-03	6.2732E-04	4.0928E-01	1.1448E-01	5.5870E-03	1.0843E-04	1.9407E-02
2	50	5.7900E-03	5.4600E-03	1.1422E-03	2.6578E-04	2.0470E-01	4.7931E-02	5.5870E-03	1.1091E-04	1.9852E-02
4	25	5.8075E-03	5.4625E-03	7.3354E-04	1.0564E-04	1.3217E-01	1.9042E-02	5.5850E-03	1.1000E-04	1.9696E-02
5	20	5.8100E-03	5.4620E-03	5.5736E-04	7.4410E-05	1.0064E-01	1.3407E-02	5.5832E-03	1.1076E-04	1.9837E-02
10	10	5.8150E-03	5.4310E-03	5.5493E-04	2.8694E-05	1.0218E-01	5.1673E-03	5.5725E-03	1.2341E-04	2.2146E-02

D1.54 In the case of S-PEr-Tp-P0-50 (t_{total} = 789 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2200E-03	6.9000E-03	7.9003E-04	6.6545E-04	1.1111E-01	9.3545E-02	7.1029E-03	1.1056E-04	1.5566E-02
2	50	7.2250E-03	6.9000E-03	3.6826E-04	2.9559E-04	5.2785E-02	4.0912E-02	7.1036E-03	1.1190E-04	1.5753E-02
4	25	7.2250E-03	6.8975E-03	1.4420E-04	9.0355E-05	2.0450E-02	1.2731E-02	7.1043E-03	1.1332E-04	1.5951E-02
5	20	7.2280E-03	6.9020E-03	1.2480E-04	7.8298E-05	1.7474E-02	1.1034E-02	7.1049E-03	1.1250E-04	1.5835E-02
10	10	7.2320E-03	6.9120E-03	8.7490E-05	4.4721E-05	1.2238E-02	6.1941E-03	7.1071E-03	1.1027E-04	1.5515E-02

D1.55 In the case of S-PEr-Tp-P0-59 (t_{total} = 691 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.2300E-03	8.0600E-03	7.2223E-04	5.8075E-04	8.9607E-02	7.0903E-02	8.1367E-03	6.9186E-05	8.5030E-03
2	50	8.2150E-03	8.0650E-03	3.2580E-04	1.8633E-04	3.9902E-02	2.3047E-02	8.1342E-03	6.3594E-05	7.8181E-03
4	25	8.1950E-03	8.0725E-03	1.5554E-04	8.9994E-05	1.9014E-02	1.1131E-02	8.1317E-03	5.3518E-05	6.5814E-03
5	20	8.1920E-03	8.0740E-03	1.3771E-04	6.8549E-05	1.6810E-02	8.4796E-03	8.1310E-03	5.2104E-05	6.4080E-03
10	10	8.1750E-03	8.0810E-03	1.0896E-04	5.3635E-05	1.3328E-02	6.6371E-03	8.1280E-03	4.0704E-05	5.0079E-03

D1.56 In the case of S-PEr-Tp-Sd-10 (t_{total} = 3621 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5000E-03	1.4100E-03	6.4322E-04	5.0000E-04	4.4494E-01	3.4483E-01	1.4411E-03	2.1617E-05	1.5000E-02
2	50	1.5000E-03	1.4100E-03	2.6845E-04	1.5980E-04	1.8413E-01	1.0908E-01	1.4414E-03	2.0305E-05	1.4087E-02
4	25	1.4950E-03	1.4075E-03	1.1163E-04	4.6771E-05	7.8474E-02	3.2090E-02	1.4413E-03	1.9617E-05	1.3610E-02
5	20	1.4920E-03	1.4100E-03	7.0457E-05	2.8654E-05	4.9688E-02	2.0038E-02	1.4413E-03	1.9250E-05	1.3356E-02
10	10	1.4890E-03	1.4100E-03	4.2019E-05	9.6609E-06	2.8219E-02	6.6352E-03	1.4410E-03	1.8656E-05	1.2946E-02

D1.57 In the case of S-PEr-Tp-Sd-26 (t_{total} = 1516 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.6500E-03	3.5500E-03	7.5905E-04	5.7022E-04	2.0868E-01	1.5884E-01	3.6120E-03	3.2338E-05	8.9528E-03
2	50	3.6600E-03	3.5500E-03	3.0393E-04	1.7496E-04	8.3612E-02	4.8601E-02	3.6117E-03	3.2714E-05	9.0580E-03
4	25	3.6600E-03	3.5525E-03	1.2114E-04	7.5863E-05	3.3098E-02	2.1355E-02	3.6120E-03	3.1399E-05	8.6929E-03
5	20	3.6620E-03	3.5500E-03	8.4579E-05	5.7271E-05	2.3097E-02	1.5743E-02	3.6120E-03	3.1423E-05	8.6997E-03
10	10	3.6510E-03	3.5500E-03	4.5326E-05	1.4142E-05	1.2415E-02	3.9067E-03	3.6119E-03	3.2592E-05	9.0234E-03

D1.58 In the case of S-PEr-Tp-Sd-38 (t_{total} = 918 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.9700E-03	5.6600E-03	1.0577E-03	7.2027E-04	1.7776E-01	1.2167E-01	5.9022E-03	1.0281E-04	1.7418E-02
2	50	5.9800E-03	5.6700E-03	4.8445E-04	2.3085E-04	8.1421E-02	3.9094E-02	5.9028E-03	1.0152E-04	1.7199E-02
4	25	5.9875E-03	5.6800E-03	2.4185E-04	1.1875E-04	4.0664E-02	2.0457E-02	5.9036E-03	9.8052E-05	1.6609E-02
5	20	5.9820E-03	5.6820E-03	1.8042E-04	9.7030E-05	3.0343E-02	1.6718E-02	5.9036E-03	9.7431E-05	1.6504E-02
10	10	5.9730E-03	5.6900E-03	8.7082E-05	4.7854E-05	1.4623E-02	8.0332E-03	5.9038E-03	1.0230E-04	1.7329E-02

D1.59 In the case of S-PEr-Tp-Sd-50 (t_{total} = 738 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.5000E-03	7.3200E-03	8.1501E-04	5.7595E-04	1.1134E-01	7.7205E-02	7.4314E-03	6.2029E-05	8.3469E-03
2	50	7.5000E-03	7.3200E-03	4.2570E-04	2.4228E-04	5.8156E-02	3.2455E-02	7.4314E-03	6.2163E-05	8.3649E-03
4	25	7.5000E-03	7.3225E-03	1.2640E-04	7.4390E-05	1.7075E-02	9.9187E-03	7.4325E-03	6.3031E-05	8.4805E-03
5	20	7.4960E-03	7.3220E-03	9.8387E-05	4.7284E-05	1.3437E-02	6.3949E-03	7.4326E-03	6.2115E-05	8.3571E-03
10	10	7.4960E-03	7.3200E-03	5.9067E-05	1.7764E-05	8.0692E-03	2.3698E-03	7.4337E-03	6.2120E-05	8.3565E-03

D1.60 In the case of S-PEr-Tp-Sd-59 (t_{total} = 609 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.7700E-03	7.9800E-03	7.1598E-04	5.5877E-04	8.2584E-02	6.1473E-02	8.8633E-03	9.1086E-04	1.0277E-01
2	50	9.7650E-03	7.9800E-03	5.1312E-04	1.9457E-04	5.3366E-02	2.0953E-02	8.8608E-03	9.0143E-04	1.0173E-01
4	25	9.7600E-03	7.9850E-03	7.4077E-04	6.9128E-05	7.7812E-02	7.0828E-03	8.8513E-03	8.7891E-04	9.9297E-02
5	20	9.7600E-03	7.9880E-03	3.2431E-04	6.2239E-05	3.9753E-02	6.3769E-03	8.7216E-03	9.0865E-04	1.0418E-01
10	10	9.7590E-03	7.9910E-03	4.0487E-04	4.1110E-05	4.9129E-02	4.8654E-03	8.7400E-03	8.9782E-04	1.0273E-01

D1.61 In the case of S-PEr-Tp-P1-10 (t_{total} = 3658 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2900E-03	1.1900E-03	1.0636E-03	8.2701E-04	8.8636E-01	6.5119E-01	1.2436E-03	3.0720E-05	2.4702E-02
2	50	1.3000E-03	1.1850E-03	5.6173E-04	3.9901E-04	4.6616E-01	3.1542E-01	1.2436E-03	3.0952E-05	2.4889E-02
4	25	1.2900E-03	1.1900E-03	1.4447E-04	8.5923E-05	1.1287E-01	6.9293E-02	1.2438E-03	2.7617E-05	2.2203E-02
5	20	1.2960E-03	1.1900E-03	1.3788E-04	7.2111E-05	1.1586E-01	5.7682E-02	1.2437E-03	2.8309E-05	2.2762E-02
10	10	1.2920E-03	1.1960E-03	8.8192E-05	2.5408E-05	6.8366E-02	2.0278E-02	1.2439E-03	2.7947E-05	2.2467E-02

D1.62 In the case of S-PEr-Tp-P1-26 (t_{total} = 1413 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.7600E-03	3.6800E-03	1.1146E-03	7.7694E-04	3.0125E-01	2.1113E-01	3.7179E-03	2.7506E-05	7.3984E-03
2	50	3.7750E-03	3.6750E-03	7.1707E-04	4.1591E-04	1.9433E-01	1.1287E-01	3.7171E-03	3.1727E-05	8.5353E-03
4	25	3.7825E-03	3.6825E-03	3.0377E-04	1.7999E-04	8.2435E-02	4.8580E-02	3.7173E-03	2.9927E-05	8.0507E-03
5	20	3.7800E-03	3.6820E-03	1.8274E-04	9.6660E-05	4.8939E-02	2.5970E-02	3.7176E-03	2.8286E-05	7.6088E-03
10	10	3.7850E-03	3.6810E-03	7.1368E-05	2.3476E-05	1.9062E-02	6.3585E-03	3.7160E-03	2.8821E-05	7.7560E-03

D1.63 In the case of S-PEr-Tp-P1-38 (t_{total} = 978 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.5900E-03	5.4300E-03	2.6330E-03	1.8775E-03	4.7187E-01	3.4075E-01	5.5089E-03	5.2308E-05	9.4952E-03
2	50	5.5600E-03	5.4450E-03	1.2174E-03	7.1694E-04	2.1936E-01	1.3047E-01	5.5100E-03	4.3517E-05	7.8979E-03
4	25	5.5575E-03	5.4400E-03	2.3725E-04	1.3844E-04	4.2691E-02	2.4990E-02	5.5075E-03	4.3139E-05	7.8327E-03
5	20	5.5560E-03	5.4420E-03	1.9707E-04	1.1743E-04	3.5496E-02	2.1390E-02	5.5076E-03	4.1926E-05	7.6124E-03
10	10	5.5490E-03	5.4500E-03	6.6908E-05	3.3682E-05	1.2058E-02	6.0720E-03	5.5064E-03	3.7470E-05	6.8048E-03

D1.64 In the case of S-PEr-Tp-P1-50 (t_{total} = 742 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2300E-03	6.8500E-03	2.7454E-03	2.5188E-03	3.9390E-01	3.5130E-01	7.1000E-03	1.1958E-04	1.6843E-02
2	50	7.2350E-03	6.8850E-03	1.1192E-03	9.3303E-04	1.5763E-01	1.3004E-01	7.1086E-03	1.0892E-04	1.5323E-02
4	25	7.2125E-03	6.8975E-03	3.9198E-04	1.8477E-04	5.5111E-02	2.6788E-02	7.1075E-03	1.0215E-04	1.4373E-02
5	20	7.2180E-03	6.9040E-03	3.3552E-04	1.6634E-04	4.7283E-02	2.3121E-02	7.1083E-03	1.0118E-04	1.4234E-02
10	10	7.2100E-03	6.9160E-03	1.2026E-04	6.7856E-05	1.6957E-02	9.8115E-03	7.1109E-03	9.7002E-05	1.3641E-02

D1.65 In the case of S-PEr-Tp-P1-59 (t_{total} = 713 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.9300E-03	7.6700E-03	2.1096E-03	1.4818E-03	2.7081E-01	1.9270E-01	7.7943E-03	1.0064E-04	1.2912E-02
2	50	7.9150E-03	7.6600E-03	6.1910E-04	4.5347E-04	8.0665E-02	5.7293E-02	7.7907E-03	9.7144E-05	1.2469E-02
4	25	7.9200E-03	7.6125E-03	6.0246E-04	2.2500E-04	7.9141E-02	2.8409E-02	7.7846E-03	1.0887E-04	1.3985E-02
5	20	7.9140E-03	7.5760E-03	6.6950E-04	1.7521E-04	8.8372E-02	2.2503E-02	7.7794E-03	1.1872E-04	1.5261E-02
10	10	7.9060E-03	7.6970E-03	1.0056E-04	5.7242E-05	1.3065E-02	7.2836E-03	7.8130E-03	7.7638E-05	9.9370E-03

D1.66 In the case of S-PEr-Tp-P1.5-10 (t_{total} = 3613 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3000E-03	1.2000E-03	2.0404E-03	1.2815E-03	1.6048E+00	9.9344E-01	1.2497E-03	2.3843E-05	1.9079E-02
2	50	1.2950E-03	1.2150E-03	1.1190E-03	6.4159E-04	9.0975E-01	4.9735E-01	1.2500E-03	2.0142E-05	1.6114E-02
4	25	1.2825E-03	1.2150E-03	2.0010E-04	1.0753E-04	1.6335E-01	8.4836E-02	1.2500E-03	1.5549E-05	1.2440E-02
5	20	1.2860E-03	1.2140E-03	2.2882E-04	1.2202E-04	1.8603E-01	9.7148E-02	1.2501E-03	1.6003E-05	1.2802E-02
10	10	1.2760E-03	1.2060E-03	8.2388E-05	2.8284E-05	6.4924E-02	2.2589E-02	1.2506E-03	1.4759E-05	1.1801E-02

D1.67 In the case of S-PEr-Tp-P1.5-26 (t_{total} = 1435 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.5800E-03	3.4300E-03	1.1763E-03	9.6588E-04	3.3706E-01	2.6980E-01	3.5114E-03	4.5886E-05	1.3068E-02
2	50	3.5750E-03	3.4350E-03	5.2792E-04	3.6002E-04	1.5192E-01	1.0481E-01	3.5118E-03	4.4661E-05	1.2718E-02
4	25	3.5725E-03	3.4350E-03	2.7509E-04	9.9609E-05	7.8542E-02	2.8998E-02	3.5121E-03	4.4364E-05	1.2631E-02
5	20	3.5700E-03	3.4400E-03	2.4943E-04	6.5663E-05	7.1184E-02	1.8697E-02	3.5121E-03	4.4400E-05	1.2642E-02
10	10	3.5730E-03	3.4390E-03	1.5847E-04	2.4698E-05	4.5186E-02	7.1818E-03	3.5132E-03	4.4661E-05	1.2712E-02

D1.68 In the case of S-PEr-Tp-P1.5-38 (t_{total} = 956 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.5400E-03	5.3900E-03	2.9179E-03	2.3889E-03	5.3344E-01	4.3435E-01	5.4744E-03	4.9777E-05	9.0927E-03
2	50	5.5300E-03	5.4200E-03	1.1710E-03	8.4553E-04	2.1310E-01	1.5304E-01	5.4739E-03	3.6638E-05	6.6933E-03
4	25	5.5400E-03	5.4125E-03	4.7560E-04	2.0333E-04	8.5849E-02	3.7566E-02	5.4711E-03	4.4108E-05	8.0619E-03
5	20	5.5340E-03	5.4140E-03	3.2139E-04	1.2000E-04	5.8075E-02	2.1978E-02	5.4716E-03	4.1711E-05	7.6232E-03
10	10	5.5450E-03	5.4050E-03	1.2799E-04	3.4075E-05	2.3128E-02	6.3044E-03	5.4697E-03	4.5796E-05	8.3727E-03

D1.69 In the case of S-PEr-Tp-P1.5-50 (t_{total} = 735 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2000E-03	7.1000E-03	2.6895E-03	1.6997E-03	3.7511E-01	2.3607E-01	7.1514E-03	3.1848E-05	4.4534E-03
2	50	7.1900E-03	7.0850E-03	8.4002E-04	6.1561E-04	1.1856E-01	8.5621E-02	7.1543E-03	3.7464E-05	5.2366E-03
4	25	7.1925E-03	7.1000E-03	2.6534E-04	1.4311E-04	3.6994E-02	1.9898E-02	7.1539E-03	3.2591E-05	4.5557E-03
5	20	7.1960E-03	7.0980E-03	2.0473E-04	1.3850E-04	2.8714E-02	1.9333E-02	7.1531E-03	3.1851E-05	4.4527E-03
10	10	7.1940E-03	7.0930E-03	9.1190E-05	5.9264E-05	1.2676E-02	8.3553E-03	7.1551E-03	3.3583E-05	4.6935E-03

D1.70 In the case of S-PEr-Tp-P1.5-59 (t_{total} = 667 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.2900E-03	7.5200E-03	2.7388E-03	1.8882E-03	3.3514E-01	2.5109E-01	7.9317E-03	6.7104E-04	8.4603E-02
2	50	9.3000E-03	7.4750E-03	1.6351E-03	1.1619E-03	1.9819E-01	1.5544E-01	7.9325E-03	6.7802E-04	8.5474E-02
4	25	9.2250E-03	7.4500E-03	9.1318E-04	5.0454E-04	1.1945E-01	5.4692E-02	7.9371E-03	6.4376E-04	8.1107E-02
5	20	9.1940E-03	7.4580E-03	6.3546E-04	3.8267E-04	8.3262E-02	4.6437E-02	7.9377E-03	6.2911E-04	7.9256E-02
10	10	9.1280E-03	7.4860E-03	3.8383E-04	1.1374E-04	4.4492E-02	1.5094E-02	7.9413E-03	5.9713E-04	7.5193E-02

D1.71 In the case of S-PEr-Tp-P2-10 (t_{total} = 3570 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4700E-03	1.3800E-03	1.1282E-03	8.8100E-04	8.0582E-01	6.0342E-01	1.4371E-03	2.2696E-05	1.5793E-02
2	50	1.4700E-03	1.3850E-03	5.1570E-04	3.7335E-04	3.6189E-01	2.5398E-01	1.4370E-03	1.8795E-05	1.3079E-02
4	25	1.4675E-03	1.3875E-03	1.7116E-04	1.0625E-04	1.2011E-01	7.4431E-02	1.4370E-03	1.7382E-05	1.2096E-02
5	20	1.4700E-03	1.3840E-03	1.0186E-04	5.3940E-05	7.0343E-02	3.7303E-02	1.4370E-03	1.7303E-05	1.2041E-02
10	10	1.4640E-03	1.3870E-03	6.8928E-05	1.7920E-05	4.8134E-02	1.2540E-02	1.4372E-03	1.5885E-05	1.1053E-02

D1.72 In the case of S-PEr-Tp-P2-26 (t_{total} = 1461 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.7200E-03	3.5900E-03	1.1968E-03	9.4367E-04	3.3151E-01	2.5367E-01	3.6514E-03	4.4003E-05	1.2051E-02
2	50	3.7150E-03	3.5850E-03	5.1530E-04	3.1578E-04	1.4294E-01	8.7596E-02	3.6507E-03	4.5778E-05	1.2539E-02
4	25	3.7125E-03	3.6000E-03	2.6270E-04	1.1875E-04	7.1727E-02	3.2138E-02	3.6513E-03	4.3630E-05	1.1949E-02
5	20	3.7140E-03	3.5980E-03	2.2194E-04	9.2201E-05	6.0607E-02	2.5626E-02	3.6514E-03	4.3722E-05	1.1974E-02
10	10	3.7120E-03	3.5940E-03	8.8072E-05	2.9439E-05	2.4083E-02	7.9351E-03	3.6519E-03	4.2897E-05	1.1747E-02

D1.73 In the case of S-PEr-Tp-P2-38 (t_{total} = 937 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.4600E-03	5.3100E-03	1.9740E-03	1.5201E-03	3.7105E-01	2.8412E-01	5.4000E-03	5.8523E-05	1.0838E-02
2	50	5.4550E-03	5.3050E-03	7.5936E-04	4.7262E-04	1.3985E-01	8.6878E-02	5.4006E-03	5.8601E-05	1.0851E-02
4	25	5.4600E-03	5.3100E-03	2.5865E-04	1.3896E-04	4.7416E-02	2.5591E-02	5.3983E-03	6.0065E-05	1.1127E-02
5	20	5.4580E-03	5.3080E-03	1.9779E-04	8.5692E-05	3.6533E-02	1.6132E-02	5.3989E-03	6.0623E-05	1.1229E-02
10	10	5.4650E-03	5.3090E-03	9.9828E-05	2.9981E-05	1.8314E-02	5.6473E-03	5.3992E-03	6.0611E-05	1.1226E-02

D1.74 In the case of S-PEr-Tp-P2-50 (t_{total} = 801 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.1900E-03	7.0000E-03	3.0107E-03	2.2652E-03	4.1874E-01	3.2361E-01	7.0829E-03	7.1581E-05	1.0106E-02
2	50	7.1500E-03	7.0200E-03	1.6782E-03	1.3470E-03	2.3855E-01	1.8905E-01	7.0843E-03	5.1351E-05	7.2486E-03
4	25	7.1775E-03	6.9700E-03	4.1658E-04	1.4284E-04	5.9768E-02	2.0254E-02	7.0857E-03	7.1249E-05	1.0055E-02
5	20	7.1820E-03	6.9920E-03	3.4958E-04	1.6895E-04	4.9997E-02	2.3524E-02	7.0849E-03	7.0568E-05	9.9604E-03
10	10	7.1680E-03	7.0110E-03	2.0962E-04	5.2873E-05	2.9256E-02	7.3763E-03	7.0841E-03	6.0276E-05	8.5085E-03

D1.75 In the case of S-PEr-Tp-P2-59 (t_{total} = 684 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.6200E-03	7.3000E-03	3.4983E-03	2.2159E-03	4.5909E-01	3.0231E-01	7.4050E-03	1.1292E-04	1.5249E-02
2	50	7.6550E-03	7.3050E-03	1.9325E-03	1.1064E-03	2.5244E-01	1.4942E-01	7.4042E-03	1.2722E-04	1.7182E-02
4	25	7.6675E-03	7.3075E-03	9.6162E-04	3.6234E-04	1.2542E-01	4.9500E-02	7.4063E-03	1.3262E-04	1.7906E-02
5	20	7.6600E-03	7.3100E-03	7.6892E-04	1.5223E-04	1.0038E-01	2.0550E-02	7.4077E-03	1.2826E-04	1.7314E-02
10	10	7.6250E-03	7.3210E-03	6.1923E-04	4.8808E-05	8.1211E-02	6.6460E-03	7.4047E-03	1.1128E-04	1.5028E-02

D1.76 In the case of S-PEr-Ta-P0-10 (t_{total} = 3617 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.6000E-03	1.0000E-03	1.6757E-03	4.7140E-04	1.1970E+00	4.4786E-01	1.3369E-03	1.4677E-04	1.0978E-01
2	50	1.5900E-03	1.0050E-03	1.3266E-03	2.1524E-04	9.4421E-01	1.5826E-01	1.3376E-03	1.4658E-04	1.0958E-01
4	25	1.6200E-03	1.0050E-03	9.1676E-04	6.5052E-05	6.4789E-01	4.7311E-02	1.3386E-03	1.4752E-04	1.1020E-01
5	20	1.6280E-03	1.0040E-03	7.9136E-04	6.6807E-05	5.5573E-01	4.8411E-02	1.3389E-03	1.4779E-04	1.1038E-01
10	10	1.6350E-03	1.0020E-03	4.0505E-04	3.1710E-05	2.7705E-01	2.3231E-02	1.3363E-03	1.5014E-04	1.1235E-01

D1.77 In the case of S-PEr-Ta-P0-26 (t_{total} = 1456 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.1900E-03	2.8300E-03	1.4049E-03	6.3652E-04	3.6110E-01	1.7643E-01	3.6957E-03	3.7498E-04	1.0146E-01
2	50	4.2000E-03	2.8400E-03	9.3917E-04	3.0203E-04	2.4458E-01	7.8655E-02	3.6968E-03	3.7491E-04	1.0142E-01
4	25	4.2275E-03	2.8350E-03	5.6391E-04	1.5297E-04	1.3339E-01	4.0125E-02	3.6984E-03	3.7536E-04	1.0149E-01
5	20	4.2400E-03	2.8320E-03	5.1504E-04	1.1154E-04	1.2147E-01	2.8973E-02	3.6994E-03	3.7618E-04	1.0169E-01
10	10	4.2690E-03	2.8230E-03	3.6400E-04	3.7253E-05	8.5267E-02	9.6535E-03	3.7040E-03	3.7085E-04	1.0012E-01

D1.78 In the case of S-PEr-Ta-P0-38 (t_{total} = 1053 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.7100E-03	4.2500E-03	1.0897E-03	7.3855E-04	1.9891E-01	1.3188E-01	5.4910E-03	4.3953E-04	8.0046E-02
2	50	5.7050E-03	4.2400E-03	5.4700E-04	3.2717E-04	9.8470E-02	5.7845E-02	5.4910E-03	4.4251E-04	8.0588E-02
4	25	5.7025E-03	4.2425E-03	4.3000E-04	1.3150E-04	7.7129E-02	2.3243E-02	5.4940E-03	4.4245E-04	8.0533E-02
5	20	5.7060E-03	4.2440E-03	4.0632E-04	1.0897E-04	7.2740E-02	1.9117E-02	5.4954E-03	4.4241E-04	8.0505E-02
10	10	5.7210E-03	4.2690E-03	2.9782E-04	3.7133E-05	5.3039E-02	6.6703E-03	5.5035E-03	4.3632E-04	7.9280E-02

D1.79 In the case of S-PEr-Ta-P0-50 (t_{total} = 821 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.5000E-03	6.3900E-03	1.2711E-03	6.5134E-04	1.8211E-01	8.8019E-02	7.1975E-03	3.6035E-04	5.0066E-02
2	50	7.4950E-03	6.3900E-03	9.3055E-04	2.8966E-04	1.3447E-01	3.9117E-02	7.1919E-03	3.6614E-04	5.0910E-02
4	25	7.5050E-03	6.4025E-03	9.1705E-04	1.0662E-04	1.3427E-01	1.4206E-02	7.1844E-03	3.7426E-04	5.2093E-02
5	20	7.5040E-03	6.4140E-03	9.6297E-04	8.2564E-05	1.4182E-01	1.1185E-02	7.1808E-03	3.7639E-04	5.2416E-02
10	10	7.4980E-03	6.4700E-03	1.2233E-03	3.1198E-05	1.8611E-01	4.1609E-03	7.1613E-03	4.0047E-04	5.5922E-02

D1.80 In the case of S-PEr-Ta-P0-59 (t_{total} = 630 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.0500E-03	8.6400E-03	8.0378E-04	4.8451E-04	8.9111E-02	5.5436E-02	8.8600E-03	1.5937E-04	1.7988E-02
2	50	9.0500E-03	8.6450E-03	6.1204E-04	1.7793E-04	6.7854E-02	2.0369E-02	8.8617E-03	1.5873E-04	
4	25	9.0450E-03	8.6400E-03	5.6394E-04	9.6353E-05	6.2487E-02	1.1034E-02	8.8613E-03	1.5994E-04	1.8050E-02
5	20	9.0480E-03	8.6400E-03	5.5142E-04	8.4380E-05	6.1106E-02	9.6611E-03	8.8613E-03	1.5998E-04	1.8054E-02
10	10	9.0700E-03	8.6490E-03	5.0222E-04	6.0745E-05	5.5635E-02	6.9638E-03	8.8622E-03	1.6479E-04	1.8594E-02

D1.81 In the case of S-PEr-Ta-Sd-10 (t_{total} = 3614 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.9400E-03	1.1600E-03	3.4971E-03	4.7397E-04	2.0418E+00	3.1980E-01	1.5439E-03	1.4879E-04	9.6374E-02
2	50	1.9300E-03	1.1600E-03	2.3716E-03	1.7793E-04	1.4198E+00	1.1783E-01	1.5439E-03	1.4596E-04	9.4538E-02
4	25	1.9125E-03	1.1650E-03	1.5026E-03	6.7315E-05	9.1908E-01	4.3220E-02	1.5453E-03	1.4170E-04	9.1696E-02
5	20	1.9060E-03	1.1640E-03	1.3086E-03	5.3351E-05	8.2928E-01	3.4300E-02	1.5472E-03	1.4317E-04	9.2537E-02
10	10	1.7950E-03	1.1670E-03	8.0030E-04	2.2136E-05	5.1665E-01	1.8109E-02	1.5423E-03	1.2880E-04	8.3507E-02

D1.82 In the case of S-PEr-Ta-Sd-26 (t_{total} = 1507 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.1000E-03	3.0200E-03	3.7829E-03	6.0436E-04	9.9951E-01	1.6246E-01	3.7960E-03	2.6675E-04	7.0271E-02
2	50	4.0950E-03	3.0250E-03	2.7516E-03	2.5380E-04	6.8194E-01	6.6352E-02	3.7967E-03	2.6422E-04	6.9593E-02
4	25	4.0600E-03	3.0350E-03	1.8722E-03	6.6829E-05	4.6486E-01	1.7438E-02	3.7963E-03	2.6756E-04	7.0481E-02
5	20	4.0360E-03	3.0380E-03	1.7190E-03	5.3940E-05	4.2698E-01	1.4069E-02	3.7959E-03	2.6558E-04	6.9966E-02
10	10	4.0230E-03	3.0500E-03	1.0754E-03	2.0976E-05	2.6966E-01	5.4654E-03	3.7944E-03	2.5888E-04	6.8227E-02

D1.83 In the case of S-PEr-Ta-Sd-38 (t_{total} = 989 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.8500E-03	3.9900E-03	1.4460E-03	7.1802E-04	3.6240E-01	1.3396E-01	5.4633E-03	5.6820E-04	1.0400E-01
2	50	5.8400E-03	4.0150E-03	1.0587E-03	3.2404E-04	2.6370E-01	6.0455E-02	5.4678E-03	5.6061E-04	1.0253E-01
4	25	5.8400E-03	4.0925E-03	8.1572E-04	2.2659E-04	1.9932E-01	4.0589E-02	5.4767E-03	5.3390E-04	9.7487E-02
5	20	5.8320E-03	4.1320E-03	7.5973E-04	1.7148E-04	1.8387E-01	3.0021E-02	5.4811E-03	5.2027E-04	9.4921E-02
10	10	5.8340E-03	4.2660E-03	5.9084E-04	6.1473E-05	1.3850E-01	1.0983E-02	5.4997E-03	4.7708E-04	8.6748E-02

D1.84 In the case of S-PEr-Ta-Sd-50 (t_{total} = 761 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.5600E-03	6.6000E-03	3.4362E-03	7.3985E-04	4.5939E-01	9.9844E-02	7.3557E-03	3.3709E-04	4.5827E-02
2	50	7.5400E-03	6.6200E-03	1.8049E-03	3.4993E-04	2.4033E-01	4.6583E-02	7.3521E-03	3.2578E-04	4.4311E-02
4	25	7.5325E-03	6.6600E-03	7.5843E-04	1.3989E-04	1.1388E-01	1.8572E-02	7.3582E-03	3.1076E-04	4.2234E-02
5	20	7.5340E-03	6.6740E-03	7.4509E-04	1.0644E-04	1.1164E-01	1.4129E-02	7.3640E-03	3.0717E-04	4.1712E-02
10	10	7.5330E-03	6.7500E-03	7.0940E-04	4.0838E-05	1.0510E-01	5.4942E-03	7.3794E-03	2.8092E-04	3.8068E-02

D1.85 In the case of S-PEr-Ta-Sd-59 (t_{total} = 693 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.2900E-03	6.3500E-03	1.9400E-03	6.6088E-04	2.3401E-01	8.0010E-02	7.9283E-03	7.7476E-04	9.7721E-02
2	50	8.2800E-03	6.3800E-03	1.1335E-03	3.0477E-04	1.6928E-01	3.6874E-02	7.9333E-03	7.6263E-04	9.6130E-02
4	25	8.2800E-03	6.4175E-03	1.0759E-03	1.8215E-04	1.6764E-01	2.2092E-02	7.9421E-03	7.4804E-04	9.4187E-02
5	20	8.2800E-03	6.4400E-03	1.0796E-03	1.3171E-04	1.6764E-01	1.5907E-02	7.9463E-03	7.3914E-04	9.3017E-02
10	10	8.2870E-03	6.5670E-03	1.1131E-03	6.0378E-05	1.6950E-01	7.2894E-03	7.9683E-03	6.8782E-04	8.6320E-02

D1.86 In the case of S-PEr-Ta-P1-10 (t_{total} = 3607 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.1400E-03	8.9000E-04	5.0991E-03	7.8232E-04	2.3946E+00	5.6211E-01	1.4131E-03	2.1182E-04	1.4990E-01
2	50	2.1500E-03	9.0500E-04	3.7651E-03	3.5603E-04	1.7512E+00	2.7493E-01	1.4133E-03	2.1272E-04	1.5051E-01
4	25	1.7550E-03	8.9750E-04	1.3300E-03	1.3583E-04	8.7355E-01	1.0429E-01	1.3924E-03	1.7880E-04	1.2841E-01
5	20	1.7420E-03	9.0400E-04	1.1603E-03	1.1408E-04	7.8085E-01	9.3658E-02	1.3925E-03	1.7620E-04	1.2654E-01
10	10	1.6970E-03	8.9400E-04	6.3209E-04	6.1968E-05	3.7247E-01	5.0877E-02	1.3935E-03	1.7083E-04	1.2259E-01

D1.87 In the case of S-PEr-Ta-P1-26 (t_{total} = 1495 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.0800E-03	2.9500E-03	7.7050E-03	8.1128E-04	1.8885E+00	2.5195E-01	3.6664E-03	3.0651E-04	8.3599E-02
2	50	4.0650E-03	2.9600E-03	4.4849E-03	3.6365E-04	1.1291E+00	1.1259E-01	3.6657E-03	2.9877E-04	8.1503E-02
4	25	3.9225E-03	2.9600E-03	2.6222E-03	2.0162E-04	6.6849E-01	6.7562E-02	3.6638E-03	2.6206E-04	7.1526E-02
5	20	3.9240E-03	2.9620E-03	2.2645E-03	1.4386E-04	5.8940E-01	3.9198E-02	3.6629E-03	2.5320E-04	6.9127E-02
10	10	3.8600E-03	2.9710E-03	8.5454E-04	4.1580E-05	2.3089E-01	1.1305E-02	3.6659E-03	2.4297E-04	6.6279E-02

D1.88 In the case of S-PEr-Ta-P1-38 (t_{total} = 1001 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.7100E-03	4.2700E-03	4.5711E-03	1.4805E-03	8.0054E-01	2.5974E-01	5.4611E-03	4.5361E-04	8.3062E-02
2	50	5.7650E-03	4.2750E-03	2.5855E-03	4.6828E-04	4.4848E-01	8.5297E-02	5.4667E-03	4.5669E-04	8.3540E-02
4	25	5.8025E-03	4.3000E-03	1.1792E-03	2.0885E-04	2.0322E-01	3.7973E-02	5.4756E-03	4.5165E-04	8.2484E-02
5	20	5.7740E-03	4.3140E-03	7.3702E-04	1.8228E-04	1.2765E-01	3.2125E-02	5.4767E-03	4.4535E-04	8.1318E-02
10	10	5.7740E-03	4.3800E-03	4.6655E-04	7.2180E-05	1.0652E-01	1.3074E-02	5.4856E-03	4.2273E-04	7.7063E-02

D1.89 In the case of S-PEr-Ta-P1-50 (t_{total} = 753 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.7600E-03	6.3200E-03	4.6431E-03	1.4003E-03	6.0725E-01	1.8256E-01	7.4400E-03	5.0130E-04	6.7379E-02
2	50	7.7550E-03	6.3800E-03	2.8596E-03	6.1006E-04	3.7283E-01	7.9694E-02	7.4521E-03	4.7942E-04	6.4333E-02
4	25	7.7275E-03	6.4400E-03	9.5819E-04	1.9846E-04	1.4879E-01	2.5985E-02	7.4657E-03	4.5620E-04	6.1106E-02
5	20	7.7120E-03	6.4660E-03	9.5501E-04	1.5573E-04	1.4770E-01	2.0384E-02	7.4680E-03	4.4531E-04	5.9629E-02
10	10	7.7520E-03	6.5830E-03	9.4664E-04	5.4985E-05	1.4380E-01	7.2282E-03	7.4944E-03	4.0753E-04	5.4378E-02

D1.90 In the case of S-PEr-Ta-P1-59 (t_{total} = 543 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.4000E-03	9.1900E-03	9.6080E-04	8.1271E-04	1.0455E-01	8.7295E-02	9.3060E-03	7.7006E-05	8.2749E-03
2	50	9.4150E-03	9.1950E-03	4.9819E-04	3.3503E-04	5.4180E-02	3.6025E-02	9.3060E-03	8.0731E-05	8.6752E-03
4	25	9.4175E-03	9.1950E-03	3.0261E-04	1.9325E-04	3.2911E-02	2.0520E-02	9.3050E-03	8.1911E-05	8.8029E-03
5	20	9.4180E-03	9.1960E-03	2.5228E-04	1.6935E-04	2.7434E-02	1.8221E-02	9.3052E-03	8.1371E-05	8.7447E-03
10	10	9.3980E-03	9.1920E-03	1.4046E-04	5.3500E-05	1.5281E-02	5.7514E-03	9.3054E-03	7.4531E-05	8.0094E-03

D1.91 In the case of S-PEr-Ta-P1.5-10 (t_{total} = 3610 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8400E-03	1.0300E-03	5.5633E-03	9.4168E-04	3.3313E+00	8.3815E-01	1.3911E-03	1.6781E-04	1.2063E-01
2	50	1.8300E-03	1.0400E-03	3.8090E-03	4.5201E-04	2.2740E+00	4.0077E-01	1.3913E-03	1.6646E-04	1.1965E-01
4	25	1.8025E-03	1.0575E-03	2.1224E-03	1.4078E-04	1.2728E+00	1.1620E-01	1.3914E-03	1.6391E-04	1.1780E-01
5	20	1.7980E-03	1.0640E-03	1.9995E-03	8.9419E-05	1.1988E+00	8.1143E-02	1.3872E-03	1.6460E-04	1.1865E-01
10	10	1.7690E-03	1.0770E-03	1.1031E-03	4.1687E-05	6.6170E-01	3.7691E-02	1.3920E-03	1.5129E-04	1.0869E-01

D1.92 In the case of S-PEr-Ta-P1.5-26 (t_{total} = 1601 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.6700E-03	2.7600E-03	2.1010E-03	1.0359E-03	6.0199E-01	3.7214E-01	3.3833E-03	2.2038E-04	6.5136E-02
2	50	3.6600E-03	2.7700E-03	1.3878E-03	4.2809E-04	3.9652E-01	1.5455E-01	3.3830E-03	2.1782E-04	6.4387E-02
4	25	3.6550E-03	2.7750E-03	7.7399E-04	1.7952E-04	2.2162E-01	6.4691E-02	3.3832E-03	2.1186E-04	6.2623E-02
5	20	3.6460E-03	2.7760E-03	5.4603E-04	1.1043E-04	1.5019E-01	3.9778E-02	3.3831E-03	2.1052E-04	6.2227E-02
10	10	3.6680E-03	2.7750E-03	2.3185E-04	5.8462E-05	6.6875E-02	1.6906E-02	3.3883E-03	2.1211E-04	6.2600E-02

D1.93 In the case of S-PEr-Ta-P1.5-38 (t_{total} = 1015 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.6500E-03	4.7500E-03	5.2465E-03	2.3953E-03	9.3023E-01	4.4357E-01	5.3700E-03	2.4815E-04	4.6210E-02
2	50	5.6650E-03	4.7150E-03	3.1226E-03	1.2887E-03	5.5661E-01	2.3865E-01	5.3695E-03	2.5567E-04	4.7616E-02
4	25	5.6200E-03	4.7350E-03	1.3410E-03	2.7080E-04	2.3978E-01	5.0523E-02	5.3708E-03	2.4144E-04	4.4955E-02
5	20	5.6280E-03	4.7520E-03	9.5122E-04	2.3518E-04	1.7059E-01	4.3746E-02	5.3686E-03	2.3544E-04	4.3855E-02
10	10	5.6230E-03	4.8330E-03	3.4144E-04	6.6675E-05	7.0647E-02	1.2432E-02	5.3521E-03	2.1111E-04	3.9444E-02

D1.94 In the case of S-PEr-Ta-P1.5-50 (t_{total} = 781 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2300E-03	6.2700E-03	3.1398E-03	1.8161E-03	4.4726E-01	2.6206E-01	6.9371E-03	3.1346E-04	4.5186E-02
2	50	7.2350E-03	6.2700E-03	1.7004E-03	6.7959E-04	2.3502E-01	9.8064E-02	6.9450E-03	3.1415E-04	4.5234E-02
4	25	7.1900E-03	6.2875E-03	7.1568E-04	1.7181E-04	9.9539E-02	2.4730E-02	6.9414E-03	3.0360E-04	4.3737E-02
5	20	7.1800E-03	6.3100E-03	6.6185E-04	1.5223E-04	1.0489E-01	2.1898E-02	6.9403E-03	2.9423E-04	4.2395E-02
10	10	7.1820E-03	6.3620E-03	6.2134E-04	5.0288E-05	9.7664E-02	7.1310E-03	6.9476E-03	2.7785E-04	3.9993E-02

D1.95 In the case of S-PEr-Ta-P1.5-59 (t_{total} = 724 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.5900E-03	6.2800E-03	7.4578E-03	2.4703E-03	9.8258E-01	3.9337E-01	7.2243E-03	4.3301E-04	5.9938E-02
2	50	7.5100E-03	6.2700E-03	4.3720E-03	7.5228E-04	5.8372E-01	1.1998E-01	7.2371E-03	4.4000E-04	6.0797E-02
4	25	7.5850E-03	6.3000E-03	2.1470E-03	4.2433E-04	2.8887E-01	5.8791E-02	7.2407E-03	4.2900E-04	5.9248E-02
5	20	7.5360E-03	6.3180E-03	1.4520E-03	2.2868E-04	1.9558E-01	3.1673E-02	7.2409E-03	4.1779E-04	5.7698E-02
10	10	7.4830E-03	6.4120E-03	5.4299E-04	1.6158E-04	8.4684E-02	2.2416E-02	7.2411E-03	3.7575E-04	5.1892E-02

D1.96 In the case of S-PEr-Ta-P2-10 (t_{total} = 1718 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3800E-03	7.4000E-04	1.1815E-03	5.4346E-04	1.0839E+00	6.8922E-01	1.0706E-03	1.4215E-04	1.3278E-01
2	50	1.3700E-03	7.4000E-04	7.0510E-04	2.5734E-04	6.4393E-01	3.4776E-01	1.0706E-03	1.4021E-04	1.3097E-01
4	25	1.3400E-03	7.4250E-04	3.6223E-04	8.4008E-05	2.8624E-01	8.4856E-02	1.0706E-03	1.3617E-04	1.2719E-01
5	20	1.3240E-03	7.5000E-04	3.7251E-04	7.0963E-05	2.8920E-01	7.1248E-02	1.0706E-03	1.3336E-04	1.2456E-01
10	10	1.2450E-03	7.6800E-04	2.9064E-04	3.8137E-05	2.3345E-01	3.7797E-02	1.0583E-03	1.1884E-04	1.1229E-01

D1.97 In the case of S-PEr-Ta-P2-26 (t_{total} = 1490 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.6900E-03	3.1000E-03	9.0453E-04	7.8083E-04	2.9179E-01	2.1808E-01	3.5721E-03	1.4359E-04	4.0197E-02
2	50	3.6900E-03	3.0950E-03	5.0318E-04	2.9641E-04	1.4310E-01	8.2795E-02	3.5729E-03	1.4454E-04	4.0454E-02
4	25	3.6900E-03	3.1150E-03	2.9508E-04	1.5104E-04	8.1457E-02	4.2072E-02	3.5743E-03	1.3829E-04	3.8690E-02
5	20	3.6960E-03	3.1200E-03	2.1383E-04	8.7515E-05	5.9036E-02	2.4029E-02	3.5749E-03	1.3718E-04	3.8373E-02
10	10	3.6980E-03	3.1400E-03	1.5377E-04	4.7011E-05	4.8971E-02	1.2911E-02	3.5767E-03	1.3198E-04	3.6899E-02

D1.98 In the case of S-PEr-Ta-P2-38 (t_{total} = 971 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.0500E-03	5.1800E-03	2.8352E-03	2.1052E-03	5.0538E-01	3.4797E-01	5.8100E-03	2.8222E-04	4.8575E-02
2	50	6.0500E-03	5.1900E-03	1.4162E-03	7.2492E-04	2.5178E-01	1.1982E-01	5.8106E-03	2.7807E-04	4.7856E-02
4	25	6.0425E-03	5.2325E-03	6.7544E-04	2.4992E-04	1.2909E-01	4.1810E-02	5.8172E-03	2.6264E-04	4.5148E-02
5	20	6.0420E-03	5.2520E-03	6.2913E-04	1.5294E-04	1.1979E-01	2.5617E-02	5.8180E-03	2.5632E-04	4.4057E-02
10	10	6.0470E-03	5.3050E-03	6.0616E-04	6.9282E-05	1.1426E-01	1.1803E-02	5.8239E-03	2.4315E-04	4.1751E-02

D1.99 In the case of S-PEr-Ta-P2-50 (ttotal = 665 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.3700E-03	7.5000E-03	2.0174E-03	1.6415E-03	2.5123E-01	2.0141E-01	8.0417E-03	2.9041E-04	3.6113E-02
2	50	8.3900E-03	7.5500E-03	7.9539E-04	5.3011E-04	1.0535E-01	6.3184E-02	8.0533E-03	2.7917E-04	3.4665E-02
4	25	8.4025E-03	7.5875E-03	4.8881E-04	1.7317E-04	6.4423E-02	2.1235E-02	8.0625E-03	2.6940E-04	3.3414E-02
5	20	8.4020E-03	7.5960E-03	4.7291E-04	1.5327E-04	6.2258E-02	1.8787E-02	8.0650E-03	2.6639E-04	3.3030E-02
10	10	8.3810E-03	7.6690E-03	3.7192E-04	8.5739E-05	4.8496E-02	1.0510E-02	8.0768E-03	2.3559E-04	2.9168E-02

D1.100 In the case of S-PEr-Ta-P2-59 (t_{total} = 667 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.8400E-03	6.8900E-03	2.3991E-03	1.5487E-03	3.4819E-01	1.7519E-01	8.1267E-03	6.9919E-04	8.6037E-02
2	50	8.8400E-03	6.9350E-03	1.0712E-03	5.0699E-04	1.5446E-01	5.7352E-02	8.1350E-03	6.8455E-04	8.4149E-02
4	25	8.8300E-03	6.9925E-03	7.9310E-04	2.8614E-04	1.1342E-01	3.2405E-02	8.1467E-03	6.6561E-04	8.1704E-02
5	20	8.8240E-03	7.0140E-03	7.3014E-04	1.8530E-04	1.0410E-01	2.2139E-02	8.1507E-03	6.5700E-04	8.0607E-02
10	10	8.8230E-03	7.1110E-03	5.9838E-04	4.3474E-05	8.4148E-02	4.9988E-03	8.1753E-03	6.2501E-04	7.6450E-02

D1.101 In the case of S-PEp-Cc-P0-10* (t_{total} = 3614 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.9800E-03	1.9400E-03	8.2780E-04	5.2136E-04	4.2235E-01	2.6465E-01	1.9600E-03	9.5618E-06	4.8785E-03
2	50	1.9750E-03	1.9400E-03	3.1139E-04	1.7757E-04	1.5847E-01	9.0596E-02	1.9596E-03	8.4832E-06	4.3291E-03
4	25	1.9700E-03	1.9450E-03	1.0520E-04	5.2042E-05	5.3607E-02	2.6757E-02	1.9597E-03	7.2000E-06	3.6741E-03
5	20	1.9700E-03	1.9440E-03	8.0498E-05	3.1456E-05	4.1029E-02	1.5967E-02	1.9597E-03	6.7975E-06	3.4686E-03
10	10	1.9700E-03	1.9450E-03	3.6878E-05	1.1595E-05	1.8777E-02	5.9553E-03	1.9600E-03	6.4215E-06	3.2763E-03

D1.102 In the case of S-PEp-Cc-P0-26* (t_{total} = 1159 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.9400E-03	6.9100E-03	8.1767E-04	5.9764E-04	1.1833E-01	8.6364E-02	6.9255E-03	1.0357E-05	1.4955E-03
2	50	6.9400E-03	6.9100E-03	3.3289E-04	2.2160E-04	4.8106E-02	3.2000E-02	6.9264E-03	8.0904E-06	1.1681E-03
4	25	6.9375E-03	6.9050E-03	1.2900E-04	7.9631E-05	1.8682E-02	1.1483E-02	6.9268E-03	9.4268E-06	1.3609E-03
5	20	6.9400E-03	6.9040E-03	9.6660E-05	5.2073E-05	1.3964E-02	7.5119E-03	6.9275E-03	1.0202E-05	1.4726E-03
10	10	6.9440E-03	6.9070E-03	5.4252E-05	1.7670E-05	7.8388E-03	2.5582E-03	6.9275E-03	1.0152E-05	1.4655E-03

D1.103 In the case of S-PEp-Cc-P0-38* (t_{total} = 768 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0600E-02	1.0520E-02	1.3445E-03	5.7419E-04	1.2780E-01	5.4374E-02	1.0561E-02	2.8536E-05	2.7019E-03
2	50	1.0595E-02	1.0530E-02	7.8052E-04	1.7936E-04	7.3878E-02	1.6944E-02	1.0568E-02	2.2704E-05	2.1484E-03
4	25	1.0613E-02	1.0540E-02	2.3385E-04	6.7218E-05	2.2036E-02	6.3503E-03	1.0575E-02	2.6748E-05	2.5295E-03
5	20	1.0606E-02	1.0536E-02	1.1334E-04	4.7284E-05	1.0687E-02	4.4667E-03	1.0574E-02	2.5193E-05	2.3825E-03
10	10	1.0593E-02	1.0532E-02	4.1110E-05	1.7920E-05	3.8808E-03	1.6987E-03	1.0573E-02	2.3194E-05	2.1938E-03

D1.104 In the case of S-PEp-Cc-P0-50* (t_{total} = 609 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3650E-02	1.2640E-02	5.3740E-01	5.8223E-04	4.0285E+01	4.2748E-02	1.3405E-02	3.9221E-04	2.9259E-02
2	50	4.0315E-02	-1.3325E-02	1.8947E-01	2.0953E-04	4.6782E+00	-1.4219E+01	1.3398E-02	1.6967E-02	1.2665E+00
4	25	2.6848E-02	1.4250E-04	6.7348E-02	6.8750E-05	4.7261E+02	5.0524E-03	1.3371E-02	8.4583E-03	6.3259E-01
5	20	2.4154E-02	2.8380E-03	4.8205E-02	5.5479E-05	1.6985E+01	4.0775E-03	1.3564E-02	7.5367E-03	5.5566E-01
10	10	1.8765E-02	8.2310E-03	1.7031E-02	3.9215E-05	2.0691E+00	2.8695E-03	1.3562E-02	3.7251E-03	2.7467E-01

D1.105 In the case of S-PEp-Cc-P0-59* (t_{total} = 523 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5460E-02	1.5410E-02	7.3985E-04	6.5713E-04	4.8011E-02	4.2533E-02	1.5442E-02	2.1679E-05	1.4039E-03
2	50	1.5470E-02	1.5415E-02	2.5971E-04	2.2946E-04	1.6842E-02	1.4833E-02	1.5440E-02	2.3184E-05	1.5016E-03
4	25	1.5463E-02	1.5420E-02	1.2568E-04	7.6547E-05	8.1501E-03	4.9505E-03	1.5438E-02	2.0341E-05	1.3176E-03
5	20	1.5466E-02	1.5420E-02	1.0972E-04	5.4290E-05	7.1143E-03	3.5207E-03	1.5437E-02	2.2027E-05	1.4269E-03
10	10	1.5466E-02	1.5350E-02	2.4486E-04	3.2728E-05	1.5952E-02	2.1161E-03	1.5423E-02	4.5406E-05	2.9441E-03

D1.106 In the case of S-PEp-Cc-P1-10* (t_{total} = 3606 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.0100E-03	1.8200E-03	7.9715E-04	5.6711E-04	4.1004E-01	2.8934E-01	1.9564E-03	3.4736E-05	1.7755E-02
2	50	2.0150E-03	1.8300E-03	3.8469E-04	2.1213E-04	1.9577E-01	1.0768E-01	1.9567E-03	3.3445E-05	1.7093E-02
4	25	2.0050E-03	1.8500E-03	1.6230E-04	7.2169E-05	8.7229E-02	3.6311E-02	1.9567E-03	3.1347E-05	1.6020E-02
5	20	2.0040E-03	1.8580E-03	1.1752E-04	4.6066E-05	6.1207E-02	2.3408E-02	1.9569E-03	3.0503E-05	1.5587E-02
10	10	2.0000E-03	1.8680E-03	4.7011E-05	9.4868E-06	2.3612E-02	4.8476E-03	1.9572E-03	2.9031E-05	1.4833E-02

D1.107 In the case of S-PEp-Cc-P1-26*(t_{total} = 1214 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.7700E-03	6.6200E-03	9.6274E-04	6.1332E-04	1.4412E-01	9.0997E-02	6.7283E-03	4.4484E-05	6.6114E-03
2	50	6.7600E-03	6.5950E-03	6.2247E-04	1.9226E-04	9.4386E-02	2.8504E-02	6.7300E-03	4.6024E-05	6.8386E-03
4	25	6.7625E-03	6.5525E-03	6.0264E-04	6.0703E-05	9.1971E-02	9.0031E-03	6.7275E-03	5.6719E-05	8.4309E-03
5	20	6.7640E-03	6.5340E-03	6.1288E-04	4.5837E-05	9.3799E-02	6.7988E-03	6.7263E-03	6.2119E-05	9.2352E-03
10	10	6.7640E-03	6.7140E-03	4.8865E-05	1.7127E-05	7.2382E-03	2.5471E-03	6.7445E-03	1.5769E-05	2.3381E-03

D1.108 In the case of S-PEp-Cc-P1-38* (t_{total} = 796 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0300E-02	1.0030E-02	7.7198E-04	7.0036E-04	7.4950E-02	6.9206E-02	1.0174E-02	1.0502E-04	1.0322E-02
2	50	1.0295E-02	1.0035E-02	3.9005E-04	2.5660E-04	3.7943E-02	2.5494E-02	1.0174E-02	1.0269E-04	1.0093E-02
4	25	1.0295E-02	1.0048E-02	1.9605E-04	8.4625E-05	1.9062E-02	8.4100E-03	1.0175E-02	1.0072E-04	9.8985E-03
5	20	1.0300E-02	1.0054E-02	1.7978E-04	6.7434E-05	1.7481E-02	6.6635E-03	1.0176E-02	1.0026E-04	9.8526E-03
10	10	1.0315E-02	1.0060E-02	1.2895E-04	2.2509E-05	1.2501E-02	2.2260E-03	1.0178E-02	1.0063E-04	9.8863E-03

D1.109 In the case of S-PEp-Cc-P1-50* (t_{total} = 624 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3080E-02	4.2500E-03	5.5603E-03	7.9462E-04	1.3083E+00	6.0797E-02	1.1585E-02	3.5936E-03	3.1019E-01
2	50	1.3085E-02	4.1250E-03	5.5107E-03	3.3431E-04	1.3359E+00	2.5588E-02	1.1566E-02	3.6455E-03	3.1520E-01
4	25	1.3093E-02	3.8825E-03	5.4206E-03	1.5654E-04	1.3962E+00	1.1970E-02	1.1523E-02	3.7433E-03	3.2486E-01
5	20	1.3094E-02	3.7560E-03	5.3593E-03	1.2681E-04	1.4269E+00	9.6962E-03	1.1501E-02	3.7948E-03	3.2994E-01
10	10	1.3098E-02	3.1390E-03	4.9173E-03	6.8767E-05	1.5665E+00	5.2566E-03	1.1395E-02	4.0449E-03	3.5499E-01

D1.110 In the case of S-PEp-Cc-P1-59* (t_{total} = 595 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4110E-02	1.3880E-02	8.2749E-04	7.2864E-04	5.8646E-02	5.2495E-02	1.3964E-02	8.8769E-05	6.3570E-03
2	50	1.4120E-02	1.3865E-02	4.3225E-04	3.0034E-04	3.0612E-02	2.1514E-02	1.3963E-02	9.5237E-05	6.8206E-03
4	25	1.4105E-02	1.3873E-02	2.3917E-04	1.3414E-04	1.6956E-02	9.6351E-03	1.3961E-02	8.7332E-05	6.2554E-03
5	20	1.4104E-02	1.3870E-02	2.3084E-04	9.4390E-05	1.6367E-02	6.7789E-03	1.3960E-02	8.7373E-05	6.2588E-03
10	10	1.4089E-02	1.3867E-02	1.6421E-04	4.4981E-05	1.1655E-02	3.2238E-03	1.3955E-02	8.1707E-05	5.8550E-03

D1.111 In the case of S-PEp-Cc-P0-10 (t_{total} = 3593 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.4100E-03	2.0400E-03	9.0224E-04	5.9933E-04	3.9399E-01	2.5157E-01	2.3580E-03	6.2488E-05	2.6500E-02
2	50	2.4050E-03	2.0350E-03	4.8708E-04	2.0923E-04	2.1177E-01	8.8487E-02	2.3581E-03	6.3130E-05	2.6771E-02
4	25	2.4025E-03	2.0250E-03	3.0778E-04	6.6340E-05	1.3309E-01	2.7728E-02	2.3581E-03	6.4521E-05	2.7362E-02
5	20	2.4040E-03	2.0260E-03	2.8243E-04	4.8341E-05	1.2216E-01	2.0226E-02	2.3581E-03	6.4336E-05	2.7284E-02
10	10	2.3970E-03	2.0180E-03	1.9894E-04	1.8379E-05	8.5383E-02	7.7678E-03	2.3577E-03	6.6237E-05	2.8093E-02

D1.112 In the case of S-PEp-Cc-P0-26 (t_{total} = 1100 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.3900E-03	7.2000E-03	7.7694E-04	6.3913E-04	1.0614E-01	8.7075E-02	7.3130E-03	5.3135E-05	7.2658E-03
2	50	7.3850E-03	7.1900E-03	3.1848E-04	2.1482E-04	4.3389E-02	2.9207E-02	7.3130E-03	5.4426E-05	7.4424E-03
4	25	7.3850E-03	7.1950E-03	1.7052E-04	7.6291E-05	2.3699E-02	1.0376E-02	7.3140E-03	5.3062E-05	7.2548E-03
5	20	7.3860E-03	7.1920E-03	1.4252E-04	6.2912E-05	1.9816E-02	8.5711E-03	7.3138E-03	5.3470E-05	7.3109E-03
10	10	7.3880E-03	7.1910E-03	1.1995E-04	2.5055E-05	1.6680E-02	3.4346E-03	7.3141E-03	5.2456E-05	7.1719E-03

D1.113 In the case of S-PEp-Cc-P0-38(t_{total} = 793 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0940E-02	1.0900E-02	7.0353E-04	5.2839E-04	6.4544E-02	4.8299E-02	1.0924E-02	1.6183E-05	1.4814E-03
2	50	1.0945E-02	1.0900E-02	2.7016E-04	1.5186E-04	2.4751E-02	1.3894E-02	1.0925E-02	1.6833E-05	1.5407E-03
4	25	1.0943E-02	1.0908E-02	1.0026E-04	6.7508E-05	9.1855E-03	6.1721E-03	1.0925E-02	1.3693E-05	1.2534E-03
5	20	1.0940E-02	1.0908E-02	8.4205E-05	4.5883E-05	7.7196E-03	4.1941E-03	1.0925E-02	1.3158E-05	1.2044E-03
10	10	1.0945E-02	1.0911E-02	4.0346E-05	1.4337E-05	3.6896E-03	1.3099E-03	1.0925E-02	1.2482E-05	1.1425E-03

D1.114 In the case of S-PEp-Cc-P0-50 (t_{total} = 574 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4200E-02	1.4010E-02	9.5869E-04	5.3182E-04	6.8429E-02	3.7452E-02	1.4138E-02	7.4632E-05	5.2789E-03
2	50	1.4205E-02	1.4040E-02	3.5485E-04	2.3523E-04	2.5274E-02	1.6559E-02	1.4145E-02	6.3738E-05	4.5060E-03
4	25	1.4210E-02	1.4058E-02	1.3821E-04	7.4127E-05	9.7777E-03	5.2165E-03	1.4149E-02	5.7814E-05	4.0863E-03
5	20	1.4210E-02	1.4060E-02	8.6572E-05	6.0698E-05	6.1573E-03	4.2715E-03	1.4149E-02	5.6614E-05	4.0012E-03
10	10	1.4210E-02	1.4066E-02	3.9497E-05	2.0656E-05	2.8080E-03	1.4581E-03	1.4151E-02	5.3757E-05	3.7987E-03

D1.115 In the case of S-PEp-Cc-P0-59 (t_{total} = 505 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5840E-02	1.5570E-02	9.2899E-04	6.8283E-04	5.8649E-02	4.3437E-02	1.5702E-02	9.8590E-05	6.2788E-03
2	50	1.5855E-02	1.5525E-02	6.0872E-04	3.0975E-04	3.9209E-02	1.9773E-02	1.5697E-02	1.1904E-04	7.5835E-03
4	25	1.5858E-02	1.5675E-02	1.3802E-04	1.1122E-04	8.7729E-03	7.0953E-03	1.5741E-02	8.1429E-05	5.1732E-03
5	20	1.5852E-02	1.5672E-02	9.5719E-05	8.2181E-05	6.0828E-03	5.1843E-03	1.5739E-02	7.9825E-05	5.0718E-03
10	10	1.5846E-02	1.5676E-02	4.7889E-05	3.2592E-05	3.0549E-03	2.0722E-03	1.5736E-02	7.6256E-05	4.8459E-03

D1.116 In the case of S-PEp-Cc-P1-10 (t_{total} = 3602 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.1900E-03	1.9000E-03	1.5765E-03	5.9450E-04	7.3667E-01	2.8471E-01	2.1194E-03	6.1018E-05	2.8790E-02
2	50	2.1950E-03	1.9200E-03	9.5684E-04	2.2137E-04	4.5672E-01	1.0369E-01	2.1200E-03	6.0330E-05	2.8458E-02
4	25	2.2125E-03	1.9350E-03	5.6640E-04	7.9221E-05	2.7231E-01	3.6466E-02	2.1205E-03	5.9244E-05	2.7939E-02
5	20	2.2040E-03	1.9360E-03	4.0147E-04	5.5782E-05	1.9301E-01	2.6588E-02	2.1206E-03	5.8376E-05	2.7527E-02
10	10	2.1890E-03	1.9530E-03	1.5593E-04	2.7588E-05	7.4467E-02	1.3760E-02	2.1213E-03	5.6042E-05	2.6419E-02

D1.117 In the case of S-PEp-Cc-P1-26 (t_{total} = 1143 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.4200E-03	6.1800E-03	1.5933E-03	7.6383E-04	2.5012E-01	1.2086E-01	6.3391E-03	7.5559E-05	1.1919E-02
2	50	6.4250E-03	6.2100E-03	8.9678E-04	2.7866E-04	1.4067E-01	4.4023E-02	6.3409E-03	6.9239E-05	1.0919E-02
4	25	6.4200E-03	6.2275E-03	5.5019E-04	1.1787E-04	8.6237E-02	1.8643E-02	6.3423E-03	6.6440E-05	1.0476E-02
5	20	6.4160E-03	6.2280E-03	3.4955E-04	9.8729E-05	5.4771E-02	1.5696E-02	6.3420E-03	6.5933E-05	1.0396E-02
10	10	6.4200E-03	6.2280E-03	1.8800E-04	4.0222E-05	2.9657E-02	6.4582E-03	6.3438E-03	6.2854E-05	9.9078E-03

D1.118 In the case of S-PEp-Cc-P1-38 (t_{total} = 802 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0030E-02	9.2400E-03	8.7755E-04	6.1922E-04	9.4973E-02	6.1798E-02	9.8300E-03	2.7031E-04	2.7498E-02
2	50	1.0030E-02	9.2600E-03	4.9218E-04	2.0953E-04	5.3152E-02	2.1043E-02	9.8336E-03	2.6343E-04	2.6789E-02
4	25	1.0030E-02	9.2750E-03	3.8060E-04	7.5519E-05	4.1035E-02	7.5387E-03	9.8368E-03	2.5852E-04	2.6281E-02
5	20	1.0026E-02	9.2780E-03	3.7780E-04	4.2053E-05	4.0720E-02	4.1969E-03	9.8377E-03	2.5755E-04	2.6180E-02
10	10	1.0023E-02	9.3000E-03	3.6648E-04	3.6530E-05	3.9407E-02	3.6446E-03	9.8433E-03	2.4934E-04	2.5331E-02

D1.119 In the case of S-PEp-Cc-P1-50 (t_{total} = 614 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3130E-02	1.2230E-02	9.7292E-04	7.1992E-04	7.9552E-02	5.4830E-02	1.2877E-02	3.2959E-04	2.5596E-02
2	50	1.3140E-02	1.2260E-02	4.0708E-04	2.6578E-04	3.3204E-02	2.0480E-02	1.2883E-02	3.1973E-04	2.4819E-02
4	25	1.3138E-02	1.2273E-02	1.9672E-04	9.3750E-05	1.6029E-02	7.1361E-03	1.2886E-02	3.1664E-04	2.4572E-02
5	20	1.3134E-02	1.2280E-02	1.6841E-04	6.5244E-05	1.3575E-02	4.9676E-03	1.2888E-02	3.1411E-04	2.4372E-02
10	10	1.3128E-02	1.2307E-02	1.7282E-04	2.0976E-05	1.4043E-02	1.5978E-03	1.2903E-02	3.3936E-04	2.6302E-02

D1.120 In the case of S-PEp-Cc-P1-59 (t_{total} = 567 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4330E-02	1.3870E-02	1.4201E-03	8.9955E-04	1.0187E-01	6.3483E-02	1.4084E-02	1.8379E-04	1.3050E-02
2	50	1.4330E-02	1.3875E-02	6.8103E-04	4.1784E-04	4.8872E-02	2.9159E-02	1.4087E-02	1.8339E-04	1.3019E-02
4	25	1.4350E-02	1.3898E-02	3.8528E-04	1.8663E-04	2.7693E-02	1.3006E-02	1.4086E-02	1.8748E-04	1.3310E-02
5	20	1.4358E-02	1.3904E-02	2.9809E-04	1.4479E-04	2.1064E-02	1.0084E-02	1.4086E-02	1.8949E-04	1.3453E-02
10	10	1.4362E-02	1.3895E-02	2.2886E-04	7.2080E-05	1.6151E-02	5.0188E-03	1.4086E-02	1.9344E-04	1.3732E-02

D1.121 In the case of S-PEp-Sq-P0-10 (t_{total} = 3600 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.9800E-03	1.9100E-03	8.0000E-04	5.8292E-04	4.1667E-01	3.0048E-01	1.9446E-03	2.0342E-05	1.0461E-02
2	50	1.9800E-03	1.9100E-03	3.1237E-04	1.9272E-04	1.6227E-01	9.9343E-02	1.9443E-03	1.9858E-05	1.0213E-02
4	25	1.9725E-03	1.9150E-03	1.2167E-04	6.2500E-05	6.2881E-02	3.1884E-02	1.9444E-03	1.9033E-05	9.7889E-03
5	20	1.9740E-03	1.9140E-03	9.9599E-05	4.3577E-05	5.0712E-02	2.2075E-02	1.9445E-03	1.8893E-05	9.7166E-03
10	10	1.9720E-03	1.9160E-03	4.1419E-05	1.1353E-05	2.1618E-02	5.9068E-03	1.9446E-03	1.8498E-05	9.5124E-03

D1.122 Ln the case of S-PEp-Sq-P0-26 (t_{total} = 1051 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.6000E-03	7.3600E-03	7.3985E-04	6.0302E-04	9.7557E-02	7.9345E-02	7.5320E-03	8.6769E-05	1.1520E-02
2	50	7.6000E-03	7.3700E-03	3.0623E-04	2.1577E-04	4.1256E-02	2.8484E-02	7.5335E-03	8.3501E-05	1.1084E-02
4	25	7.5975E-03	7.3675E-03	1.4220E-04	7.6801E-05	1.8729E-02	1.0196E-02	7.5343E-03	8.1769E-05	1.0853E-02
5	20	7.5960E-03	7.3680E-03	9.4122E-05	5.5479E-05	1.2774E-02	7.3056E-03	7.5344E-03	8.0938E-05	1.0742E-02
10	10	7.6030E-03	7.3740E-03	4.4920E-05	2.1213E-05	5.9591E-03	2.7930E-03	7.5351E-03	7.9675E-05	1.0574E-02

D1.123 Ln the case of S-PEp-Sq-P0-38 (t_{total} = 717 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1350E-02	1.1010E-02	1.4231E-03	7.5237E-04	1.2856E-01	6.7538E-02	1.1139E-02	1.1894E-04	1.0679E-02
2	50	1.1310E-02	1.1005E-02	8.7611E-04	2.5375E-04	7.8540E-02	2.2799E-02	1.1144E-02	1.0459E-04	9.3858E-03
4	25	1.1263E-02	1.0965E-02	3.7668E-04	1.4488E-04	3.3791E-02	1.3026E-02	1.1131E-02	1.0571E-04	9.4969E-03
5	20	1.1260E-02	1.0958E-02	2.9034E-04	1.2236E-04	2.5785E-02	1.1000E-02	1.1129E-02	1.0600E-04	9.5254E-03
10	10	1.1287E-02	1.0946E-02	2.3624E-04	8.1131E-05	2.1343E-02	7.2391E-03	1.1122E-02	1.2248E-04	1.1012E-02

D1.124 In the case of S-PEp-Sq-P0-50 (t_{total} = 546 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4410E-02	1.4280E-02	7.9968E-04	5.8006E-04	5.5650E-02	4.0366E-02	1.4348E-02	5.2154E-05	3.6349E-03
2	50	1.4415E-02	1.4285E-02	3.3201E-04	2.1789E-04	2.3080E-02	1.5115E-02	1.4351E-02	5.4589E-05	3.8039E-03
4	25	1.4413E-02	1.4288E-02	1.3622E-04	7.2169E-05	9.5339E-03	5.0074E-03	1.4353E-02	5.5913E-05	3.8956E-03
5	20	1.4414E-02	1.4290E-02	1.1743E-04	6.0732E-05	8.2175E-03	4.2164E-03	1.4354E-02	5.7869E-05	4.0317E-03
10	10	1.4415E-02	1.4293E-02	4.6007E-05	2.6771E-05	3.2184E-03	1.8571E-03	1.4354E-02	5.7816E-05	4.0278E-03

D1.125 In the case of S-PEp-Sq-P0-59 (t_{total} = 518 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5800E-02	1.5470E-02	9.2611E-04	6.4909E-04	5.9865E-02	4.1264E-02	1.5656E-02	1.2876E-04	8.2245E-03
2	50	1.5800E-02	1.5480E-02	3.6365E-04	2.7921E-04	2.3492E-02	1.7796E-02	1.5661E-02	1.2462E-04	7.9573E-03
4	25	1.5790E-02	1.5498E-02	1.5721E-04	1.1428E-04	9.9845E-03	7.3292E-03	1.5664E-02	1.1841E-04	7.5595E-03
5	20	1.5790E-02	1.5502E-02	1.1452E-04	7.9233E-05	7.2530E-03	5.0512E-03	1.5665E-02	1.1752E-04	7.5022E-03
10	10	1.5757E-02	1.5510E-02	7.6449E-05	3.4335E-05	4.9290E-03	2.1790E-03	1.5639E-02	1.0725E-04	6.8579E-03

D1.126 In the case of S-PEp-Sq-P1-10 (t_{total} = 3606 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3800E-03	1.1700E-03	9.4340E-04	6.2044E-04	7.0932E-01	4.9999E-01	1.3194E-03	4.0281E-05	3.0529E-02
2	50	1.3650E-03	1.1750E-03	4.5748E-04	2.8320E-04	3.4657E-01	2.1293E-01	1.3193E-03	3.8935E-05	2.9512E-02
4	25	1.3525E-03	1.1875E-03	1.6898E-04	7.8644E-05	1.2701E-01	5.9919E-02	1.3193E-03	3.7009E-05	2.8053E-02
5	20	1.3540E-03	1.1880E-03	1.1901E-04	5.5479E-05	1.0018E-01	4.1420E-02	1.3194E-03	3.6766E-05	2.7866E-02
10	10	1.3510E-03	1.1900E-03	4.5277E-05	1.2693E-05	3.5792E-02	9.5078E-03	1.3195E-03	3.6123E-05	2.7375E-02

D1.127 In the case of S-PEp-Sq-P1-26 (t_{total} = 1210 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.4900E-03	6.4000E-03	9.2654E-04	7.8393E-04	1.4276E-01	1.2135E-01	6.4450E-03	2.8762E-05	4.4627E-03
2	50	6.4750E-03	6.4050E-03	3.4993E-04	2.5254E-04	5.4252E-02	3.9153E-02	6.4446E-03	2.3400E-05	3.6309E-03
4	25	6.4775E-03	6.4050E-03	1.5934E-04	8.6527E-05	2.4705E-02	1.3441E-02	6.4440E-03	2.2372E-05	3.4718E-03
5	20	6.4760E-03	6.4020E-03	1.2042E-04	5.8759E-05	1.8664E-02	9.1525E-03	6.4420E-03	2.2996E-05	3.5696E-03
10	10	6.4650E-03	6.4050E-03	5.1045E-05	2.1082E-05	7.9695E-03	3.2685E-03	6.4423E-03	2.0919E-05	3.2472E-03

D1.128 In the case of S-PEp-Sq-P1-38 (t_{total} = 778 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0210E-02	1.0070E-02	1.0376E-03	6.6507E-04	1.0163E-01	6.5784E-02	1.0120E-02	4.7610E-05	4.7045E-03
2	50	1.0200E-02	1.0070E-02	5.3213E-04	2.6769E-04	5.2170E-02	2.6491E-02	1.0119E-02	4.2496E-05	4.1999E-03
4	25	1.0213E-02	1.0075E-02	3.3023E-04	7.8810E-05	3.2336E-02	7.8107E-03	1.0120E-02	4.4931E-05	4.4398E-03
5	20	1.0216E-02	1.0076E-02	2.7111E-04	6.4236E-05	2.6537E-02	6.3350E-03	1.0120E-02	4.6654E-05	4.6102E-03
10	10	1.0214E-02	1.0082E-02	1.8810E-04	2.7101E-05	1.8416E-02	2.6734E-03	1.0120E-02	4.5031E-05	4.4497E-03

D1.129 In the case of S-PEp-Sq-P1-50 (t_{total} = 619 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2680E-02	1.2580E-02	9.6457E-04	6.5134E-04	7.6131E-02	5.1694E-02	1.2633E-02	4.1793E-05	3.3082E-03
2	50	1.2690E-02	1.2580E-02	3.4185E-04	2.3990E-04	2.6949E-02	1.8904E-02	1.2636E-02	4.5102E-05	3.5694E-03
4	25	1.2695E-02	1.2578E-02	1.3660E-04	9.8953E-05	1.0760E-02	7.8550E-03	1.2636E-02	4.9060E-05	3.8825E-03
5	20	1.2700E-02	1.2574E-02	1.0342E-04	6.8179E-05	8.1429E-03	5.3735E-03	1.2636E-02	4.9687E-05	3.9322E-03
10	10	1.2709E-02	1.2595E-02	4.3576E-05	3.2728E-05	3.4369E-03	2.5900E-03	1.2649E-02	4.5302E-05	3.5816E-03

D1.130 In the case of S-PEp-Sq-P1-59 (t_{total} = 578 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4170E-02	1.3540E-02	8.0472E-04	6.8785E-04	5.8868E-02	4.9787E-02	1.3840E-02	2.4870E-04	1.7969E-02
2	50	1.4170E-02	1.3545E-02	3.1315E-04	2.4138E-04	2.2099E-02	1.7266E-02	1.3839E-02	2.4724E-04	1.7866E-02
4	25	1.4158E-02	1.3545E-02	1.3395E-04	6.8750E-05	9.4614E-03	5.0757E-03	1.3836E-02	2.4321E-04	1.7579E-02
5	20	1.4150E-02	1.3548E-02	1.2773E-04	4.8731E-05	9.0271E-03	3.5969E-03	1.3834E-02	2.4023E-04	1.7365E-02
10	10	1.4144E-02	1.3551E-02	8.3560E-05	2.8848E-05	5.9078E-03	2.1289E-03	1.3829E-02	2.3854E-04	1.7249E-02

D1.131 In the case of S-PEp-Tp-P0-10 (t_{total} = 3643 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.5900E-03	7.6000E-04	9.1032E-04	6.0836E-04	1.0763E+00	2.3764E-01	2.4267E-03	3.8660E-04	1.5931E-01
2	50	2.5850E-03	7.5500E-04	5.2297E-04	1.9568E-04	5.4549E-01	7.7191E-02	2.4258E-03	3.8851E-04	1.6016E-01
4	25	2.5800E-03	7.3250E-04	3.1014E-04	6.3225E-05	3.6494E-01	2.5139E-02	2.4244E-03	3.9273E-04	1.6199E-01
5	20	2.5780E-03	7.2400E-04	2.7169E-04	4.3577E-05	3.3386E-01	1.7159E-02	2.4236E-03	3.9465E-04	1.6284E-01
10	10	2.5750E-03	7.1100E-04	2.5220E-04	9.6609E-06	2.3380E-01	3.8428E-03	2.4211E-03	3.9996E-04	1.6519E-01

D1.132 In the case of S-PEp-Tp-P0-26 (t_{total} = 1126 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.3800E-03	7.1900E-03	8.1718E-04	6.6203E-04	1.1148E-01	9.2076E-02	7.2745E-03	6.6987E-05	9.2084E-03
2	50	7.3750E-03	7.1700E-03	3.2580E-04	2.5475E-04	4.4418E-02	3.5530E-02	7.2745E-03	6.8792E-05	9.4565E-03
4	25	7.3650E-03	7.1675E-03	1.4174E-04	7.6547E-05	1.9331E-02	1.0595E-02	7.2741E-03	6.8504E-05	9.4176E-03
5	20	7.3640E-03	7.1660E-03	1.1491E-04	4.2053E-05	1.5664E-02	5.8245E-03	7.2744E-03	6.9171E-05	9.5089E-03
10	10	7.3580E-03	7.1680E-03	6.5524E-05	1.6633E-05	8.9342E-03	2.3041E-03	7.2752E-03	6.8727E-05	9.4467E-03

D1.133 In the case of S-PEp-Tp-P0-38 (t_{total} = 778 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1110E-02	1.0960E-02	7.3828E-04	4.8576E-04	6.7238E-02	4.3841E-02	1.1021E-02	5.6988E-05	5.1706E-03
2	50	1.1105E-02	1.0960E-02	2.4438E-04	1.6759E-04	2.2186E-02	1.5187E-02	1.1022E-02	5.6114E-05	5.0910E-03
4	25	1.1105E-02	1.0955E-02	1.0783E-04	6.7700E-05	9.7102E-03	6.1351E-03	1.1023E-02	5.7951E-05	5.2575E-03
5	20	1.1106E-02	1.0956E-02	8.1538E-05	5.2676E-05	7.4274E-03	4.7809E-03	1.1023E-02	5.7778E-05	5.2418E-03
10	10	1.1103E-02	1.0961E-02	5.1001E-05	2.8206E-05	4.6479E-03	2.5600E-03	1.1023E-02	5.7116E-05	5.1814E-03

D1.134 In the case of S-PEp-Tp-P0-50 (t_{total} = 585 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3990E-02	1.3840E-02	8.0050E-04	6.6545E-04	5.7840E-02	4.7669E-02	1.3934E-02	5.8138E-05	4.1724E-03
2	50	1.3970E-02	1.3865E-02	3.4185E-04	2.5071E-04	2.4532E-02	1.7947E-02	1.3935E-02	4.2866E-05	3.0761E-03
4	25	1.3973E-02	1.3873E-02	1.3868E-04	8.8609E-05	9.9251E-03	6.3428E-03	1.3936E-02	4.0520E-05	2.9077E-03
5	20	1.3976E-02	1.3876E-02	1.0471E-04	5.1258E-05	7.5158E-03	3.6697E-03	1.3936E-02	3.9810E-05	2.8567E-03
10	10	1.3969E-02	1.3871E-02	6.1183E-05	3.3149E-05	4.3799E-03	2.3748E-03	1.3935E-02	3.8486E-05	2.7619E-03

D1.135 In the case of S-PEp-Tp-P0-59 (t_{total} = 515 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8600E-02	1.5340E-02	1.1030E-03	6.9892E-04	7.1902E-02	4.4860E-02	1.6120E-02	1.3896E-03	8.6200E-02
2	50	1.8630E-02	1.5385E-02	7.3229E-04	2.0831E-04	4.7598E-02	1.3409E-02	1.6137E-02	1.3957E-03	8.6492E-02
4	25	1.8640E-02	1.5440E-02	4.0363E-04	8.4856E-05	2.6142E-02	5.4640E-03	1.6161E-02	1.3876E-03	8.5862E-02
5	20	1.8634E-02	1.5456E-02	3.6163E-04	7.0218E-05	2.3155E-02	4.5203E-03	1.6169E-02	1.3796E-03	8.5323E-02
10	10	1.5772E-02	1.5487E-02	6.0842E-04	3.6271E-05	3.8576E-02	2.3241E-03	1.5600E-02	1.2500E-04	8.0132E-03

CD.136 In the case of S-PEp-Tp-P1-10 (t_{total} = 3599 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.1200E-03	1.8800E-03	1.0434E-03	7.5872E-04	4.9453E-01	3.7678E-01	2.0263E-03	5.1110E-05	2.5224E-02
2	50	2.1150E-03	1.8800E-03	5.3091E-04	3.2356E-04	2.6479E-01	1.5631E-01	2.0270E-03	4.8948E-05	2.4148E-02
4	25	2.1000E-03	1.9025E-03	1.8930E-04	9.6690E-05	9.9499E-02	4.7339E-02	2.0276E-03	4.6564E-05	2.2965E-02
5	20	2.1000E-03	1.9060E-03	1.2574E-04	6.3941E-05	6.2557E-02	3.0652E-02	2.0278E-03	4.5715E-05	2.2544E-02
10	10	2.0930E-03	1.9090E-03	5.1251E-05	1.4491E-05	2.5074E-02	6.9370E-03	2.0283E-03	4.4625E-05	2.2002E-02

D1.137 In the case of S-PEp-Tp-P1-26 (t_{total} = 1169 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.9400E-03	6.3100E-03	1.4960E-03	8.2505E-04	2.2598E-01	1.2851E-01	6.6836E-03	1.6512E-04	2.4705E-02
2	50	6.9050E-03	6.3300E-03	8.4853E-04	2.8162E-04	1.2818E-01	4.1518E-02	6.6859E-03	1.5869E-04	2.3736E-02
4	25	6.8775E-03	6.3450E-03	2.7500E-04	1.0986E-04	4.1462E-02	1.6496E-02	6.6884E-03	1.5220E-04	2.2755E-02
5	20	6.8700E-03	6.3520E-03	2.0503E-04	8.6475E-05	3.1888E-02	1.2992E-02	6.6893E-03	1.5033E-04	2.2473E-02
10	10	6.8740E-03	6.3880E-03	1.4444E-04	4.3919E-05	2.2611E-02	6.5964E-03	6.6933E-03	1.4253E-04	2.1294E-02

D1.138 In the case of S-PEp-Tp-P1-38 (t_{total} = 803 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.8800E-03	9.2100E-03	2.3784E-03	6.5258E-04	2.4122E-01	6.7138E-02	9.6688E-03	2.3068E-04	2.3858E-02
2	50	9.8850E-03	9.2150E-03	1.0142E-03	3.2087E-04	1.0281E-01	3.3046E-02	9.6457E-03	2.3536E-04	2.4401E-02
4	25	9.8850E-03	9.2325E-03	4.3244E-04	1.9432E-04	4.3803E-02	2.0033E-02	9.6489E-03	2.2979E-04	2.3815E-02
5	20	9.8880E-03	9.2380E-03	3.9922E-04	1.3201E-04	4.0431E-02	1.3870E-02	9.6506E-03	2.2801E-04	2.3627E-02
10	10	9.8990E-03	9.2640E-03	1.9399E-04	4.5570E-05	1.9597E-02	4.7873E-03	9.6573E-03	2.2264E-04	2.3055E-02

D1.139 In the case of S-PEp-Tp-P1-50 (t_{total} = 636 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2850E-02	1.2700E-02	8.5375E-04	5.9789E-04	6.7119E-02	4.6674E-02	1.2772E-02	5.6362E-05	4.4130E-03
2	50	1.2855E-02	1.2695E-02	3.3991E-04	2.4744E-04	2.6775E-02	1.9331E-02	1.2772E-02	5.7417E-05	4.4956E-03
4	25	1.2868E-02	1.2695E-02	1.4803E-04	9.1998E-05	1.1504E-02	7.1943E-03	1.2771E-02	6.1251E-05	4.7962E-03
5	20	1.2868E-02	1.2698E-02	1.2319E-04	6.5018E-05	9.5730E-03	5.0843E-03	1.2770E-02	6.1136E-05	4.7875E-03
10	10	1.2877E-02	1.2701E-02	8.8198E-05	2.0440E-05	6.8493E-03	1.5971E-03	1.2769E-02	6.4892E-05	5.0819E-03

D1.140 In the case of S-PEp-Tp-P1-59 (t_{total} = 545 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4600E-02	1.4120E-02	1.4723E-03	8.6946E-04	1.0361E-01	6.0129E-02	1.4310E-02	2.0928E-04	1.4625E-02
2	50	1.4590E-02	1.4135E-02	6.7643E-04	2.7086E-04	4.7602E-02	1.8565E-02	1.4310E-02	2.0344E-04	1.4217E-02
4	25	1.4595E-02	1.4140E-02	3.2026E-04	9.7361E-05	2.2629E-02	6.6708E-03	1.4313E-02	2.0294E-04	1.4179E-02
5	20	1.4594E-02	1.4148E-02	2.9602E-04	7.9233E-05	2.0914E-02	5.4292E-03	1.4313E-02	2.0012E-04	1.3982E-02
10	10	1.4594E-02	1.4138E-02	2.2982E-04	3.6878E-05	1.6228E-02	2.5269E-03	1.4308E-02	1.9850E-04	1.3873E-02

D1.141 In the case of S-PEp-Ta-P0-10 (t_{total} = 3071 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.7800E-03	2.4300E-03	1.0020E-03	6.4031E-04	3.7248E-01	2.3628E-01	2.6887E-03	9.1641E-05	3.4084E-02
2	50	2.7750E-03	2.4400E-03	5.9395E-04	2.1165E-04	2.2039E-01	8.6742E-02	2.6887E-03	9.0867E-05	3.3796E-02
4	25	2.7725E-03	2.4475E-03	4.0182E-04	6.1661E-05	1.4882E-01	2.5193E-02	2.6889E-03	9.0651E-05	3.3713E-02
5	20	2.7640E-03	2.4500E-03	3.3150E-04	4.7639E-05	1.2287E-01	1.7399E-02	2.6890E-03	9.0657E-05	3.3714E-02
10	10	2.7630E-03	2.4490E-03	2.3618E-04	2.1628E-05	8.9940E-02	8.6409E-03	2.6894E-03	9.0328E-05	3.3587E-02

D1.142 In the case of S-PEp-Ta-P0-26 (t_{total} = 1210 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2200E-03	6.7000E-03	9.6922E-04	5.2223E-04	1.4466E-01	7.3554E-02	7.0292E-03	1.1950E-04	1.7001E-02
2	50	7.2100E-03	6.7200E-03	4.8350E-04	2.0880E-04	7.1950E-02	2.9388E-02	7.0304E-03	1.1433E-04	1.6262E-02
4	25	7.2150E-03	6.7300E-03	3.4267E-04	8.4394E-05	5.0917E-02	1.1988E-02	7.0323E-03	1.1294E-04	1.6060E-02
5	20	7.2180E-03	6.7340E-03	3.1875E-04	6.0871E-05	4.7335E-02	8.6464E-03	7.0275E-03	1.1563E-04	1.6454E-02
10	10	7.2290E-03	6.7630E-03	2.7219E-04	2.1628E-05	4.0248E-02	3.0665E-03	7.0300E-03	1.1006E-04	1.5656E-02

D1.143 In the case of S-PEp-Ta-P0-38 (t_{total} = 816 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0750E-02	1.0190E-02	1.5562E-03	5.8767E-04	1.4571E-01	5.5493E-02	1.0603E-02	1.7831E-04	1.6817E-02
2	50	1.0725E-02	1.0195E-02	8.7226E-04	2.1876E-04	8.1711E-02	2.0657E-02	1.0604E-02	1.7418E-04	1.6425E-02
4	25	1.0720E-02	1.0220E-02	4.6879E-04	1.1227E-04	4.5870E-02	1.0609E-02	1.0606E-02	1.6506E-04	1.5562E-02
5	20	1.0718E-02	1.0230E-02	4.5586E-04	8.9419E-05	4.4561E-02	8.4501E-03	1.0608E-02	1.6154E-04	1.5229E-02
10	10	1.0711E-02	1.0289E-02	4.2417E-04	4.7621E-05	4.1226E-02	4.4998E-03	1.0607E-02	1.5169E-04	1.4301E-02

D1.144 In the case of S-PEp-Ta-P0-50 (t_{total} = 623 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4130E-02	1.3130E-02	1.2444E-03	5.3362E-04	9.4777E-02	3.8362E-02	1.3832E-02	3.5341E-04	2.5551E-02
2	50	1.4135E-02	1.3155E-02	1.1053E-03	2.3041E-04	8.4020E-02	1.6534E-02	1.3833E-02	3.4317E-04	2.4808E-02
4	25	1.4133E-02	1.3200E-02	1.0542E-03	1.0520E-04	7.9863E-02	7.5550E-03	1.3838E-02	3.2424E-04	2.3431E-02
5	20	1.4130E-02	1.3222E-02	1.0411E-03	7.5672E-05	7.8739E-02	5.4362E-03	1.3840E-02	3.1496E-04	2.2757E-02
10	10	1.4110E-02	1.3348E-02	1.0086E-03	3.0478E-05	7.5562E-02	2.1898E-03	1.3853E-02	2.6154E-04	1.8880E-02

D1.145 In the case of S-PEp-Ta-P0-59 (t_{total} = 570 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5930E-02	1.5220E-02	2.0130E-03	8.3913E-04	1.3226E-01	5.3211E-02	1.5716E-02	2.8745E-04	1.8291E-02
2	50	1.5950E-02	1.5220E-02	1.1050E-03	3.7444E-04	7.2602E-02	2.3759E-02	1.5713E-02	2.8626E-04	1.8218E-02
4	25	1.5958E-02	1.5223E-02	8.1950E-04	1.8551E-04	5.3835E-02	1.1625E-02	1.5715E-02	2.8620E-04	1.8212E-02
5	20	1.5964E-02	1.5230E-02	7.4448E-04	1.3667E-04	4.8883E-02	8.5610E-03	1.5718E-02	2.8478E-04	1.8118E-02
10	10	1.5965E-02	1.5268E-02	5.4792E-04	6.4679E-05	3.5887E-02	4.0513E-03	1.5728E-02	2.7008E-04	1.7173E-02

D1.146 In the case of S-PEp-Ta-P1-10 (t_{total} = 2957 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.0100E-03	2.6300E-03	9.2091E-04	6.8836E-04	3.0903E-01	2.3177E-01	2.9055E-03	9.3066E-05	3.2031E-02
2	50	3.0050E-03	2.6400E-03	4.1845E-04	2.2728E-04	1.4089E-01	7.6398E-02	2.9060E-03	9.2112E-05	3.1697E-02
4	25	3.0075E-03	2.6400E-03	1.6567E-04	8.0687E-05	5.5363E-02	2.9475E-02	2.9060E-03	9.1455E-05	3.1471E-02
5	20	3.0100E-03	2.6420E-03	1.1772E-04	5.9859E-05	4.2391E-02	2.0128E-02	2.9062E-03	9.1301E-05	3.1416E-02
10	10	3.0090E-03	2.6590E-03	5.4171E-05	1.7638E-05	2.0093E-02	6.1032E-03	2.9071E-03	8.9330E-05	3.0728E-02

D1.147 In the case of S-PEp-Ta-P1-26 (t_{total} = 1208 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.5700E-03	6.1100E-03	1.0100E-03	7.2995E-04	1.5562E-01	1.1144E-01	6.4683E-03	1.3624E-04	2.1062E-02
2	50	6.5750E-03	6.1300E-03	3.9525E-04	2.5254E-04	6.4478E-02	3.8555E-02	6.4696E-03	1.3069E-04	2.0200E-02
4	25	6.5600E-03	6.1375E-03	1.8400E-04	9.1998E-05	2.9979E-02	1.4208E-02	6.4611E-03	1.3013E-04	2.0141E-02
5	20	6.5600E-03	6.1400E-03	1.3266E-04	7.2577E-05	2.1607E-02	1.1121E-02	6.4618E-03	1.2944E-04	2.0031E-02
10	10	6.5650E-03	6.1440E-03	9.0210E-05	3.8658E-05	1.4283E-02	5.8885E-03	6.4638E-03	1.2759E-04	1.9739E-02

D1.148 In the case of S-PEp-Ta-P1-38 (t_{total} = 884 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.7400E-03	9.0900E-03	8.8825E-04	6.1332E-04	9.1856E-02	6.2969E-02	9.6000E-03	2.1247E-04	2.2132E-02
2	50	9.7400E-03	9.1000E-03	3.5355E-04	2.3631E-04	3.8852E-02	2.4475E-02	9.6006E-03	2.0968E-04	2.1841E-02
4	25	9.7400E-03	9.1075E-03	2.4838E-04	1.0320E-04	2.7272E-02	1.0675E-02	9.6013E-03	2.0707E-04	2.1567E-02
5	20	9.7340E-03	9.1080E-03	2.3686E-04	9.2566E-05	2.6005E-02	9.5134E-03	9.6020E-03	2.0639E-04	2.1495E-02
10	10	9.7300E-03	9.1410E-03	2.2128E-04	4.0000E-05	2.4208E-02	4.1110E-03	9.6070E-03	1.9444E-04	2.0239E-02

D1.149 In the case of S-PEp-Ta-P1-50 (t_{total} = 592 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3020E-02	1.1870E-02	1.8688E-03	8.6053E-04	1.4738E-01	7.2496E-02	1.2626E-02	4.4354E-04	3.5129E-02
2	50	1.3015E-02	1.1900E-02	1.0351E-03	5.1260E-04	8.1636E-02	4.3075E-02	1.2631E-02	4.3053E-04	3.4085E-02
4	25	1.3010E-02	1.1945E-02	6.6933E-04	2.0546E-04	5.2693E-02	1.5792E-02	1.2641E-02	4.1111E-04	3.2523E-02
5	20	1.3002E-02	1.1962E-02	5.7520E-04	1.5491E-04	4.5284E-02	1.1914E-02	1.2644E-02	4.0290E-04	3.1865E-02
10	10	1.2995E-02	1.2032E-02	3.9449E-04	5.7591E-05	3.1062E-02	4.4317E-03	1.2661E-02	3.7339E-04	2.9492E-02

D1.150 In the case of S-PEp-Ta-P1-59 (t_{total} = 596 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3940E-02	1.3450E-02	2.8476E-03	7.6303E-04	2.1171E-01	5.4737E-02	1.3754E-02	1.8902E-04	1.3743E-02
2	50	1.3930E-02	1.3450E-02	1.6880E-03	3.4641E-04	1.2551E-01	2.4868E-02	1.3758E-02	1.9159E-04	1.3926E-02
4	25	1.3935E-02	1.3458E-02	1.1821E-03	1.7444E-04	8.7840E-02	1.2518E-02	1.3762E-02	1.9263E-04	1.3997E-02
5	20	1.3926E-02	1.3444E-02	9.9243E-04	1.4114E-04	7.3819E-02	1.0135E-02	1.3762E-02	1.9815E-04	1.4399E-02
10	10	1.3953E-02	1.3451E-02	4.6160E-04	8.1513E-05	3.4317E-02	5.8559E-03	1.3764E-02	2.0330E-04	1.4771E-02

D1.151 In the case of S-GSM-Cc-P0-10NP (t_{total} = 2672 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.2800E-03	2.7300E-03	1.1976E-03	7.9766E-04	4.0481E-01	2.6119E-01	3.0338E-03	1.2810E-04	4.2222E-02
2	50	3.2550E-03	2.7350E-03	4.9487E-04	3.0089E-04	1.7065E-01	9.5350E-02	3.0340E-03	1.2322E-04	4.0614E-02
4	25	3.2475E-03	2.7325E-03	2.7900E-04	9.9347E-05	9.5957E-02	3.3033E-02	3.0343E-03	1.1965E-04	3.9434E-02
5	20	3.2440E-03	2.7260E-03	2.4261E-04	8.7323E-05	8.3142E-02	2.8223E-02	3.0348E-03	1.1951E-04	3.9380E-02
10	10	3.2410E-03	2.7210E-03	2.2546E-04	3.9721E-05	7.6661E-02	1.2813E-02	3.0356E-03	1.1791E-04	3.8843E-02

D1.152 In the case of S-GSM-Cc-P0-26NP (t_{total} = 905 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0040E-02	9.3200E-03	1.5930E-03	1.1745E-03	1.6356E-01	1.1887E-01	9.7544E-03	2.3292E-04	2.3879E-02
2	50	1.0055E-02	9.3250E-03	9.8101E-04	4.4115E-04	1.0520E-01	4.3874E-02	9.7522E-03	2.3304E-04	2.3896E-02
4	25	1.0043E-02	9.4875E-03	6.5274E-04	1.8375E-04	6.8513E-02	1.8297E-02	9.8053E-03	1.7447E-04	1.7793E-02
5	20	1.0042E-02	9.4920E-03	6.3364E-04	1.3946E-04	6.5256E-02	1.3887E-02	9.8048E-03	1.7301E-04	1.7645E-02
10	10	1.0038E-02	9.5210E-03	5.7622E-04	9.8297E-05	5.9557E-02	9.7924E-03	9.8071E-03	1.6700E-04	1.7028E-02

D1.153 In the case of S-GSM-Cc-P0-38NP (t_{total} = 884 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5780E-02	1.1160E-02	7.8004E-03	3.7165E-03	5.7734E-01	3.3118E-01	1.4154E-02	1.7121E-03	1.2097E-01
2	50	1.5805E-02	1.1155E-02	5.4581E-03	1.7261E-03	4.0430E-01	1.5473E-01	1.4166E-02	1.7091E-03	1.2065E-01
4	25	1.5758E-02	1.1110E-02	4.3904E-03	1.2149E-03	3.2612E-01	7.8775E-02	1.4173E-02	1.7138E-03	1.2092E-01
5	20	1.5752E-02	1.1108E-02	4.2210E-03	1.0084E-03	3.1467E-01	6.5277E-02	1.4175E-02	1.7130E-03	1.2085E-01
10	10	1.5821E-02	1.1188E-02	3.6430E-03	5.6692E-04	2.6892E-01	3.6381E-02	1.4185E-02	1.6786E-03	1.1833E-01

D1.154 In the case of S-GSM-Cc-P0-50NP (t_{total} = 677 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.0960E-02	1.2530E-02	9.6775E-03	4.7945E-03	7.0462E-01	2.3700E-01	1.8775E-02	3.1411E-03	1.6730E-01
2	50	2.0925E-02	1.2465E-02	8.1402E-03	2.4985E-03	6.5304E-01	1.2360E-01	1.8766E-02	3.1662E-03	1.6872E-01
4	25	2.0793E-02	1.2525E-02	7.9188E-03	1.0680E-03	6.3224E-01	5.2782E-02	1.8749E-02	3.1133E-03	1.6605E-01
5	20	2.0736E-02	1.2574E-02	7.8585E-03	9.9700E-04	6.2498E-01	4.9269E-02	1.8745E-02	3.0858E-03	1.6462E-01
10	10	2.0620E-02	1.2861E-02	7.4668E-03	6.7183E-04	5.8058E-01	3.3269E-02	1.8761E-02	2.9378E-03	1.5659E-01

D1.155 In the case of S-GSM-Cc-P0-59NP (t_{total} = 614 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.3230E-02	1.7290E-02	1.1246E-02	6.1200E-03	5.9628E-01	2.7080E-01	2.0757E-02	2.2434E-03	1.0808E-01
2	50	2.3165E-02	1.7410E-02	6.8101E-03	3.3039E-03	3.9116E-01	1.4491E-01	2.0779E-02	2.2322E-03	1.0742E-01
4	25	2.3170E-02	1.7623E-02	4.7509E-03	1.0391E-03	2.6959E-01	4.5319E-02	2.0805E-02	2.2211E-03	1.0676E-01
5	20	2.3128E-02	1.7706E-02	4.3919E-03	6.2958E-04	2.2347E-01	2.7466E-02	2.0796E-02	2.2180E-03	1.0666E-01
10	10	2.2909E-02	1.8075E-02	3.6094E-03	3.3653E-04	1.7851E-01	1.4690E-02	2.0321E-02	2.0309E-03	9.9941E-02

D1.156 In the case of S-GSM-Cc-P0-10HP (t_{total} = 3430 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.0100E-03	2.3900E-03	2.0632E-03	1.2624E-03	7.2649E-01	4.5967E-01	2.7474E-03	1.1843E-04	4.3108E-02
2	50	3.0100E-03	2.3750E-03	1.2056E-03	5.8904E-04	4.2451E-01	2.1150E-01	2.7478E-03	1.1689E-04	4.2541E-02
4	25	3.0000E-03	2.3775E-03	5.0919E-04	1.3849E-04	1.8121E-01	5.0269E-02	2.7483E-03	1.1556E-04	4.2048E-02
5	20	3.0000E-03	2.3740E-03	3.5979E-04	1.1002E-04	1.2813E-01	3.9435E-02	2.7482E-03	1.1587E-04	4.2162E-02
10	10	2.9960E-03	2.3850E-03	2.1588E-04	4.4833E-05	8.5463E-02	1.6018E-02	2.7486E-03	1.1401E-04	4.1479E-02

D1.157 In the case of S-GSM-Cc-P0-26HP (t_{total} = 1181 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.8900E-03	6.3300E-03	3.1561E-03	1.0577E-03	4.9859E-01	1.2371E-01	8.4445E-03	7.1348E-04	8.4490E-02
2	50	8.8850E-03	6.3200E-03	2.9460E-03	3.3840E-04	4.6613E-01	3.8259E-02	8.4436E-03	7.1618E-04	8.4819E-02
4	25	8.8725E-03	6.3275E-03	2.8707E-03	1.6829E-04	4.5368E-01	1.9015E-02	8.4420E-03	7.1313E-04	8.4473E-02
5	20	8.8720E-03	6.3300E-03	2.8360E-03	1.0723E-04	4.4803E-01	1.2122E-02	8.4416E-03	7.1202E-04	8.4347E-02
10	10	8.8410E-03	6.3590E-03	2.5910E-03	5.2705E-05	4.0746E-01	5.9621E-03	8.4407E-03	7.0174E-04	8.3137E-02

D1.158 In the case of S-GSM-Cc-P0-38HP (t_{total} = 751 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3510E-02	1.3270E-02	2.1875E-03	1.6763E-03	1.6484E-01	1.2500E-01	1.3401E-02	9.0079E-05	6.7216E-03
2	50	1.3515E-02	1.3260E-02	6.9613E-04	4.8969E-04	5.2498E-02	3.6544E-02	1.3399E-02	9.7113E-05	7.2480E-03
4	25	1.3495E-02	1.3265E-02	4.5932E-04	1.7109E-04	3.4581E-02	1.2678E-02	1.3399E-02	9.0862E-05	6.7813E-03
5	20	1.3488E-02	1.3266E-02	4.3441E-04	1.1506E-04	3.2707E-02	8.5303E-03	1.3400E-02	9.0122E-05	6.7256E-03
10	10	1.3486E-02	1.3279E-02	3.4534E-04	4.9486E-05	2.5989E-02	3.6695E-03	1.3402E-02	8.4507E-05	6.3056E-03

D1.159 In the case of S-GSM-Cc-P0-50HP (ttotal = 585 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.7540E-02	1.7350E-02	2.4178E-03	1.9354E-03	1.3936E-01	1.1034E-01	1.7452E-02	8.1363E-05	4.6621E-03
2	50	1.7535E-02	1.7340E-02	1.3399E-03	1.0127E-03	7.7272E-02	5.7752E-02	1.7443E-02	8.6212E-05	4.9425E-03
4	25	1.7530E-02	1.7340E-02	5.7142E-04	3.6133E-04	3.2954E-02	2.0754E-02	1.7449E-02	8.1846E-05	4.6907E-03
5	20	1.7522E-02	1.7352E-02	5.5023E-04	3.0738E-04	3.1710E-02	1.7545E-02	1.7448E-02	7.3176E-05	4.1939E-03
10	10	1.7517E-02	1.7403E-02	4.3336E-04	1.5989E-04	2.4901E-02	9.1320E-03	1.7458E-02	5.2543E-05	3.0098E-03

D1.160 In the case of S-GSM-Cc-P0-59HP (t_{total} = 615 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.0040E-02	1.7260E-02	5.0083E-03	1.1694E-03	2.9017E-01	5.9392E-02	1.9415E-02	1.0617E-03	5.4683E-02
2	50	2.0055E-02	1.7425E-02	4.4453E-03	4.9293E-04	2.5511E-01	2.5054E-02	1.9442E-02	9.9546E-04	5.1203E-02
4	25	2.0063E-02	1.7763E-02	3.5221E-03	2.8648E-04	1.9829E-01	1.4575E-02	1.9495E-02	8.5860E-04	4.4042E-02
5	20	2.0056E-02	1.7924E-02	2.9707E-03	2.5906E-04	1.6574E-01	1.3178E-02	1.9520E-02	7.9224E-04	4.0586E-02
10	10	2.0057E-02	1.8267E-02	1.6454E-03	1.8169E-04	9.0074E-02	9.2372E-03	1.9526E-02	7.1808E-04	3.6776E-02

D1.161 In the case of S-GSM-Cc-P0.6-38NP (t_{total} = 1430 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.3200E-03	4.9500E-03	1.3584E-02	9.3647E-03	2.5235E+00	1.2006E+00	7.2336E-03	1.0845E-03	1.4993E-01
2	50	8.4150E-03	5.1100E-03	5.5713E-03	2.9322E-03	7.1611E-01	3.8191E-01	7.2500E-03	1.0529E-03	1.4523E-01
4	25	8.3275E-03	5.0650E-03	3.0406E-03	1.2612E-03	4.0407E-01	1.6655E-01	7.2588E-03	9.9442E-04	1.3700E-01
5	20	8.3540E-03	5.1120E-03	2.7722E-03	1.0365E-03	3.7301E-01	1.3660E-01	7.2647E-03	9.6742E-04	1.3317E-01
10	10	8.2400E-03	5.1590E-03	1.6587E-03	7.7845E-04	2.6049E-01	9.9917E-02	7.2843E-03	8.7976E-04	1.2078E-01

D1.162 In the case of S-GSM-Cc-P0.6-50NP (t_{total} = 1196 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.7300E-03	6.2600E-03	1.1342E-02	3.3318E-03	1.2321E+00	3.6613E-01	8.8909E-03	9.3932E-04	1.0565E-01
2	50	9.6300E-03	6.2600E-03	7.0783E-03	2.1341E-03	8.0317E-01	2.3387E-01	8.8936E-03	9.2354E-04	1.0384E-01
4	25	9.6375E-03	6.2375E-03	4.4850E-03	9.0011E-04	4.9421E-01	9.8588E-02	8.8993E-03	9.1646E-04	1.0298E-01
5	20	9.6320E-03	6.2640E-03	3.9443E-03	8.5030E-04	4.3069E-01	9.3133E-02	8.9049E-03	9.0888E-04	1.0207E-01
10	10	9.4370E-03	6.5520E-03	1.6542E-03	5.2356E-04	2.5247E-01	5.9226E-02	8.9350E-03	8.1904E-04	9.1666E-02

D1.163 In the case of S-GSM-Cc-P0.6-59NP (t_{total} = 1086 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0450E-02	7.1000E-03	1.3037E-02	3.9370E-03	1.2476E+00	4.1750E-01	9.5210E-03	9.5259E-04	1.0005E-01
2	50	1.0465E-02	7.1900E-03	8.5044E-03	2.6062E-03	8.1265E-01	2.7682E-01	9.5320E-03	9.3051E-04	9.7620E-02
4	25	1.0273E-02	7.2750E-03	4.7869E-03	1.0411E-03	4.6599E-01	1.4307E-01	9.5433E-03	8.6704E-04	9.0854E-02
5	20	1.0210E-02	7.2580E-03	3.8922E-03	5.4883E-04	4.0273E-01	7.5618E-02	9.5418E-03	8.5382E-04	8.9482E-02
10	10	1.0229E-02	7.2730E-03	1.7896E-03	3.9517E-04	1.8931E-01	4.9508E-02	9.5517E-03	8.4704E-04	8.8679E-02

D1.164 In the case of S-GSM-Cc-P0.6-26HP (t_{total} = 1217 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.3300E-03	4.8500E-03	1.8710E-03	9.9676E-04	3.0031E-01	1.5148E-01	6.1942E-03	6.9686E-04	1.1250E-01
2	50	7.3200E-03	4.8100E-03	1.7033E-03	7.8480E-04	2.6458E-01	1.1927E-01	6.1950E-03	6.9800E-04	1.1267E-01
4	25	7.3100E-03	4.7325E-03	1.5982E-03	6.9445E-04	2.5663E-01	1.0554E-01	6.1969E-03	7.0336E-04	1.1350E-01
5	20	7.2920E-03	4.6960E-03	1.5371E-03	6.8341E-04	2.5501E-01	1.0399E-01	6.1980E-03	7.0347E-04	1.1350E-01
10	10	7.1980E-03	4.5300E-03	1.4620E-03	5.8890E-04	2.4209E-01	9.8892E-02	6.2106E-03	7.4092E-04	1.1930E-01

D1.165 In the case of S-GSM-Cc-P0.6-38HP (t_{total} = 1416 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.5300E-03	6.8400E-03	1.5487E-02	1.0449E-02	2.2642E+00	1.4926E+00	7.6971E-03	4.7800E-04	6.2101E-02
2	50	8.4850E-03	6.7550E-03	6.7007E-03	4.6937E-03	8.8275E-01	6.1638E-01	7.6986E-03	4.8401E-04	6.2870E-02
4	25	8.3950E-03	6.8375E-03	3.9899E-03	2.0787E-03	4.8778E-01	2.6865E-01	7.7023E-03	4.7619E-04	6.1824E-02
5	20	8.4720E-03	6.7960E-03	3.2713E-03	1.4340E-03	4.2620E-01	1.8361E-01	7.7090E-03	4.9257E-04	6.3896E-02
10	10	8.2850E-03	7.0810E-03	1.8791E-03	3.8031E-04	2.5612E-01	4.8207E-02	7.6611E-03	3.5761E-04	4.6679E-02

D1.166 In the case of S-GSM-Cc-P0.6-50HP (t_{total} = 1133 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0860E-02	9.1300E-03	1.4734E-02	9.7737E-03	1.6085E+00	9.8724E-01	9.9409E-03	5.5475E-04	5.5805E-02
2	50	1.1045E-02	8.8950E-03	9.0272E-03	5.3398E-03	1.0149E+00	5.2791E-01	9.9223E-03	6.0948E-04	6.1426E-02
4	25	1.0993E-02	8.9000E-03	4.1835E-03	2.2344E-03	4.7006E-01	2.2113E-01	9.9186E-03	5.6352E-04	5.6814E-02
5	20	1.0882E-02	9.0180E-03	3.5728E-03	1.7113E-03	3.7784E-01	1.6768E-01	9.9204E-03	5.1935E-04	5.2351E-02
10	10	1.0774E-02	9.2990E-03	2.3083E-03	3.8621E-04	2.4045E-01	3.8265E-02	9.9175E-03	4.2805E-04	4.3161E-02

D1.167 In the case of S-GSM-Cc-P0.6-59HP (t_{total} = 1092 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1770E-02	7.9800E-03	1.6603E-02	1.2474E-02	1.8135E+00	1.1088E+00	1.0761E-02	1.1825E-03	1.0989E-01
2	50	1.1785E-02	7.9950E-03	9.4338E-03	5.4463E-03	1.1800E+00	4.7483E-01	1.0766E-02	1.1719E-03	1.0885E-01
4	25	1.1718E-02	8.0675E-03	5.6603E-03	2.1923E-03	7.0162E-01	1.9168E-01	1.0777E-02	1.1590E-03	1.0755E-01
5	20	1.1696E-02	8.1260E-03	4.4948E-03	1.3461E-03	5.5314E-01	1.2759E-01	1.0783E-02	1.1517E-03	1.0680E-01
10	10	1.1727E-02	8.2360E-03	2.8071E-03	3.6004E-04	3.4083E-01	3.4078E-02	1.0818E-02	1.1168E-03	1.0323E-01

D1.168 In the case of S-GSM-Sq-P0-26HP (t_{total} = 1078 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.3100E-03	7.1500E-03	1.8552E-03	1.3757E-03	2.5947E-01	1.7248E-01	7.7160E-03	3.4043E-04	4.4120E-02
2	50	8.3050E-03	7.1750E-03	1.4719E-03	6.2124E-04	2.0514E-01	7.4804E-02	7.7170E-03	3.3271E-04	4.3114E-02
4	25	8.2850E-03	7.2350E-03	1.3452E-03	4.4600E-04	1.8593E-01	5.3833E-02	7.7193E-03	3.1851E-04	4.1262E-02
5	20	8.2720E-03	7.2820E-03	1.2805E-03	4.2423E-04	1.7584E-01	5.1286E-02	7.7198E-03	3.0929E-04	4.0065E-02
10	10	8.1700E-03	7.3190E-03	1.2166E-03	3.9687E-04	1.6309E-01	4.9808E-02	7.7209E-03	2.7390E-04	3.5475E-02

D1.169 In the case of S-GSM-Sq-P0-38HP (t_{total} = 719 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2380E-02	1.0500E-02	2.7146E-03	1.9321E-03	2.4497E-01	1.5606E-01	1.1546E-02	6.5665E-04	5.6874E-02
2	50	1.2410E-02	1.0510E-02	1.9756E-03	8.3832E-04	1.8797E-01	6.9889E-02	1.1549E-02	6.5655E-04	5.6848E-02
4	25	1.2403E-02	1.0523E-02	1.8918E-03	5.7254E-04	1.7492E-01	4.7711E-02	1.1553E-02	6.4615E-04	5.5928E-02
5	20	1.2410E-02	1.0532E-02	1.9063E-03	5.4788E-04	1.6921E-01	4.5603E-02	1.1556E-02	6.4564E-04	5.5870E-02
10	10	1.2077E-02	1.0628E-02	1.7843E-03	4.6989E-04	1.5128E-01	3.8908E-02	1.1427E-02	5.8344E-04	5.1060E-02

D1.170 In the case of S-GSM-Sq-P0-50HP (t_{total} = 604 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.6300E-02	1.1320E-02	6.2545E-03	2.1904E-03	5.3230E-01	1.3438E-01	1.4067E-02	2.0360E-03	1.4474E-01
2	50	1.6330E-02	1.1255E-02	6.0850E-03	1.0861E-03	5.1590E-01	6.6512E-02	1.3839E-02	2.2047E-03	1.5931E-01
4	25	1.6358E-02	1.1175E-02	5.9832E-03	3.8253E-04	5.0121E-01	2.3386E-02	1.3850E-02	2.2042E-03	1.5916E-01
5	20	1.6368E-02	1.1106E-02	5.9270E-03	3.4619E-04	4.9244E-01	2.1150E-02	1.3854E-02	2.2073E-03	1.5933E-01
10	10	1.6421E-02	1.0624E-02	5.3557E-03	2.3816E-04	4.2144E-01	1.4503E-02	1.3867E-02	2.2672E-03	1.6349E-01

D1.171 In the case of S-GSM-Sq-P0-59HP (t_{total} = 537 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.6920E-02	1.4270E-02	4.5767E-03	8.8825E-04	3.2072E-01	5.2778E-02	1.6184E-02	1.0979E-03	6.7840E-02
2	50	1.6900E-02	1.4290E-02	4.4085E-03	4.1407E-04	3.0850E-01	2.4921E-02	1.6177E-02	1.0835E-03	6.6976E-02
4	25	1.6858E-02	1.4278E-02	4.2501E-03	3.4328E-04	2.9768E-01	2.0617E-02	1.6162E-02	1.0815E-03	6.6916E-02
5	20	1.6840E-02	1.4280E-02	4.1442E-03	3.0365E-04	2.9021E-01	1.8229E-02	1.6157E-02	1.0768E-03	6.6647E-02
10	10	1.6830E-02	1.4281E-02	3.5750E-03	2.0646E-04	2.5033E-01	1.2389E-02	1.6144E-02	1.0703E-03	6.6300E-02

D1.172 In the case of S-GSM-Sq-P0.6-26HP (t_{total} = 1332 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.3100E-03	2.5900E-03	2.8359E-03	9.3479E-04	1.0949E+00	1.3222E-01	6.2154E-03	1.1762E-03	1.8924E-01
2	50	7.3250E-03	2.6250E-03	2.7716E-03	5.1518E-04	1.0558E+00	7.2868E-02	6.2146E-03	1.1700E-03	1.8827E-01
4	25	7.3475E-03	2.6875E-03	2.7933E-03	3.4483E-04	1.0394E+00	4.8929E-02	6.2162E-03	1.1579E-03	1.8628E-01
5	20	7.3440E-03	2.7300E-03	2.8174E-03	3.0526E-04	1.0320E+00	4.3398E-02	6.2169E-03	1.1487E-03	1.8477E-01
10	10	7.3510E-03	2.9240E-03	2.8533E-03	2.0408E-04	9.7583E-01	2.9010E-02	6.2161E-03	1.1108E-03	1.7870E-01

D1.173 In the case of S-GSM-Sq-P0.6-38HP (t_{total} = 885 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1050E-02	6.9600E-03	3.4917E-03	1.9905E-03	4.8236E-01	2.1542E-01	9.1113E-03	1.1499E-03	1.2621E-01
2	50	1.1085E-02	6.9650E-03	2.6812E-03	1.3228E-03	3.1506E-01	1.3939E-01	9.1125E-03	1.1512E-03	1.2633E-01
4	25	1.1113E-02	6.9300E-03	2.4382E-03	1.0306E-03	2.8392E-01	1.0747E-01	9.1141E-03	1.1624E-03	1.2753E-01
5	20	1.1096E-02	6.9240E-03	2.3376E-03	9.7837E-04	2.7682E-01	1.0168E-01	9.1128E-03	1.1566E-03	1.2693E-01
10	10	1.1022E-02	6.8860E-03	1.8169E-03	7.2558E-04	2.3453E-01	7.4518E-02	9.1099E-03	1.1394E-03	1.2507E-01

D1.174 In the case of S-GSM-Sq-P0.6-50HP (t_{total} = 724 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3300E-02	4.5200E-03	5.0101E-03	1.3887E-03	1.1084E+00	1.2107E-01	1.1286E-02	3.0722E-03	2.7222E-01
2	50	1.3360E-02	4.5000E-03	4.9273E-03	1.1591E-03	1.0950E+00	1.0119E-01	1.1286E-02	3.0847E-03	2.7333E-01
4	25	1.3465E-02	4.4525E-03	4.8100E-03	1.0581E-03	1.0803E+00	9.2493E-02	1.1288E-02	3.1150E-03	2.7596E-01
5	20	1.3512E-02	4.4400E-03	4.7626E-03	1.0247E-03	1.0726E+00	8.9537E-02	1.1289E-02	3.1246E-03	2.7678E-01
10	10	1.3696E-02	4.3730E-03	4.3943E-03	9.1046E-04	1.0049E+00	7.9422E-02	1.1304E-02	3.1845E-03	2.8172E-01

D1.175 In the case of S-GSM-Sq-P0.6-59HP (t_{total} = 697 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3210E-02	1.2020E-02	3.2795E-03	1.4563E-03	2.5721E-01	1.2116E-01	1.2652E-02	4.0990E-04	3.2399E-02
2	50	1.3145E-02	1.2015E-02	2.5073E-03	9.4005E-04	1.9703E-01	7.8240E-02	1.2647E-02	3.9601E-04	3.1314E-02
4	25	1.3065E-02	1.1965E-02	2.0454E-03	6.0248E-04	1.5695E-01	5.0354E-02	1.2632E-02	4.0566E-04	3.2113E-02
5	20	1.3058E-02	1.1958E-02	1.9859E-03	4.9032E-04	1.5257E-01	4.1004E-02	1.2624E-02	4.0765E-04	3.2291E-02
10	10	1.3043E-02	1.1955E-02	1.9530E-03	2.9304E-04	1.6088E-01	2.4512E-02	1.2573E-02	4.4415E-04	3.5325E-02

D1.176 In the case of S-GSM-Tp-P0-26HP (t_{total} = 1136 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.5700E-03	6.7800E-03	3.0104E-03	9.8734E-04	4.4400E-01	1.1521E-01	7.7336E-03	5.9519E-04	7.6961E-02
2	50	8.5550E-03	6.8000E-03	2.7752E-03	4.8784E-04	4.0811E-01	5.7024E-02	7.7364E-03	5.8855E-04	7.6076E-02
4	25	8.5375E-03	6.8650E-03	2.6883E-03	2.4359E-04	3.9160E-01	2.9472E-02	7.7430E-03	5.6985E-04	7.3596E-02
5	20	8.5280E-03	6.9120E-03	2.6431E-03	2.2285E-04	3.8239E-01	2.6947E-02	7.7473E-03	5.5901E-04	7.2156E-02
10	10	8.5040E-03	7.1670E-03	2.2918E-03	1.8315E-04	3.1844E-01	2.2122E-02	7.7717E-03	5.1385E-04	6.6118E-02

D1.177 In the case of S-GSM-Tp-P0-38HP (t_{total} = 625 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5870E-02	1.1630E-02	4.4259E-03	1.3901E-03	3.8056E-01	8.7594E-02	1.3808E-02	1.6606E-03	1.2026E-01
2	50	1.5880E-02	1.1665E-02	4.2530E-03	6.7620E-04	3.6460E-01	4.2582E-02	1.3813E-02	1.6554E-03	1.1984E-01
4	25	1.5865E-02	1.1655E-02	4.1151E-03	4.4182E-04	3.5308E-01	2.7849E-02	1.3809E-02	1.6607E-03	1.2026E-01
5	20	1.5848E-02	1.1638E-02	4.0097E-03	4.3810E-04	3.4454E-01	2.7644E-02	1.3805E-02	1.6659E-03	1.2067E-01
10	10	1.5772E-02	1.1656E-02	3.5174E-03	4.2460E-04	3.0177E-01	2.6921E-02	1.3796E-02	1.6696E-03	1.2102E-01

D1.178 In the case of S-GSM-Tp-P0-50HP (t_{total} = 479 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8100E-02	1.6950E-02	1.6926E-03	1.4311E-03	9.4832E-02	8.4429E-02	1.7688E-02	5.3388E-04	3.0184E-02
2	50	1.8135E-02	1.6970E-02	1.1418E-03	6.4413E-04	6.4140E-02	3.7957E-02	1.7696E-02	5.2831E-04	2.9854E-02
4	25	1.8150E-02	1.6975E-02	9.9674E-04	2.8924E-04	5.6472E-02	1.7039E-02	1.7704E-02	5.3109E-04	2.9999E-02
5	20	1.8162E-02	1.6990E-02	9.8821E-04	2.9275E-04	5.5976E-02	1.7231E-02	1.7711E-02	5.2707E-04	2.9760E-02
10	10	1.8153E-02	1.7056E-02	8.4588E-04	2.6078E-04	4.8075E-02	1.5289E-02	1.7728E-02	5.1431E-04	2.9011E-02

D1.179 In the case of S-GSM-Tp-P0-59HP (t_{total} = 425 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.0080E-02	1.9100E-02	1.9331E-03	1.5482E-03	9.6753E-02	7.7919E-02	1.9758E-02	4.4664E-04	2.2606E-02
2	50	2.0090E-02	1.9095E-02	1.5080E-03	8.5698E-04	7.5456E-02	4.4880E-02	1.9754E-02	4.5049E-04	2.2805E-02
4	25	2.0073E-02	1.9105E-02	1.3946E-03	6.5618E-04	6.9737E-02	3.4346E-02	1.9749E-02	4.4203E-04	2.2383E-02
5	20	2.0062E-02	1.9108E-02	1.3595E-03	6.0955E-04	6.7953E-02	3.1900E-02	1.9748E-02	4.3936E-04	2.2249E-02
10	10	2.0053E-02	1.9121E-02	1.1730E-03	5.0963E-04	5.8496E-02	2.6653E-02	1.9732E-02	4.2445E-04	2.1511E-02

D1.180 In the case of S-GSM-Tp-P0.6-26HP (t_{total} = 1145 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.8600E-03	7.0400E-03	1.6692E-03	1.0349E-03	2.3710E-01	1.3167E-01	7.4545E-03	2.4287E-04	3.2581E-02
2	50	7.8700E-03	7.0850E-03	1.2932E-03	3.9847E-04	1.8253E-01	5.0631E-02	7.4559E-03	2.3205E-04	3.1124E-02
4	25	7.8800E-03	7.1550E-03	1.1949E-03	1.9922E-04	1.6700E-01	2.5281E-02	7.4555E-03	2.2168E-04	2.9734E-02
5	20	7.8820E-03	7.1820E-03	1.1696E-03	1.5760E-04	1.6285E-01	1.9995E-02	7.4555E-03	2.2085E-04	2.9623E-02
10	10	7.8910E-03	7.1270E-03	9.5929E-04	9.4569E-05	1.3210E-01	1.1984E-02	7.4536E-03	2.2550E-04	3.0253E-02

D1.181 In the case of S-GSM-Tp-P0.6-38HP (t_{total} = 706 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2220E-02	9.3100E-03	3.2958E-03	1.4172E-03	3.5401E-01	1.2281E-01	1.1617E-02	1.0481E-03	9.0218E-02
2	50	1.2230E-02	9.2400E-03	3.0843E-03	7.2318E-04	3.3379E-01	5.9204E-02	1.1605E-02	1.0717E-03	9.2347E-02
4	25	1.2218E-02	1.1545E-02	6.9222E-04	3.7935E-04	5.6797E-02	3.1056E-02	1.1999E-02	2.7323E-04	2.2771E-02
5	20	1.2206E-02	1.1542E-02	5.9635E-04	2.9287E-04	5.0504E-02	2.3994E-02	1.1998E-02	2.7151E-04	2.2630E-02
10	10	1.2198E-02	1.1542E-02	4.7847E-04	2.1740E-04	4.0445E-02	1.7822E-02	1.1985E-02	2.5312E-04	2.1120E-02

D1.182 In the case of S-GSM-Tp-P0.6-50HP (t_{total} = 550 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.9040E-02	1.5320E-02	1.9274E-03	1.2864E-03	1.2581E-01	6.7566E-02	1.6888E-02	1.7883E-03	1.0589E-01
2	50	1.9035E-02	1.5375E-02	1.4719E-03	6.2116E-04	9.5733E-02	3.5302E-02	1.6892E-02	1.7736E-03	1.0500E-01
4	25	1.9053E-02	1.5413E-02	1.2727E-03	3.8767E-04	8.2577E-02	2.0347E-02	1.6905E-02	1.7660E-03	1.0447E-01
5	20	1.9066E-02	1.5428E-02	1.2124E-03	3.1770E-04	7.8587E-02	1.6663E-02	1.6912E-02	1.7639E-03	1.0430E-01
10	10	1.9085E-02	1.5550E-02	1.1732E-03	1.6036E-04	7.5448E-02	8.4026E-03	1.6947E-02	1.7375E-03	1.0253E-01

D1.183 In the case of S-GSM-Tp-P0.6-59HP (t_{total} = 541 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8400E-02	1.1940E-02	5.7889E-03	1.2875E-03	4.8483E-01	7.0240E-02	1.7070E-02	2.8680E-03	1.6801E-01
2	50	1.8445E-02	1.2035E-02	5.5927E-03	5.6704E-04	4.6470E-01	3.0952E-02	1.7105E-02	2.8348E-03	1.6573E-01
4	25	1.8590E-02	1.2183E-02	5.3422E-03	3.1855E-04	4.3851E-01	1.7376E-02	1.7169E-02	2.7894E-03	1.6247E-01
5	20	1.8654E-02	1.2266E-02	5.2030E-03	2.4848E-04	4.2418E-01	1.3569E-02	1.7198E-02	2.7604E-03	1.6051E-01
10	10	1.8866E-02	1.2721E-02	4.4477E-03	9.6845E-05	3.4963E-01	5.2941E-03	1.7327E-02	2.5850E-03	1.4919E-01

D1.184 In the case of S-GSM-Ta-P0-26HP (t_{total} = 1258 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2000E-03	5.2500E-03	2.4675E-03	1.2001E-03	4.6999E-01	1.7091E-01	6.6008E-03	5.2445E-04	7.9452E-02
2	50	7.1950E-03	5.2550E-03	2.2403E-03	4.2633E-04	4.2632E-01	6.0688E-02	6.6017E-03	5.1866E-04	7.8565E-02
4	25	7.1975E-03	5.2525E-03	2.1708E-03	2.4077E-04	4.1329E-01	3.4261E-02	6.6027E-03	5.2032E-04	7.8805E-02
5	20	7.2000E-03	5.2540E-03	2.1342E-03	2.1010E-04	4.0620E-01	2.9895E-02	6.6030E-03	5.2015E-04	7.8774E-02
10	10	7.1870E-03	5.3070E-03	1.9627E-03	1.5704E-04	3.6983E-01	2.2377E-02	6.6027E-03	5.0185E-04	7.6008E-02

D1.185 In the case of S-GSM-Ta-P0-38HP (t_{total} = 849 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1500E-02	8.9500E-03	3.5086E-03	1.8936E-03	3.9203E-01	1.7457E-01	1.0156E-02	9.3935E-04	9.2489E-02
2	50	1.1490E-02	8.8500E-03	3.3681E-03	7.7585E-04	3.8058E-01	6.7524E-02	1.0160E-02	9.4624E-04	9.3134E-02
4	25	1.1458E-02	8.6675E-03	3.4568E-03	4.9170E-04	3.9882E-01	4.2915E-02	1.0163E-02	9.6609E-04	9.5064E-02
5	20	1.1442E-02	8.6100E-03	3.4287E-03	4.3266E-04	3.9822E-01	3.7813E-02	1.0165E-02	9.7151E-04	9.5579E-02
10	10	1.1381E-02	8.5150E-03	3.0511E-03	3.4959E-04	3.5832E-01	3.0717E-02	1.0182E-02	9.6007E-04	9.4296E-02

D1.186 In the case of S-GSM-Ta-P0-50HP (t_{total} = 553 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.7740E-02	1.3730E-02	1.8943E-03	1.3655E-03	1.3284E-01	7.9342E-02	1.5390E-02	1.9217E-03	1.2487E-01
2	50	1.7745E-02	1.3735E-02	1.3304E-03	7.4473E-04	9.3231E-02	5.4221E-02	1.5401E-02	1.9207E-03	1.2471E-01
4	25	1.7753E-02	1.3730E-02	1.1655E-03	4.6271E-04	8.1460E-02	3.3701E-02	1.5419E-02	1.9169E-03	1.2432E-01
5	20	1.7768E-02	1.3726E-02	1.1434E-03	4.4015E-04	7.9767E-02	3.2067E-02	1.5430E-02	1.9151E-03	1.2412E-01
10	10	1.7855E-02	1.3741E-02	9.7495E-04	3.2071E-04	6.7555E-02	2.3340E-02	1.5482E-02	1.9020E-03	1.2285E-01

D1.187 In the case of S-GSM-Ta-P0-59HP (t_{total} = 535 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8290E-02	1.3290E-02	6.8436E-03	1.1780E-03	5.1494E-01	6.6145E-02	1.6364E-02	2.1137E-03	1.2917E-01
2	50	1.8285E-02	1.3245E-02	6.6786E-03	8.4014E-04	5.0423E-01	4.7212E-02	1.6359E-02	2.1205E-03	1.2962E-01
4	25	1.8273E-02	1.3238E-02	6.4543E-03	8.2093E-04	4.8758E-01	4.7100E-02	1.6358E-02	2.0951E-03	1.2808E-01
5	20	1.8260E-02	1.3274E-02	6.3377E-03	7.6869E-04	4.7745E-01	4.4423E-02	1.6363E-02	2.0630E-03	1.2608E-01
10	10	1.8240E-02	1.3712E-02	5.6290E-03	4.8157E-04	4.1051E-01	2.7950E-02	1.6441E-02	1.7938E-03	1.0910E-01

D1.188 In the case of S-GSM-Ta-P0.6-26HP (t_{total} = 1038 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.4900E-03	6.7200E-03	2.3238E-03	9.1425E-04	3.1876E-01	1.2272E-01	7.1560E-03	2.5894E-04	3.6185E-02
2	50	7.5000E-03	6.7000E-03	1.4917E-03	4.5457E-04	2.0504E-01	6.1016E-02	7.1605E-03	2.6475E-04	3.6973E-02
4	25	7.5450E-03	6.6875E-03	1.1486E-03	2.1170E-04	1.5515E-01	2.8265E-02	7.1678E-03	2.7408E-04	3.8237E-02
5	20	7.5820E-03	6.6700E-03	1.1226E-03	1.8721E-04	1.5421E-01	2.4988E-02	7.1712E-03	2.8078E-04	3.9153E-02
10	10	7.7080E-03	6.6350E-03	7.8104E-04	1.2856E-04	1.1304E-01	1.8190E-02	7.1813E-03	3.0887E-04	4.3011E-02

D1.189 In the case of S-GSM-Ta-P0.6-38HP (t_{total} = 784 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2270E-02	8.0900E-03	6.3883E-03	1.6383E-03	7.8965E-01	1.3352E-01	1.0499E-02	1.5023E-03	1.4309E-01
2	50	1.2290E-02	8.1850E-03	3.6032E-03	7.3776E-04	4.3493E-01	6.0029E-02	1.0509E-02	1.5049E-03	1.4320E-01
4	25	1.2318E-02	8.2825E-03	3.2411E-03	4.2502E-04	3.8252E-01	3.4505E-02	1.0527E-02	1.5341E-03	1.4573E-01
5	20	1.2316E-02	8.3400E-03	3.2189E-03	3.4651E-04	3.7579E-01	2.8135E-02	1.0536E-02	1.5475E-03	1.4688E-01
10	10	1.2278E-02	8.3950E-03	3.0012E-03	1.5404E-04	3.3576E-01	1.2546E-02	1.0571E-02	1.5919E-03	1.5059E-01

D1.190 In the case of S-GSM-Ta-P0.6-50HP (t_{total} = 603 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5760E-02	1.0490E-02	5.1560E-03	1.3862E-03	4.4969E-01	8.7958E-02	1.4095E-02	2.2784E-03	1.6164E-01
2	50	1.5775E-02	1.0485E-02	4.0675E-03	7.1115E-04	3.8793E-01	4.5081E-02	1.4513E-02	2.2651E-03	1.5607E-01
4	25	1.5773E-02	1.0490E-02	3.6493E-03	4.4194E-04	3.4789E-01	2.8060E-02	1.4476E-02	2.2515E-03	1.5553E-01
5	20	1.5786E-02	1.0522E-02	3.5723E-03	3.7622E-04	3.3951E-01	2.3896E-02	1.4460E-02	2.2306E-03	1.5426E-01
10	10	1.5829E-02	1.0931E-02	3.2442E-03	2.1833E-04	2.9679E-01	1.3886E-02	1.4430E-02	2.0273E-03	1.4049E-01

D1.191 In the case of S-GSM-Ta-P0.6-59HP (t_{total} = 558 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.6390E-02	9.4400E-03	5.1783E-03	1.3622E-03	5.4855E-01	8.3726E-02	1.4698E-02	2.9590E-03	2.0132E-01
2	50	1.6405E-02	9.4950E-03	5.0355E-03	6.5004E-04	5.3033E-01	3.9929E-02	1.4708E-02	2.9356E-03	1.9959E-01
4	25	1.6430E-02	9.5975E-03	4.9069E-03	4.0222E-04	5.1127E-01	2.4714E-02	1.4722E-02	2.8885E-03	1.9621E-01
5	20	1.6440E-02	9.6080E-03	4.8409E-03	3.7085E-04	5.0384E-01	2.2791E-02	1.4723E-02	2.8837E-03	1.9587E-01
10	10	1.6447E-02	9.7720E-03	4.7109E-03	2.2460E-04	4.8208E-01	1.3656E-02	1.4755E-02	2.8137E-03	1.9069E-01

D1.192 In the case of S-PEpSr-Cc-P0-10 (t_{total} = 1471 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.2800E-03	2.0700E-03	3.1618E-03	6.9187E-04	1.3929E+00	3.1592E-01	2.2293E-03	5.6496E-05	2.5342E-02
2	50	2.2750E-03	2.0800E-03	1.8776E-03	2.4223E-04	8.3080E-01	1.0766E-01	2.2289E-03	5.5476E-05	2.4889E-02
4	25	2.2750E-03	2.0875E-03	1.2358E-03	8.8241E-05	5.4382E-01	3.9306E-02	2.2291E-03	5.4470E-05	2.4436E-02
5	20	2.2760E-03	2.0860E-03	1.1847E-03	5.8759E-05	5.2054E-01	2.6000E-02	2.2289E-03	5.4928E-05	2.4644E-02
10	10	2.2730E-03	2.0790E-03	8.1202E-04	2.1318E-05	3.5725E-01	9.7833E-03	2.2288E-03	5.3992E-05	2.4225E-02

D1.193 In the case of S-PEpSr-Cc-P0-26 (t_{total} = 620 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.9200E-03	6.5500E-03	1.6659E-03	7.4745E-04	2.4427E-01	1.0880E-01	6.8017E-03	1.2922E-04	1.8998E-02
2	50	6.9250E-03	6.5450E-03	9.8592E-04	3.5771E-04	1.4456E-01	5.2145E-02	6.8008E-03	1.3136E-04	1.9315E-02
4	25	6.9200E-03	6.5475E-03	4.4415E-04	1.3468E-04	6.5196E-02	1.9647E-02	6.8017E-03	1.2996E-04	1.9107E-02
5	20	6.9220E-03	6.5560E-03	3.5282E-04	1.1993E-04	5.1793E-02	1.7493E-02	6.8027E-03	1.2677E-04	1.8635E-02
10	10	6.9150E-03	6.5890E-03	1.4310E-04	5.1812E-05	2.1718E-02	7.5659E-03	6.7962E-03	1.2289E-04	1.8083E-02

D1.194 In the case of S-PEpSr-Cc-P0-38 (t_{total} = 522 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0680E-02	1.0360E-02	1.9326E-03	7.3195E-04	1.8096E-01	7.0652E-02	1.0476E-02	1.3885E-04	1.3254E-02
2	50	1.0685E-02	1.0370E-02	9.9848E-04	3.6523E-04	9.3447E-02	3.4603E-02	1.0476E-02	1.3957E-04	1.3323E-02
4	25	1.0668E-02	1.0373E-02	3.6297E-04	1.8837E-04	3.4025E-02	1.7833E-02	1.0476E-02	1.3245E-04	1.2643E-02
5	20	1.0662E-02	1.0378E-02	3.5219E-04	1.6105E-04	3.3032E-02	1.5251E-02	1.0477E-02	1.2796E-04	1.2213E-02
10	10	1.0631E-02	1.0385E-02	2.4106E-04	9.0240E-05	2.3119E-02	8.5366E-03	1.0483E-02	1.1062E-04	1.0552E-02

D1.195 In the case of S-PEpSr-Cc-P0-50 (t_{total} = 363 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3970E-02	1.3830E-02	1.4359E-03	6.6241E-04	1.0382E-01	4.7862E-02	1.3880E-02	7.8102E-05	5.6270E-03
2	50	1.3960E-02	1.3840E-02	9.2824E-04	3.6031E-04	6.7069E-02	2.6024E-02	1.3882E-02	6.7885E-05	4.8902E-03
4	25	1.3970E-02	1.3843E-02	6.7051E-04	2.7369E-04	4.8438E-02	1.9772E-02	1.3885E-02	7.3612E-05	5.3016E-03
5	20	1.3974E-02	1.3838E-02	6.0100E-04	2.6357E-04	4.3399E-02	1.9047E-02	1.3887E-02	7.5798E-05	5.4583E-03
10	10	1.3979E-02	1.3821E-02	4.4569E-04	2.0207E-04	3.2092E-02	1.4455E-02	1.3896E-02	7.9303E-05	5.7069E-03

D1.196 In the case of S-PEpSr-Cc-P0-59 (t_{total} = 350 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.6070E-02	1.5110E-02	3.1427E-03	1.4873E-03	2.0799E-01	9.3542E-02	1.5693E-02	5.1228E-04	3.2643E-02
2	50	1.6065E-02	1.5220E-02	2.5059E-03	7.7230E-04	1.6465E-01	4.8074E-02	1.5722E-02	4.4419E-04	2.8254E-02
4	25	1.6063E-02	1.5423E-02	1.8933E-03	3.1561E-04	1.2276E-01	1.9649E-02	1.5778E-02	3.2596E-04	2.0659E-02
5	20	1.6060E-02	1.5518E-02	1.5804E-03	2.3270E-04	1.0184E-01	1.4489E-02	1.5806E-02	2.7259E-04	1.7246E-02
10	10	1.6040E-02	1.5763E-02	8.0268E-04	1.3433E-04	5.0922E-02	8.3747E-03	1.5871E-02	1.4803E-04	9.3268E-03

D1.197 In the case of S-PEpSr-Cc-P1-10 (t_{total} = 2069 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.1800E-03	1.6300E-03	2.1940E-03	5.7735E-04	1.1670E+00	3.0387E-01	1.9240E-03	1.0758E-04	5.5913E-02
2	50	2.1600E-03	1.6500E-03	1.3946E-03	2.7428E-04	7.0257E-01	1.3680E-01	1.9248E-03	1.0258E-04	5.3294E-02
4	25	2.1225E-03	1.6850E-03	1.2661E-03	1.1365E-04	6.4763E-01	5.8358E-02	1.9245E-03	9.1618E-05	4.7606E-02
5	20	2.1040E-03	1.7020E-03	1.1847E-03	8.1331E-05	6.1448E-01	4.1794E-02	1.9245E-03	8.7339E-05	4.5383E-02
10	10	2.1040E-03	1.7530E-03	7.3661E-04	4.9900E-05	3.9158E-01	2.5682E-02	1.9244E-03	8.9741E-05	4.6633E-02

D1.198 In the case of S-PEpSr-Cc-P1-26 (t_{total} = 1094 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.8600E-03	6.4700E-03	1.4103E-03	7.0896E-04	2.1798E-01	1.0613E-01	6.7080E-03	1.0401E-04	1.5505E-02
2	50	6.8550E-03	6.4650E-03	7.9714E-04	3.1465E-04	1.1996E-01	4.7068E-02	6.7105E-03	1.0326E-04	1.5389E-02
4	25	6.8350E-03	6.4750E-03	5.9646E-04	1.3741E-04	8.9124E-02	2.0547E-02	6.7158E-03	9.6983E-05	1.4441E-02
5	20	6.8280E-03	6.4820E-03	5.4665E-04	1.1795E-04	8.1516E-02	1.7636E-02	6.7170E-03	9.4174E-05	1.4020E-02
10	10	6.8150E-03	6.4960E-03	3.6011E-04	5.6970E-05	5.3341E-02	8.4991E-03	6.7223E-03	8.8530E-05	1.3170E-02

D1.199 In the case of S-PEpSr-Cc-P1-38 (t_{total} = 714 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0360E-02	9.7200E-03	1.3713E-03	7.8341E-04	1.4108E-01	7.6956E-02	1.0119E-02	2.2468E-04	2.2205E-02
2	50	1.0355E-02	9.7000E-03	9.5698E-04	3.8930E-04	9.8658E-02	3.7925E-02	1.0121E-02	2.2634E-04	2.2364E-02
4	25	1.0353E-02	9.6975E-03	8.0479E-04	1.8912E-04	8.2989E-02	1.8269E-02	1.0126E-02	2.2600E-04	2.2318E-02
5	20	1.0354E-02	9.6960E-03	7.3841E-04	1.5491E-04	7.6156E-02	1.5072E-02	1.0128E-02	2.2634E-04	2.2349E-02
10	10	1.0280E-02	9.7060E-03	6.0850E-04	4.8178E-05	6.2693E-02	4.7099E-03	1.0095E-02	2.1773E-04	2.1567E-02

D1.200 In the case of S-PEpSr-Cc-P1-50 (t_{total} = 555 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3210E-02	1.2570E-02	2.9756E-03	1.2704E-03	2.2526E-01	9.6907E-02	1.2914E-02	2.7401E-04	2.1218E-02
2	50	1.3205E-02	1.2575E-02	1.4900E-03	5.6955E-04	1.1849E-01	4.3444E-02	1.2911E-02	2.7284E-04	2.1132E-02
4	25	1.3185E-02	1.2590E-02	7.2396E-04	2.7123E-04	5.7503E-02	2.0884E-02	1.2910E-02	2.6996E-04	2.0911E-02
5	20	1.3182E-02	1.2586E-02	5.5354E-04	1.7799E-04	4.3980E-02	1.3704E-02	1.2910E-02	2.7195E-04	2.1065E-02
10	10	1.3176E-02	1.2593E-02	2.7638E-04	9.1918E-05	2.1016E-02	7.0684E-03	1.2915E-02	2.7595E-04	2.1366E-02

D1.201 In the case of S-PEpSr-Cc-P1-59 (t_{total} = 338 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4650E-02	1.4480E-02	1.8117E-03	1.2340E-03	1.2512E-01	8.4231E-02	1.4570E-02	8.5440E-05	5.8641E-03
2	50	1.4645E-02	1.4485E-02	8.3820E-04	5.6490E-04	5.7867E-02	3.8573E-02	1.4570E-02	8.0467E-05	5.5228E-03
4	25	1.4653E-02	1.4490E-02	4.2370E-04	3.2430E-04	2.9100E-02	2.2133E-02	1.4568E-02	8.1509E-05	5.5953E-03
5	20	1.4652E-02	1.4496E-02	3.7989E-04	2.9682E-04	2.6109E-02	2.0258E-02	1.4566E-02	7.9221E-05	5.4388E-03
10	10	1.4623E-02	1.4490E-02	3.3280E-04	2.4019E-04	2.2968E-02	1.6534E-02	1.4547E-02	6.8646E-05	4.7190E-03

D1.202 In the case of S-GSMSr-Cc-P0-26HP (t_{total} = 1018 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.5900E-03	5.0800E-03	4.1235E-03	1.2561E-03	8.1172E-01	1.3098E-01	8.2120E-03	1.3759E-03	1.6754E-01
2	50	9.5800E-03	5.1150E-03	4.0125E-03	5.0870E-04	7.8445E-01	5.3100E-02	8.2115E-03	1.3600E-03	1.6562E-01
4	25	9.5375E-03	5.2175E-03	4.0156E-03	1.7399E-04	7.6964E-01	1.8964E-02	8.2085E-03	1.3139E-03	1.6007E-01
5	20	9.5100E-03	5.2740E-03	4.0162E-03	1.6178E-04	7.6151E-01	1.7631E-02	8.2070E-03	1.2904E-03	1.5723E-01
10	10	9.3270E-03	5.6040E-03	3.9554E-03	1.0296E-04	7.0581E-01	1.1252E-02	8.0963E-03	1.1707E-03	1.4460E-01

D1.203 In the case of S-GSMSr-Cc-P0-38HP (t_{total} = 612 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4180E-02	1.3790E-02	1.9720E-03	1.6016E-03	1.4187E-01	1.1424E-01	1.3978E-02	1.5368E-04	1.0994E-02
2	50	1.4175E-02	1.3770E-02	6.4009E-04	5.7196E-04	4.6000E-02	4.1208E-02	1.3976E-02	1.5018E-04	1.0746E-02
4	25	1.4165E-02	1.3788E-02	2.9828E-04	2.2171E-04	2.1106E-02	1.6080E-02	1.3980E-02	1.4959E-04	1.0700E-02
5	20	1.4168E-02	1.3780E-02	2.8228E-04	1.4270E-04	1.9974E-02	1.0254E-02	1.3980E-02	1.5117E-04	1.0813E-02
10	10	1.4160E-02	1.3777E-02	2.0769E-04	8.8944E-05	1.4838E-02	6.4081E-03	1.3950E-02	1.4260E-04	1.0222E-02

D1.204 In the case of S-GSMSr-Cc-P0-50HP (t_{total} = 477 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.7970E-02	1.7520E-02	4.2462E-03	2.2518E-03	2.4236E-01	1.2794E-01	1.7750E-02	2.2316E-04	1.2572E-02
2	50	1.7960E-02	1.7525E-02	2.2208E-03	1.0371E-03	1.2672E-01	5.8975E-02	1.7748E-02	2.2422E-04	1.2634E-02
4	25	1.7935E-02	1.7485E-02	1.2138E-03	3.7587E-04	6.9422E-02	2.1356E-02	1.7736E-02	2.2795E-04	1.2853E-02
5	20	1.7936E-02	1.7486E-02	1.1222E-03	2.9534E-04	6.4177E-02	1.6784E-02	1.7738E-02	2.3187E-04	1.3072E-02
10	10	1.7980E-02	1.7528E-02	9.1253E-04	1.4228E-04	5.2061E-02	7.9134E-03	1.7747E-02	2.1897E-04	1.2339E-02

D1.205 In the case of S-GSMSr-Cc-P0-59HP (t_{total} = 415 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.2750E-02	2.0570E-02	2.0120E-03	1.0140E-03	9.2208E-02	4.9199E-02	2.1438E-02	1.0498E-03	4.8971E-02
2	50	2.2820E-02	2.0585E-02	1.5790E-03	3.9644E-04	7.2550E-02	1.9259E-02	2.1440E-02	1.0745E-03	5.0116E-02
4	25	2.2895E-02	2.0575E-02	1.4852E-03	2.3593E-04	6.8428E-02	1.1467E-02	2.1442E-02	1.1036E-03	5.1469E-02
5	20	2.2926E-02	2.0570E-02	1.4601E-03	2.0100E-04	6.7364E-02	9.7714E-03	2.1440E-02	1.1169E-03	5.2094E-02
10	10	2.3049E-02	2.0602E-02	1.3676E-03	1.7744E-04	6.3579E-02	8.6127E-03	2.1720E-02	1.2370E-03	5.6951E-02

D1.206 In the case of S-GSMSr-Cc-P0.6-26HP (t_{total} = 2696 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.5500E-03	1.6800E-03	1.0168E-03	6.6667E-04	5.5550E-01	2.0168E-01	2.7846E-03	3.9570E-04	1.4210E-01
2	50	3.5600E-03	1.6950E-03	7.7823E-04	2.3819E-04	4.4855E-01	7.9426E-02	2.7848E-03	3.9824E-04	1.4300E-01
4	25	3.5525E-03	1.6925E-03	7.2930E-04	8.7797E-05	4.3090E-01	2.9168E-02	2.7850E-03	3.9669E-04	1.4244E-01
5	20	3.5440E-03	1.6760E-03	7.2824E-04	6.8518E-05	4.3237E-01	2.2764E-02	2.7850E-03	3.9518E-04	1.4190E-01
10	10	3.5020E-03	1.6160E-03	7.7604E-04	3.6148E-05	4.2222E-01	1.2001E-02	2.7851E-03	3.8779E-04	1.3924E-01

D1.207 In the case of S-GSMSr-Cc-P0.6-38HP (t_{total} = 860 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2650E-02	7.8000E-03	4.0149E-03	1.1225E-03	4.4413E-01	8.8739E-02	9.5438E-03	1.3820E-03	1.4481E-01
2	50	1.2660E-02	7.7300E-03	3.8834E-03	7.5383E-04	4.3005E-01	5.9545E-02	9.5338E-03	1.3971E-03	1.4654E-01
4	25	1.2673E-02	7.6000E-03	3.7977E-03	6.3898E-04	4.2138E-01	5.0422E-02	9.5150E-03	1.4253E-03	1.4980E-01
5	20	1.2678E-02	7.5380E-03	3.7517E-03	6.1360E-04	4.1639E-01	4.8399E-02	9.5048E-03	1.4393E-03	1.5143E-01
10	10	1.2719E-02	7.3390E-03	3.3560E-03	5.1412E-04	3.7489E-01	4.0422E-02	9.4540E-03	1.5016E-03	1.5883E-01

D1.208 In the case of S-GSMSr-Cc-P0.6-50HP (t_{total} = 651 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3510E-02	7.1600E-03	6.2969E-03	8.7033E-04	8.7945E-01	6.4421E-02	1.1310E-02	2.6790E-03	2.3687E-01
2	50	1.3510E-02	7.2400E-03	6.2985E-03	4.8171E-04	8.6996E-01	3.5656E-02	1.1308E-02	2.6470E-03	2.3408E-01
4	25	1.3495E-02	7.4075E-03	6.3273E-03	3.5213E-04	8.5417E-01	2.6094E-02	1.1317E-02	2.5812E-03	2.2809E-01
5	20	1.3486E-02	7.4840E-03	6.3209E-03	3.3170E-04	8.4459E-01	2.4596E-02	1.1322E-02	2.5477E-03	2.2503E-01
10	10	1.3446E-02	7.9240E-03	6.1889E-03	2.3941E-04	7.8104E-01	1.7805E-02	1.1366E-02	2.3456E-03	2.0637E-01

D1.209 In the case of S-GSMSr-Sq-P0.6-59HP (t_{total} = 607 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5420E-02	1.3050E-02	2.4273E-03	1.2528E-03	1.6592E-01	8.8290E-02	1.4410E-02	8.0022E-04	5.5533E-02
2	50	1.5420E-02	1.3030E-02	2.0678E-03	7.5869E-04	1.4158E-01	5.3354E-02	1.4417E-02	8.0098E-04	5.5560E-02
4	25	1.5473E-02	1.2975E-02	1.7502E-03	6.5870E-04	1.1794E-01	4.6151E-02	1.4407E-02	9.2143E-04	6.3957E-02
5	20	1.5492E-02	1.2952E-02	1.6406E-03	6.3449E-04	1.1065E-01	4.4388E-02	1.4420E-02	9.3514E-04	6.4852E-02
10	10	1.5548E-02	1.2870E-02	1.1935E-03	5.9042E-04	8.0809E-02	4.1139E-02	1.4458E-02	9.8774E-04	6.8320E-02

D.210 In the case of R-PEr-F1-C1-3 (t_{total} = 884 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5780E-02	1.1160E-02	7.8004E-03	3.7165E-03	5.7734E-01	3.3118E-01	1.4154E-02	1.7121E-03	1.2097E-01
2	50	1.5805E-02	1.1155E-02	5.4581E-03	1.7261E-03	4.0430E-01	1.5473E-01	1.4166E-02	1.7091E-03	1.2065E-01
4	25	1.5758E-02	1.1110E-02	4.3904E-03	1.2149E-03	3.2612E-01	7.8775E-02	1.4173E-02	1.7138E-03	1.2092E-01
5	20	1.5752E-02	1.1108E-02	4.2210E-03	1.0084E-03	3.1467E-01	6.5277E-02	1.4175E-02	1.7130E-03	1.2085E-01
10	10	1.5821E-02	1.1188E-02	3.6430E-03	5.6692E-04	2.6892E-01	3.6381E-02	1.4185E-02	1.6786E-03	1.1833E-01

D1.211 In the case of R-PEr-F1-C1-6 (t_{total} = 677 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.0960E-02	1.2530E-02	9.6775E-03	4.7945E-03	7.0462E-01	2.3700E-01	1.8775E-02	3.1411E-03	1.6730E-01
2	50	2.0925E-02	1.2465E-02	8.1402E-03	2.4985E-03	6.5304E-01	1.2360E-01	1.8766E-02	3.1662E-03	1.6872E-01
4	25	2.0793E-02	1.2525E-02	7.9188E-03	1.0680E-03	6.3224E-01	5.2782E-02	1.8749E-02	3.1133E-03	1.6605E-01
5	20	2.0736E-02	1.2574E-02	7.8585E-03	9.9700E-04	6.2498E-01	4.9269E-02	1.8745E-02	3.0858E-03	1.6462E-01
10	10	2.0620E-02	1.2861E-02	7.4668E-03	6.7183E-04	5.8058E-01	3.3269E-02	1.8761E-02	2.9378E-03	1.5659E-01

D1.212 In the case of R-PEr-F1-C1-9 (t_{total} = 614 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.3230E-02	1.7290E-02	1.1246E-02	6.1200E-03	5.9628E-01	2.7080E-01	2.0757E-02	2.2434E-03	1.0808E-01
2	50	2.3165E-02	1.7410E-02	6.8101E-03	3.3039E-03	3.9116E-01	1.4491E-01	2.0779E-02	2.2322E-03	1.0742E-01
4	25	2.3170E-02	1.7623E-02	4.7509E-03	1.0391E-03	2.6959E-01	4.5319E-02	2.0805E-02	2.2211E-03	1.0676E-01
5	20	2.3128E-02	1.7706E-02	4.3919E-03	6.2958E-04	2.2347E-01	2.7466E-02	2.0796E-02	2.2180E-03	1.0666E-01
10	10	2.2909E-02	1.8075E-02	3.6094E-03	3.3653E-04	1.7851E-01	1.4690E-02	2.0321E-02	2.0309E-03	9.9941E-02

D1.213 In the case of R-PEr-F1-C1-10 (t_{total} = 1144 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2150E-02	8.9700E-03	1.1104E-02	6.6424E-03	9.3076E-01	6.5322E-01	1.0688E-02	1.0514E-03	9.8370E-02
2	50	1.2130E-02	9.0150E-03	6.1783E-03	3.9084E-03	5.2238E-01	3.6681E-01	1.0686E-02	1.0708E-03	1.0020E-01
4	25	1.2195E-02	9.0900E-03	3.7254E-03	2.4873E-03	4.0983E-01	2.3154E-01	1.0691E-02	1.0638E-03	9.9507E-02
5	20	1.2200E-02	9.1020E-03	3.4661E-03	2.1807E-03	3.8080E-01	2.0217E-01	1.0695E-02	1.0453E-03	9.7735E-02
10	10	1.2140E-02	9.1240E-03	2.7025E-03	1.2922E-03	2.9365E-01	1.1704E-01	1.0710E-02	1.0051E-03	9.3847E-02

D1.214 In the case of R-PEr-F1-C2-3 (t_{total} = 901 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4860E-02	7.2600E-03	9.6909E-03	6.3771E-03	9.8603E-01	4.2914E-01	1.3518E-02	2.5602E-03	1.8940E-01
2	50	1.4825E-02	7.3350E-03	6.5187E-03	2.9573E-03	8.8872E-01	1.9948E-01	1.3514E-02	2.5335E-03	1.8747E-01
4	25	1.4838E-02	7.4775E-03	6.4320E-03	1.7172E-03	8.6018E-01	1.1662E-01	1.3512E-02	2.4740E-03	1.8309E-01
5	20	1.4884E-02	7.5800E-03	6.5232E-03	1.4348E-03	8.6058E-01	9.7687E-02	1.3512E-02	2.4358E-03	1.8027E-01
10	10	1.4923E-02	8.0890E-03	6.7387E-03	1.1085E-03	8.3308E-01	7.6146E-02	1.3546E-02	2.2462E-03	1.6582E-01

D1.215 In the case of R-PEr-F1-C2-6 (t_{total} = 574 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4200E-02	1.4010E-02	9.5869E-04	5.3182E-04	6.8429E-02	3.7452E-02	1.4138E-02	7.4632E-05	5.2789E-03
2	50	1.4205E-02	1.4040E-02	3.5485E-04	2.3523E-04	2.5274E-02	1.6559E-02	1.4145E-02	6.3738E-05	4.5060E-03
4	25	1.4210E-02	1.4058E-02	1.3821E-04	7.4127E-05	9.7777E-03	5.2165E-03	1.4149E-02	5.7814E-05	4.0863E-03
5	20	1.4210E-02	1.4060E-02	8.6572E-05	6.0698E-05	6.1573E-03	4.2715E-03	1.4149E-02	5.6614E-05	4.0012E-03
10	10	1.4210E-02	1.4066E-02	3.9497E-05	2.0656E-05	2.8080E-03	1.4581E-03	1.4151E-02	5.3757E-05	3.7987E-03

D1.216 In the case of R-PEr-F1-C2-9 (t_{total} = 1181 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	σ_{Qm} / $\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.8900E-03	6.3300E-03	3.1561E-03	1.0577E-03	4.9859E-01	1.2371E-01	8.4445E-03	7.1348E-04	8.4490E-02
2	50	8.8850E-03	6.3200E-03	2.9460E-03	3.3840E-04	4.6613E-01	3.8259E-02	8.4436E-03	7.1618E-04	8.4819E-02
4	25	8.8725E-03	6.3275E-03	2.8707E-03	1.6829E-04	4.5368E-01	1.9015E-02	8.4420E-03	7.1313E-04	8.4473E-02
5	20	8.8720E-03	6.3300E-03	2.8360E-03	1.0723E-04	4.4803E-01	1.2122E-02	8.4416E-03	7.1202E-04	8.4347E-02
10	10	8.8410E-03	6.3590E-03	2.5910E-03	5.2705E-05	4.0746E-01	5.9621E-03	8.4407E-03	7.0174E-04	8.3137E-02

D1.217 In the case of R-PEr-F1-C2-10 (t_{total} = 751 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	1.3510E-02	1.3270E-02	2.1875E-03	1.6763E-03	1.6484E-01	1.2500E-01	1.3401E-02	9.0079E-05	6.7216E-03
2	50	1.3515E-02	1.3260E-02	6.9613E-04	4.8969E-04	5.2498E-02	3.6544E-02	1.3399E-02	9.7113E-05	7.2480E-03
4	25	1.3495E-02	1.3265E-02	4.5932E-04	1.7109E-04	3.4581E-02	1.2678E-02	1.3399E-02	9.0862E-05	6.7813E-03
5	20	1.3488E-02	1.3266E-02	4.3441E-04	1.1506E-04	3.2707E-02	8.5303E-03	1.3400E-02	9.0122E-05	6.7256E-03
10	10	1.3486E-02	1.3279E-02	3.4534E-04	4.9486E-05	2.5989E-02	3.6695E-03	1.3402E-02	8.4507E-05	6.3056E-03

D1.218 In the case of R-PEr-F1-C3-3 (t_{total} = 585 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	1.7540E-02	1.7350E-02	2.4178E-03	1.9354E-03	1.3936E-01	1.1034E-01	1.7452E-02	8.1363E-05	4.6621E-03
2	50	1.7535E-02	1.7340E-02	1.3399E-03	1.0127E-03	7.7272E-02	5.7752E-02	1.7443E-02	8.6212E-05	4.9425E-03
4	25	1.7530E-02	1.7340E-02	5.7142E-04	3.6133E-04	3.2954E-02	2.0754E-02	1.7449E-02	8.1846E-05	4.6907E-03
5	20	1.7522E-02	1.7352E-02	5.5023E-04	3.0738E-04	3.1710E-02	1.7545E-02	1.7448E-02	7.3176E-05	4.1939E-03
10	10	1.7517E-02	1.7403E-02	4.3336E-04	1.5989E-04	2.4901E-02	9.1320E-03	1.7458E-02	5.2543E-05	3.0098E-03

D1.219 In the case of R-PEr-F1-C3-6 (t_{total} = 615 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	2.0040E-02	1.7260E-02	5.0083E-03	1.1694E-03	2.9017E-01	5.9392E-02	1.9415E-02	1.0617E-03	5.4683E-02
2	50	2.0055E-02	1.7425E-02	4.4453E-03	4.9293E-04	2.5511E-01	2.5054E-02	1.9442E-02	9.9546E-04	5.1203E-02
4	25	2.0063E-02	1.7763E-02	3.5221E-03	2.8648E-04	1.9829E-01	1.4575E-02	1.9495E-02	8.5860E-04	4.4042E-02
5	20	2.0056E-02	1.7924E-02	2.9707E-03	2.5906E-04	1.6574E-01	1.3178E-02	1.9520E-02	7.9224E-04	4.0586E-02
10	10	2.0057E-02	1.8267E-02	1.6454E-03	1.8169E-04	9.0074E-02	9.2372E-03	1.9526E-02	7.1808E-04	3.6776E-02

D1.220 In the case of R-PEr-F1-C3-9 (t_{total} = 1430 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	8.3200E-03	4.9500E-03	1.3584E-02	9.3647E-03	2.5235E+00	1.2006E+00	7.2336E-03	1.0845E-03	1.4993E-01
2	50	8.4150E-03	5.1100E-03	5.5713E-03	2.9322E-03	7.1611E-01	3.8191E-01	7.2500E-03	1.0529E-03	1.4523E-01
4	25	8.3275E-03	5.0650E-03	3.0406E-03	1.2612E-03	4.0407E-01	1.6655E-01	7.2588E-03	9.9442E-04	1.3700E-01
5	20	8.3540E-03	5.1120E-03	2.7722E-03	1.0365E-03	3.7301E-01	1.3660E-01	7.2647E-03	9.6742E-04	1.3317E-01
10	10	8.2400E-03	5.1590E-03	1.6587E-03	7.7845E-04	2.6049E-01	9.9917E-02	7.2843E-03	8.7976E-04	1.2078E-01

D1.221 In the case of R-PEr-F1-C3-10 (t_{total} = 1196 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	9.7300E-03	6.2600E-03	1.1342E-02	3.3318E-03	1.2321E+00	3.6613E-01	8.8909E-03	9.3932E-04	1.0565E-01
2	50	9.6300E-03	6.2600E-03	7.0783E-03	2.1341E-03	8.0317E-01	2.3387E-01	8.8936E-03	9.2354E-04	1.0384E-01
4	25	9.6375E-03	6.2375E-03	4.4850E-03	9.0011E-04	4.9421E-01	9.8588E-02	8.8993E-03	9.1646E-04	1.0298E-01
5	20	9.6320E-03	6.2640E-03	3.9443E-03	8.5030E-04	4.3069E-01	9.3133E-02	8.9049E-03	9.0888E-04	1.0207E-01
10	10	9.4370E-03	6.5520E-03	1.6542E-03	5.2356E-04	2.5247E-01	5.9226E-02	8.9350E-03	8.1904E-04	9.1666E-02

D1.222 In the case of R-PEr-F1-C3-3* (t_{total} = 7267 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	1.9678E-02	1.1853E-02	1.5285E-02	1.4962E-03	7.7674E-01	1.1715E-01	1.4291E-02	1.3666E-03	9.5627E-02
2	50	1.9668E-02	1.1862E-02	1.2995E-02	1.1390E-03	6.6071E-01	8.6583E-02	1.4291E-02	1.3611E-03	9.5240E-02
4	25	1.9577E-02	1.1816E-02	9.9558E-03	7.7501E-04	5.0853E-01	5.4001E-02	1.4290E-02	1.3532E-03	9.4693E-02
5	20	1.9386E-02	1.1800E-02	9.4391E-03	6.8790E-04	4.8691E-01	4.7826E-02	1.4290E-02	1.3433E-03	9.4009E-02
10	10	1.7900E-02	1.1768E-02	5.3636E-03	4.0503E-04	3.3644E-01	3.0162E-02	1.4288E-02	1.2780E-03	8.9448E-02

D1.223 In the case of R-PEr-F1-C3-6* (t_{total} = 3013 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	5.8131E-02	3.7833E-02	8.0525E-03	5.2212E-03	1.9247E-01	1.1037E-01	4.6133E-02	6.2744E-03	1.3601E-01
2	50	5.8058E-02	3.7832E-02	6.3341E-03	3.4105E-03	1.4640E-01	7.5013E-02	4.6135E-02	6.2713E-03	1.3593E-01
4	25	5.7920E-02	3.7866E-02	4.8430E-03	2.5531E-03	1.1208E-01	4.5861E-02	4.6139E-02	6.2626E-03	1.3573E-01
5	20	5.7960E-02	3.7945E-02	4.7385E-03	2.2294E-03	9.8895E-02	4.0009E-02	4.6144E-02	6.2599E-03	1.3566E-01
10	10	5.7975E-02	3.8273E-02	3.9783E-03	1.1876E-03	8.0794E-02	2.1637E-02	4.6165E-02	6.2549E-03	1.3549E-01

D1.224 In the case of R-PEr-F1-C3-9* (t_{total} = 1751 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	8.3283E-02	4.9780E-02	2.6554E-02	6.3463E-03	5.3342E-01	9.1590E-02	6.9782E-02	7.8789E-03	1.1291E-01
2	50	8.3233E-02	4.9011E-02	2.6226E-02	4.7009E-03	5.3511E-01	6.7768E-02	6.9743E-02	7.9979E-03	1.1468E-01
4	25	8.3152E-02	4.7399E-02	2.6485E-02	2.8669E-03	5.5877E-01	4.0944E-02	6.9667E-02	8.2586E-03	1.1855E-01
5	20	8.3168E-02	4.6654E-02	2.6788E-02	2.3410E-03	5.7418E-01	3.3463E-02	6.9625E-02	8.3895E-03	1.2050E-01
10	10	8.3020E-02	4.2857E-02	2.8019E-02	1.2300E-03	6.5379E-01	1.7623E-02	6.9404E-02	9.0623E-03	1.3057E-01

D1.225 In the case of R-PEr-F1-C3-10* (t_{total} = 1511 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	σ_{Qm} / $\overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.7783E-02	7.6881E-02	1.2761E-02	7.1223E-03	1.5844E-01	8.1835E-02	8.5421E-02	5.8230E-03	6.8168E-02
2	50	9.7700E-02	7.7104E-02	1.1546E-02	4.4739E-03	1.4308E-01	5.1444E-02	8.5436E-02	5.7896E-03	6.7765E-02
4	25	9.7388E-02	7.7457E-02	1.0620E-02	2.8856E-03	1.3102E-01	3.6794E-02	8.5449E-02	5.7252E-03	6.7002E-02
5	20	9.7326E-02	7.7564E-02	1.0221E-02	2.4685E-03	1.2569E-01	3.1466E-02	8.5450E-02	5.7021E-03	6.6730E-02
10	10	9.6977E-02	7.7582E-02	7.7198E-03	1.6237E-03	9.3461E-02	1.9290E-02	8.5950E-02	5.4922E-03	6.3900E-02

D1.226 In the case of R-PEr-F2-C1-3 (t_{total} = 774 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	σ_{Qm} / $\overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4770E-02	1.0520E-02	2.4898E-03	9.2638E-04	1.9602E-01	8.8059E-02	1.2339E-02	1.3771E-03	1.1161E-01
2	50	1.4790E-02	1.0540E-02	2.0562E-03	6.8950E-04	1.8625E-01	5.9597E-02	1.2347E-02	1.3743E-03	1.1130E-01
4	25	1.4815E-02	1.0573E-02	2.0275E-03	6.0507E-04	1.8340E-01	5.2914E-02	1.2359E-02	1.3703E-03	1.1088E-01
5	20	1.4818E-02	1.0588E-02	2.0093E-03	5.7996E-04	1.8168E-01	5.2501E-02	1.2363E-02	1.3662E-03	1.1051E-01
10	10	1.4811E-02	1.0669E-02	1.8293E-03	4.9675E-04	1.6591E-01	3.8848E-02	1.2376E-02	1.3490E-03	1.0900E-01

D1.227 In the case of R-PEr-F2-C1-6 (t_{total} = 1078 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	σ_{Qm} / $\overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.3100E-03	7.1500E-03	1.8552E-03	1.3757E-03	2.5947E-01	1.7248E-01	7.7160E-03	3.4043E-04	4.4120E-02
2	50	8.3050E-03	7.1750E-03	1.4719E-03	6.2124E-04	2.0514E-01	7.4804E-02	7.7170E-03	3.3271E-04	4.3114E-02
4	25	8.2850E-03	7.2350E-03	1.3452E-03	4.4600E-04	1.8593E-01	5.3833E-02	7.7193E-03	3.1851E-04	4.1262E-02
5	20	8.2720E-03	7.2820E-03	1.2805E-03	4.2423E-04	1.7584E-01	5.1286E-02	7.7198E-03	3.0929E-04	4.0065E-02
10	10	8.1700E-03	7.3190E-03	1.2166E-03	3.9687E-04	1.6309E-01	4.9808E-02	7.7209E-03	2.7390E-04	3.5475E-02

D1.228 In the case of R-PEr-F2-C1-9 (t_{total} = 719 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	σ_{Qm} / $\overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2380E-02	1.0500E-02	2.7146E-03	1.9321E-03	2.4497E-01	1.5606E-01	1.1546E-02	6.5665E-04	5.6874E-02
2	50	1.2410E-02	1.0510E-02	1.9756E-03	8.3832E-04	1.8797E-01	6.9889E-02	1.1549E-02	6.5655E-04	5.6848E-02
4	25	1.2403E-02	1.0523E-02	1.8918E-03	5.7254E-04	1.7492E-01	4.7711E-02	1.1553E-02	6.4615E-04	5.5928E-02
5	20	1.2410E-02	1.0532E-02	1.9063E-03	5.4788E-04	1.6921E-01	4.5603E-02	1.1556E-02	6.4564E-04	5.5870E-02
10	10	1.2077E-02	1.0628E-02	1.7843E-03	4.6989E-04	1.5128E-01	3.8908E-02	1.1427E-02	5.8344E-04	5.1060E-02

D1.229 In the case of R-PEr-F2-C1-10 (t_{total} = 604 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	σ_{Qm} / $\overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.6300E-02	1.1320E-02	6.2545E-03	2.1904E-03	5.3230E-01	1.3438E-01	1.4067E-02	2.0360E-03	1.4474E-01
2	50	1.6330E-02	1.1255E-02	6.0850E-03	1.0861E-03	5.1590E-01	6.6512E-02	1.3839E-02	2.2047E-03	1.5931E-01
4	25	1.6358E-02	1.1175E-02	5.9832E-03	3.8253E-04	5.0121E-01	2.3386E-02	1.3850E-02	2.2042E-03	1.5916E-01
5	20	1.6368E-02	1.1106E-02	5.9270E-03	3.4619E-04	4.9244E-01	2.1150E-02	1.3854E-02	2.2073E-03	1.5933E-01
10	10	1.6421E-02	1.0624E-02	5.3557E-03	2.3816E-04	4.2144E-01	1.4503E-02	1.3867E-02	2.2672E-03	1.6349E-01

D1.230 In the case of R-PEr-F2-C2-3 (t_{total} = 537 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	σ_{Qm} / $\overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.6920E-02	1.4270E-02	4.5767E-03	8.8825E-04	3.2072E-01	5.2778E-02	1.6184E-02	1.0979E-03	6.7840E-02
2	50	1.6900E-02	1.4290E-02	4.4085E-03	4.1407E-04	3.0850E-01	2.4921E-02	1.6177E-02	1.0835E-03	6.6976E-02
4	25	1.6858E-02	1.4278E-02	4.2501E-03	3.4328E-04	2.9768E-01	2.0617E-02	1.6162E-02	1.0815E-03	6.6916E-02
5	20	1.6840E-02	1.4280E-02	4.1442E-03	3.0365E-04	2.9021E-01	1.8229E-02	1.6157E-02	1.0768E-03	6.6647E-02
10	10	1.6830E-02	1.4281E-02	3.5750E-03	2.0646E-04	2.5033E-01	1.2389E-02	1.6144E-02	1.0703E-03	6.6300E-02

D1.231 In the case of R-PEr-F2-C2-6 (t_{total} = 1332 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	σ_{Qm} / $\overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.3100E-03	2.5900E-03	2.8359E-03	9.3479E-04	1.0949E+00	1.3222E-01	6.2154E-03	1.1762E-03	1.8924E-01
2	50	7.3250E-03	2.6250E-03	2.7716E-03	5.1518E-04	1.0558E+00	7.2868E-02	6.2146E-03	1.1700E-03	1.8827E-01
4	25	7.3475E-03	2.6875E-03	2.7933E-03	3.4483E-04	1.0394E+00	4.8929E-02	6.2162E-03	1.1579E-03	1.8628E-01
5	20	7.3440E-03	2.7300E-03	2.8174E-03	3.0526E-04	1.0320E+00	4.3398E-02	6.2169E-03	1.1487E-03	1.8477E-01
10	10	7.3510E-03	2.9240E-03	2.8533E-03	2.0408E-04	9.7583E-01	2.9010E-02	6.2161E-03	1.1108E-03	1.7870E-01

D1.232 In the case of R-PEr-F2-C2-9 (t_{total} = 885 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\overline{Q}_m$	σ_{Qm}	σ_{Qm} / $\overline{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1050E-02	6.9600E-03	3.4917E-03	1.9905E-03	4.8236E-01	2.1542E-01	9.1113E-03	1.1499E-03	1.2621E-01
2	50	1.1085E-02	6.9650E-03	2.6812E-03	1.3228E-03	3.1506E-01	1.3939E-01	9.1125E-03	1.1512E-03	1.2633E-01
4	25	1.1113E-02	6.9300E-03	2.4382E-03	1.0306E-03	2.8392E-01	1.0747E-01	9.1141E-03	1.1624E-03	1.2753E-01
5	20	1.1096E-02	6.9240E-03	2.3376E-03	9.7837E-04	2.7682E-01	1.0168E-01	9.1128E-03	1.1566E-03	1.2693E-01
10	10	1.1022E-02	6.8860E-03	1.8169E-03	7.2558E-04	2.3453E-01	7.4518E-02	9.1099E-03	1.1394E-03	1.2507E-01

D1.233 In the case of R-PEr-F2-C2-10 (t_{total} = 724 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3300E-02	4.5200E-03	5.0101E-03	1.3887E-03	1.1084E+00	1.2107E-01	1.1286E-02	3.0722E-03	2.7222E-01
2	50	1.3360E-02	4.5000E-03	4.9273E-03	1.1591E-03	1.0950E+00	1.0119E-01	1.1286E-02	3.0847E-03	2.7333E-01
4	25	1.3465E-02	4.4525E-03	4.8100E-03	1.0581E-03	1.0803E+00	9.2493E-02	1.1288E-02	3.1150E-03	2.7596E-01
5	20	1.3512E-02	4.4400E-03	4.7626E-03	1.0247E-03	1.0726E+00	8.9537E-02	1.1289E-02	3.1246E-03	2.7678E-01
10	10	1.3696E-02	4.3730E-03	4.3943E-03	9.1046E-04	1.0049E+00	7.9422E-02	1.1304E-02	3.1845E-03	2.8172E-01

D1.234 In the case of R-PEr-F2-C3-3 (t_{total} = 697 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3210E-02	1.2020E-02	3.2795E-03	1.4563E-03	2.5721E-01	1.2116E-01	1.2652E-02	4.0990E-04	3.2399E-02
2	50	1.3145E-02	1.2015E-02	2.5073E-03	9.4005E-04	1.9703E-01	7.8240E-02	1.2647E-02	3.9601E-04	3.1314E-02
4	25	1.3065E-02	1.1965E-02	2.0454E-03	6.0248E-04	1.5695E-01	5.0354E-02	1.2632E-02	4.0566E-04	3.2113E-02
5	20	1.3058E-02	1.1958E-02	1.9859E-03	4.9032E-04	1.5257E-01	4.1004E-02	1.2624E-02	4.0765E-04	3.2291E-02
10	10	1.3043E-02	1.1955E-02	1.9530E-03	2.9304E-04	1.6088E-01	2.4512E-02	1.2573E-02	4.4415E-04	3.5325E-02

D1.235 In the case of R-PEr-F2-C3-6 (t_{total} = 1136 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.5700E-03	6.7800E-03	3.0104E-03	9.8734E-04	4.4400E-01	1.1521E-01	7.7336E-03	5.9519E-04	7.6961E-02
2	50	8.5550E-03	6.8000E-03	2.7752E-03	4.8784E-04	4.0811E-01	5.7024E-02	7.7364E-03	5.8855E-04	7.6076E-02
4	25	8.5375E-03	6.8650E-03	2.6883E-03	2.4359E-04	3.9160E-01	2.9472E-02	7.7430E-03	5.6985E-04	7.3596E-02
5	20	8.5280E-03	6.9120E-03	2.6431E-03	2.2285E-04	3.8239E-01	2.6947E-02	7.7473E-03	5.5901E-04	7.2156E-02
10	10	8.5040E-03	7.1670E-03	2.2918E-03	1.8315E-04	3.1844E-01	2.2122E-02	7.7717E-03	5.1385E-04	6.6118E-02

D1.236 In the case of R-PEr-F2-C3-9 (t_{total} = 625 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5870E-02	1.1630E-02	4.4259E-03	1.3901E-03	3.8056E-01	8.7594E-02	1.3808E-02	1.6606E-03	1.2026E-01
2	50	1.5880E-02	1.1665E-02	4.2530E-03	6.7620E-04	3.6460E-01	4.2582E-02	1.3813E-02	1.6554E-03	1.1984E-01
4	25	1.5865E-02	1.1655E-02	4.1151E-03	4.4182E-04	3.5308E-01	2.7849E-02	1.3809E-02	1.6607E-03	1.2026E-01
5	20	1.5848E-02	1.1638E-02	4.0097E-03	4.3810E-04	3.4454E-01	2.7644E-02	1.3805E-02	1.6659E-03	1.2067E-01
10	10	1.5772E-02	1.1656E-02	3.5174E-03	4.2460E-04	3.0177E-01	2.6921E-02	1.3796E-02	1.6696E-03	1.2102E-01

D1.237 In the case of R-PEr-F2-C3-10 (t_{total} = 479 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8100E-02	1.6950E-02	1.6926E-03	1.4311E-03	9.4832E-02	8.4429E-02	1.7688E-02	5.3388E-04	3.0184E-02
2	50	1.8135E-02	1.6970E-02	1.1418E-03	6.4413E-04	6.4140E-02	3.7957E-02	1.7696E-02	5.2831E-04	2.9854E-02
4	25	1.8150E-02	1.6975E-02	9.9674E-04	2.8924E-04	5.6472E-02	1.7039E-02	1.7704E-02	5.3109E-04	2.9999E-02
5	20	1.8162E-02	1.6990E-02	9.8821E-04	2.9275E-04	5.5976E-02	1.7231E-02	1.7711E-02	5.2707E-04	2.9760E-02
10	10	1.8153E-02	1.7056E-02	8.4588E-04	2.6078E-04	4.8075E-02	1.5289E-02	1.7728E-02	5.1431E-04	2.9011E-02

D1.238 In the case of R-PEr-F3-C1-3 (t_{total} = 425 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.0080E-02	1.9100E-02	1.9331E-03	1.5482E-03	9.6753E-02	7.7919E-02	1.9758E-02	4.4664E-04	2.2606E-02
2	50	2.0090E-02	1.9095E-02	1.5080E-03	8.5698E-04	7.5456E-02	4.4880E-02	1.9754E-02	4.5049E-04	2.2805E-02
4	25	2.0073E-02	1.9105E-02	1.3946E-03	6.5618E-04	6.9737E-02	3.4346E-02	1.9749E-02	4.4203E-04	2.2383E-02
5	20	2.0062E-02	1.9108E-02	1.3595E-03	6.0955E-04	6.7953E-02	3.1900E-02	1.9748E-02	4.3936E-04	2.2249E-02
10	10	2.0053E-02	1.9121E-02	1.1730E-03	5.0963E-04	5.8496E-02	2.6653E-02	1.9732E-02	4.2445E-04	2.1511E-02

D1.239 In the case of R-PEr-F3-C1-6 (t_{total} = 1145 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.8600E-03	7.0400E-03	1.6692E-03	1.0349E-03	2.3710E-01	1.3167E-01	7.4545E-03	2.4287E-04	3.2581E-02
2	50	7.8700E-03	7.0850E-03	1.2932E-03	3.9847E-04	1.8253E-01	5.0631E-02	7.4559E-03	2.3205E-04	3.1124E-02
4	25	7.8800E-03	7.1550E-03	1.1949E-03	1.9922E-04	1.6700E-01	2.5281E-02	7.4555E-03	2.2168E-04	2.9734E-02
5	20	7.8820E-03	7.1820E-03	1.1696E-03	1.5760E-04	1.6285E-01	1.9995E-02	7.4555E-03	2.2085E-04	2.9623E-02
10	10	7.8910E-03	7.1270E-03	9.5929E-04	9.4569E-05	1.3210E-01	1.1984E-02	7.4536E-03	2.2550E-04	3.0253E-02

D1.240 In the case of R-PEr-F3-C1-9 (t_{total} = 706 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm}/\bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2220E-02	9.3100E-03	3.2958E-03	1.4172E-03	3.5401E-01	1.2281E-01	1.1617E-02	1.0481E-03	9.0218E-02
2	50	1.2230E-02	9.2400E-03	3.0843E-03	7.2318E-04	3.3379E-01	5.9204E-02	1.1605E-02	1.0717E-03	9.2347E-02
4	25	1.2218E-02	1.1545E-02	6.9222E-04	3.7935E-04	5.6797E-02	3.1056E-02	1.1999E-02	2.7323E-04	2.2771E-02
5	20	1.2206E-02	1.1542E-02	5.9635E-04	2.9287E-04	5.0504E-02	2.3994E-02	1.1998E-02	2.7151E-04	2.2630E-02
10	10	1.2198E-02	1.1542E-02	4.7847E-04	2.1740E-04	4.0445E-02	1.7822E-02	1.1985E-02	2.5312E-04	2.1120E-02

D1.241 In the case of R-PEr-F3-C1-10 (t_{total} = 550 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.9040E-02	1.5320E-02	1.9274E-03	1.2864E-03	1.2581E-01	6.7566E-02	1.6888E-02	1.7883E-03	1.0589E-01
2	50	1.9035E-02	1.5375E-02	1.4719E-03	6.2116E-04	9.5733E-02	3.5302E-02	1.6892E-02	1.7736E-03	1.0500E-01
4	25	1.9053E-02	1.5413E-02	1.2727E-03	3.8767E-04	8.2577E-02	2.0347E-02	1.6905E-02	1.7660E-03	1.0447E-01
5	20	1.9066E-02	1.5428E-02	1.2124E-03	3.1770E-04	7.8587E-02	1.6663E-02	1.6912E-02	1.7639E-03	1.0430E-01
10	10	1.9085E-02	1.5550E-02	1.1732E-03	1.6036E-04	7.5448E-02	8.4026E-03	1.6947E-02	1.7375E-03	1.0253E-01

D1.242 In the case of R-PEr-F3-C2-3 (t_{total} = 541 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8400E-02	1.1940E-02	5.7889E-03	1.2875E-03	4.8483E-01	7.0240E-02	1.7070E-02	2.8680E-03	1.6801E-01
2	50	1.8445E-02	1.2035E-02	5.5927E-03	5.6704E-04	4.6470E-01	3.0952E-02	1.7105E-02	2.8348E-03	1.6573E-01
4	25	1.8590E-02	1.2183E-02	5.3422E-03	3.1855E-04	4.3851E-01	1.7376E-02	1.7169E-02	2.7894E-03	1.6247E-01
5	20	1.8654E-02	1.2266E-02	5.2030E-03	2.4848E-04	4.2418E-01	1.3569E-02	1.7198E-02	2.7604E-03	1.6051E-01
10	10	1.8866E-02	1.2721E-02	4.4477E-03	9.6845E-05	3.4963E-01	5.2941E-03	1.7327E-02	2.5850E-03	1.4919E-01

D1.243 In the case of R-PEr-F3-C2-6 (t_{total} = 1258 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2000E-03	5.2500E-03	2.4675E-03	1.2001E-03	4.6999E-01	1.7091E-01	6.6008E-03	5.2445E-04	7.9452E-02
2	50	7.1950E-03	5.2550E-03	2.2403E-03	4.2633E-04	4.2632E-01	6.0688E-02	6.6017E-03	5.1866E-04	7.8565E-02
4	25	7.1975E-03	5.2525E-03	2.1708E-03	2.4077E-04	4.1329E-01	3.4261E-02	6.6027E-03	5.2032E-04	7.8805E-02
5	20	7.2000E-03	5.2540E-03	2.1342E-03	2.1010E-04	4.0620E-01	2.9895E-02	6.6030E-03	5.2015E-04	7.8774E-02
10	10	7.1870E-03	5.3070E-03	1.9627E-03	1.5704E-04	3.6983E-01	2.2377E-02	6.6027E-03	5.0185E-04	7.6008E-02

D1.244 In the case of R-PEr-F3-C2-9 (t_{total} = 849 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1500E-02	8.9500E-03	3.5086E-03	1.8936E-03	3.9203E-01	1.7457E-01	1.0156E-02	9.3935E-04	9.2489E-02
2	50	1.1490E-02	8.8500E-03	3.3681E-03	7.7585E-04	3.8058E-01	6.7524E-02	1.0160E-02	9.4624E-04	9.3134E-02
4	25	1.1458E-02	8.6675E-03	3.4568E-03	4.9170E-04	3.9882E-01	4.2915E-02	1.0163E-02	9.6609E-04	9.5064E-02
5	20	1.1442E-02	8.6100E-03	3.4287E-03	4.3266E-04	3.9822E-01	3.7813E-02	1.0165E-02	9.7151E-04	9.5579E-02
10	10	1.1381E-02	8.5150E-03	3.0511E-03	3.4959E-04	3.5832E-01	3.0717E-02	1.0182E-02	9.6007E-04	9.4296E-02

D1.245 In the case of R-PEr-F3-C2-10 (t_{total} = 553 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.7740E-02	1.3730E-02	1.8943E-03	1.3655E-03	1.3284E-01	7.9342E-02	1.5390E-02	1.9217E-03	1.2487E-01
2	50	1.7745E-02	1.3735E-02	1.3304E-03	7.4473E-04	9.3231E-02	5.4221E-02	1.5401E-02	1.9207E-03	1.2471E-01
4	25	1.7753E-02	1.3730E-02	1.1655E-03	4.6271E-04	8.1460E-02	3.3701E-02	1.5419E-02	1.9169E-03	1.2432E-01
5	20	1.7768E-02	1.3726E-02	1.1434E-03	4.4015E-04	7.9767E-02	3.2067E-02	1.5430E-02	1.9151E-03	1.2412E-01
10	10	1.7855E-02	1.3741E-02	9.7495E-04	3.2071E-04	6.7555E-02	2.3340E-02	1.5482E-02	1.9020E-03	1.2285E-01

D1.246 In the case of R-PEr-F3-C3-3 (t_{total} = 535 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8290E-02	1.3290E-02	6.8436E-03	1.1780E-03	5.1494E-01	6.6145E-02	1.6364E-02	2.1137E-03	1.2917E-01
2	50	1.8285E-02	1.3245E-02	6.6786E-03	8.4014E-04	5.0423E-01	4.7212E-02	1.6359E-02	2.1205E-03	1.2962E-01
4	25	1.8273E-02	1.3238E-02	6.4543E-03	8.2093E-04	4.8758E-01	4.7100E-02	1.6358E-02	2.0951E-03	1.2808E-01
5	20	1.8260E-02	1.3274E-02	6.3377E-03	7.6869E-04	4.7745E-01	4.4423E-02	1.6363E-02	2.0630E-03	1.2608E-01
10	10	1.8240E-02	1.3712E-02	5.6290E-03	4.8157E-04	4.1051E-01	2.7950E-02	1.6441E-02	1.7938E-03	1.0910E-01

D1.247 In the case of R-PEr-F3-C3-6 (t_{total} = 1038 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.4900E-03	6.7200E-03	2.3238E-03	9.1425E-04	3.1876E-01	1.2272E-01	7.1560E-03	2.5894E-04	3.6185E-02
2	50	7.5000E-03	6.7000E-03	1.4917E-03	4.5457E-04	2.0504E-01	6.1016E-02	7.1605E-03	2.6475E-04	3.6973E-02
4	25	7.5450E-03	6.6875E-03	1.1486E-03	2.1170E-04	1.5515E-01	2.8265E-02	7.1678E-03	2.7408E-04	3.8237E-02
5	20	7.5820E-03	6.6700E-03	1.1226E-03	1.8721E-04	1.5421E-01	2.4988E-02	7.1712E-03	2.8078E-04	3.9153E-02
10	10	7.7080E-03	6.6350E-03	7.8104E-04	1.2856E-04	1.1304E-01	1.8190E-02	7.1813E-03	3.0887E-04	4.3011E-02

D1.248 In the case of R-PEr-F3-C3-9 (t_{total} = 784 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2270E-02	8.0900E-03	6.3883E-03	1.6383E-03	7.8965E-01	1.3352E-01	1.0499E-02	1.5023E-03	1.4309E-01
2	50	1.2290E-02	8.1850E-03	3.6032E-03	7.3776E-04	4.3493E-01	6.0029E-02	1.0509E-02	1.5049E-03	1.4320E-01
4	25	1.2318E-02	8.2825E-03	3.2411E-03	4.2502E-04	3.8252E-01	3.4505E-02	1.0527E-02	1.5341E-03	1.4573E-01
5	20	1.2316E-02	8.3400E-03	3.2189E-03	3.4651E-04	3.7579E-01	2.8135E-02	1.0536E-02	1.5475E-03	1.4688E-01
10	10	1.2278E-02	8.3950E-03	3.0012E-03	1.5404E-04	3.3576E-01	1.2546E-02	1.0571E-02	1.5919E-03	1.5059E-01

D1.249 In the case of R-PEr-F3-C3-10 (t_{total} = 603 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5760E-02	1.0490E-02	5.1560E-03	1.3862E-03	4.4969E-01	8.7958E-02	1.4095E-02	2.2784E-03	1.6164E-01
2	50	1.5775E-02	1.0485E-02	4.0675E-03	7.1115E-04	3.8793E-01	4.5081E-02	1.4513E-02	2.2651E-03	1.5607E-01
4	25	1.5773E-02	1.0490E-02	3.6493E-03	4.4194E-04	3.4789E-01	2.8060E-02	1.4476E-02	2.2515E-03	1.5553E-01
5	20	1.5786E-02	1.0522E-02	3.5723E-03	3.7622E-04	3.3951E-01	2.3896E-02	1.4460E-02	2.2306E-03	1.5426E-01
10	10	1.5829E-02	1.0931E-02	3.2442E-03	2.1833E-04	2.9679E-01	1.3886E-02	1.4430E-02	2.0273E-03	1.4049E-01

D1.250 In the case of R-GSM-F1-C1-3 (t_{total} = 14368 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.8440E-03	1.4800E-04	1.7516E-03	1.8159E-04	2.1424E+00	2.6651E-01	1.4068E-03	6.3879E-04	4.5409E-01
2	50	2.8413E-03	1.5750E-04	1.6290E-03	1.6208E-04	2.0641E+00	2.4038E-01	1.4067E-03	6.3787E-04	4.5344E-01
4	25	2.8233E-03	1.8963E-04	1.3155E-03	1.6536E-04	1.7934E+00	1.6949E-01	1.4066E-03	6.3629E-04	4.5235E-01
5	20	2.8002E-03	1.9530E-04	1.1586E-03	1.4194E-04	1.6884E+00	1.4657E-01	1.4066E-03	6.3569E-04	4.5193E-01
10	10	2.7333E-03	1.7290E-04	9.1120E-04	6.3431E-05	1.4678E+00	7.4823E-02	1.4065E-03	6.3158E-04	4.4905E-01

D1.251 In the case of R-GSM-F1-C1-6 (t_{total} = 14459 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.9240E-03	2.3650E-04	2.3158E-03	2.5375E-04	1.2055E+00	1.8502E-01	2.6490E-03	1.1841E-03	4.4698E-01
2	50	5.9623E-03	2.3775E-04	2.2391E-03	2.1504E-04	1.1776E+00	1.6032E-01	2.6491E-03	1.1834E-03	4.4673E-01
4	25	6.0347E-03	2.4400E-04	2.1185E-03	1.6560E-04	1.1291E+00	1.1169E-01	2.6490E-03	1.1826E-03	4.4642E-01
5	20	6.0556E-03	2.4830E-04	2.0804E-03	1.3745E-04	1.1074E+00	9.8959E-02	2.6490E-03	1.1824E-03	4.4636E-01
10	10	6.1871E-03	2.6550E-04	1.9263E-03	7.9804E-05	1.0178E+00	5.5987E-02	2.6493E-03	1.1835E-03	4.4674E-01

D1.252 In the case of R-GSM-F1-C1-9 (t_{total} = 14392 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.6945E-03	7.2600E-04	8.0412E-03	2.2602E-04	4.0096E+00	1.9826E-01	3.5278E-03	1.3160E-03	3.7302E-01
2	50	6.6550E-03	7.1975E-04	6.7898E-03	1.6838E-04	3.3040E+00	1.5987E-01	3.5275E-03	1.3149E-03	3.7276E-01
4	25	6.5161E-03	7.0112E-04	5.1556E-03	1.1765E-04	2.4359E+00	1.0411E-01	3.5274E-03	1.3141E-03	3.7254E-01
5	20	6.4615E-03	6.9180E-04	4.7372E-03	1.0366E-04	2.2083E+00	8.6610E-02	3.5274E-03	1.3133E-03	3.7230E-01
10	10	6.3594E-03	6.5305E-04	3.7517E-03	7.5255E-05	1.6089E+00	6.6067E-02	3.5278E-03	1.3081E-03	3.7080E-01

D1.253 In the case of R-GSM-F1-C1-10 (t_{total} = 14387 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.6510E-03	5.5200E-04	2.6572E-03	4.8638E-04	1.9594E+00	1.9414E-01	3.7329E-03	1.3535E-03	3.6258E-01
2	50	7.6827E-03	5.4775E-04	2.5786E-03	4.5301E-04	1.8832E+00	1.6116E-01	3.7326E-03	1.3499E-03	3.6165E-01
4	25	7.7464E-03	5.6337E-04	2.6130E-03	3.8863E-04	1.7543E+00	1.1306E-01	3.7322E-03	1.3413E-03	3.5937E-01
5	20	7.7964E-03	5.8340E-04	2.6529E-03	3.4229E-04	1.6861E+00	9.9816E-02	3.7322E-03	1.3378E-03	3.5846E-01
10	10	8.0561E-03	5.9035E-04	2.8017E-03	2.1798E-04	1.4636E+00	6.4628E-02	3.7325E-03	1.3203E-03	3.5373E-01

D1.254 In the case of R-GSM-F1-C2-3 (t_{total} = 5544 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.4009E-02	1.3397E-02	1.1770E-02	2.4151E-03	5.2199E-01	9.6647E-02	2.5318E-02	4.1729E-03	1.6482E-01
2	50	3.4005E-02	1.3331E-02	1.0637E-02	1.7773E-03	5.1535E-01	7.4560E-02	2.5321E-02	4.1837E-03	1.6523E-01
4	25	3.4043E-02	1.3272E-02	8.9932E-03	1.3360E-03	5.0690E-01	5.7111E-02	2.5328E-02	4.2029E-03	1.6594E-01
5	20	3.4003E-02	1.3257E-02	8.4224E-03	1.2221E-03	5.0212E-01	5.0534E-02	2.5331E-02	4.2086E-03	1.6614E-01
10	10	3.3771E-02	1.3211E-02	8.3702E-03	5.6316E-04	4.7347E-01	2.8156E-02	2.5341E-02	4.2266E-03	1.6679E-01

D1.255 In the case of R-GSM-F1-C2-6 (t_{total} = 2829 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	6.5968E-02	2.2414E-02	2.2912E-02	5.4523E-03	1.0074E+00	1.0132E-01	5.1047E-02	1.1209E-02	2.1958E-01
2	50	6.5983E-02	2.2696E-02	2.2697E-02	4.2899E-03	1.0001E+00	7.6981E-02	5.1041E-02	1.1162E-02	2.1869E-01
4	25	6.5759E-02	2.3232E-02	2.2887E-02	3.6115E-03	9.8516E-01	6.5118E-02	5.1040E-02	1.1094E-02	2.1737E-01
5	20	6.5607E-02	2.3580E-02	2.2994E-02	3.4302E-03	9.7517E-01	6.1997E-02	5.1041E-02	1.1069E-02	2.1687E-01
10	10	6.4994E-02	2.5598E-02	2.3722E-02	2.9121E-03	9.2673E-01	5.2474E-02	5.1040E-02	1.0918E-02	2.1392E-01

D1.256 In the case of R-GSM-F1-C2-9 (t_{total} = 1653 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.3635E-02	5.1969E-02	3.8843E-02	7.0072E-03	7.4742E-01	9.1410E-02	7.8530E-02	1.1648E-02	1.4832E-01
2	50	9.3715E-02	5.0989E-02	3.8834E-02	5.1793E-03	7.6161E-01	6.7812E-02	7.8530E-02	1.1707E-02	1.4907E-01
4	25	9.3959E-02	4.8985E-02	3.8982E-02	4.3421E-03	7.9580E-01	5.7169E-02	7.8524E-02	1.1833E-02	1.5069E-01
5	20	9.4082E-02	4.8019E-02	3.9087E-02	4.2725E-03	8.1398E-01	5.4451E-02	7.8526E-02	1.1907E-02	1.5163E-01
10	10	9.3972E-02	4.3270E-02	3.9076E-02	2.9314E-03	9.0306E-01	3.1194E-02	7.8579E-02	1.2404E-02	1.5786E-01

D1.257 In the case of R-GSM-F1-C2-10 (t_{total} = 1642 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.7567E-02	1.4592E-02	2.7473E-02	9.7461E-03	1.8828E+00	1.0428E-01	8.1380E-02	1.9861E-02	2.4406E-01
2	50	9.7606E-02	1.5044E-02	2.7736E-02	7.2644E-03	1.8437E+00	7.7675E-02	8.1372E-02	1.9783E-02	2.4312E-01
4	25	9.7542E-02	1.6206E-02	2.8281E-02	5.0976E-03	1.7451E+00	5.4341E-02	8.1369E-02	1.9574E-02	2.4056E-01
5	20	9.7645E-02	1.6887E-02	2.8610E-02	4.6888E-03	1.6942E+00	4.9923E-02	8.1349E-02	1.9458E-02	2.3920E-01
10	10	9.8077E-02	2.0335E-02	2.9834E-02	2.8839E-03	1.4671E+00	3.0802E-02	8.1145E-02	1.8918E-02	2.3313E-01

D1.258 In the case of R-GSM-F1-C3-3 (t_{total} = 1642 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	9.5541E-02	8.7257E-02	8.3194E-03	5.6471E-03	9.0306E-02	6.2034E-02	9.1898E-02	2.4870E-03	2.7063E-02
2	50	9.5584E-02	8.7124E-02	6.8086E-03	3.5438E-03	7.3891E-02	3.8465E-02	9.1907E-02	2.4822E-03	2.7007E-02
4	25	9.5623E-02	8.6890E-02	5.3030E-03	2.7059E-03	5.7428E-02	2.8814E-02	9.1908E-02	2.4834E-03	2.7020E-02
5	20	9.5529E-02	8.6784E-02	4.6162E-03	2.3011E-03	4.9925E-02	2.4504E-02	9.1902E-02	2.4861E-03	2.7052E-02
10	10	9.5123E-02	8.6150E-02	3.5858E-03	1.1651E-03	4.1623E-02	1.2530E-02	9.1877E-02	2.5201E-03	2.7428E-02

D1.259 In the case of R-GSM-F1-C3-6 (t_{total} = 643 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.4315E-01	2.2833E-01	1.7485E-02	1.2863E-02	7.6576E-02	5.2904E-02	2.3659E-01	5.6232E-03	2.3768E-02
2	50	2.4271E-01	2.2835E-01	1.3092E-02	8.8112E-03	5.7335E-02	3.6303E-02	2.3664E-01	5.5886E-03	2.3617E-02
4	25	2.4240E-01	2.2829E-01	1.0335E-02	5.9738E-03	4.5273E-02	2.4814E-02	2.3662E-01	5.6021E-03	2.3675E-02
5	20	2.4234E-01	2.2821E-01	9.3624E-03	5.5017E-03	4.1025E-02	2.2858E-02	2.3661E-01	5.6475E-03	2.3869E-02
10	10	2.4236E-01	2.2806E-01	6.5947E-03	4.5489E-03	2.7429E-02	1.8921E-02	2.3652E-01	5.7661E-03	2.4379E-02

D1.260 In the case of R-GSM-F1-C3-9 (t_{total} = 461 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.4694E-01	3.4076E-01	2.6205E-02	2.0588E-02	7.6177E-02	5.9431E-02	3.4444E-01	2.7440E-03	7.9666E-03
2	50	3.4673E-01	3.4054E-01	1.7112E-02	1.3091E-02	4.9646E-02	3.7757E-02	3.4450E-01	2.7731E-03	8.0498E-03
4	25	3.4658E-01	3.3991E-01	1.4545E-02	7.7228E-03	4.2191E-02	2.2283E-02	3.4436E-01	3.0714E-03	8.9191E-03
5	20	3.4659E-01	3.3958E-01	1.3274E-02	6.8853E-03	3.8479E-02	1.9866E-02	3.4433E-01	3.2361E-03	9.3983E-03
10	10	3.4662E-01	3.3816E-01	1.1339E-02	5.5349E-03	3.3532E-02	1.5989E-02	3.4436E-01	4.1370E-03	1.2014E-02

D1.261 In the case of R-GSM-F1-C3-10 (t_{total} = 417 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.8061E-01	3.4562E-01	6.5746E-02	3.0058E-02	1.8867E-01	7.8975E-02	3.6362E-01	1.9175E-02	5.2732E-02
2	50	3.8114E-01	3.4545E-01	6.0459E-02	2.1948E-02	1.7362E-01	5.7586E-02	3.6365E-01	1.9450E-02	5.3486E-02
4	25	3.8158E-01	3.4513E-01	5.1529E-02	1.6488E-02	1.4805E-01	4.3208E-02	3.6350E-01	1.9583E-02	5.3873E-02
5	20	3.8193E-01	3.4499E-01	4.7856E-02	1.4647E-02	1.3752E-01	3.8351E-02	3.6348E-01	1.9693E-02	5.4180E-02
10	10	3.8166E-01	3.4915E-01	3.2268E-02	9.6663E-03	9.2419E-02	2.5327E-02	3.7014E-01	1.8211E-02	4.9199E-02

D1.262 In the case of R-GSM-F2-C1-3 (t_{total} = 14432 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.1810E-03	4.5000E-04	2.5116E-03	3.7078E-04	8.4327E-01	1.7995E-01	2.9125E-03	8.7384E-04	3.0003E-01
2	50	5.1745E-03	4.4175E-04	2.0174E-03	3.1601E-04	8.3069E-01	1.5330E-01	2.9126E-03	8.7449E-04	3.0024E-01
4	25	5.2058E-03	4.2975E-04	1.7848E-03	2.6497E-04	8.0452E-01	1.0872E-01	2.9127E-03	8.7479E-04	3.0034E-01
5	20	5.2070E-03	4.2100E-04	1.7646E-03	2.4457E-04	7.8843E-01	9.9016E-02	2.9127E-03	8.7434E-04	3.0018E-01
10	10	5.2275E-03	3.9725E-04	1.6469E-03	1.1614E-04	7.0442E-01	5.7838E-02	2.9131E-03	8.7113E-04	2.9904E-01

D1.263 In the case of R-GSM-F2-C1-6 (t_{total} = 14350 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3405E-02	1.0380E-03	4.2217E-03	9.1925E-04	1.4590E+00	2.0928E-01	6.8764E-03	2.1931E-03	3.1893E-01
2	50	1.3383E-02	1.0095E-03	3.6652E-03	8.1649E-04	1.4508E+00	1.7433E-01	6.8769E-03	2.1965E-03	3.1940E-01
4	25	1.3446E-02	9.2188E-04	3.3516E-03	6.4473E-04	1.4072E+00	1.0132E-01	6.8776E-03	2.2034E-03	3.2037E-01
5	20	1.3486E-02	8.7010E-04	3.2285E-03	5.7534E-04	1.3680E+00	8.4466E-02	6.8779E-03	2.2065E-03	3.2081E-01
10	10	1.3588E-02	6.7335E-04	3.0296E-03	3.6671E-04	1.1739E+00	4.5387E-02	6.8792E-03	2.2121E-03	3.2156E-01

D1.264 In the case of R-GSM-F2-C1-9 (t_{total} = 14404 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1327E-02	7.5700E-04	4.1968E-03	8.8935E-04	1.4257E+00	1.4436E-01	6.7257E-03	2.2470E-03	3.3408E-01
2	50	1.1342E-02	7.8475E-04	3.6565E-03	8.0830E-04	1.4152E+00	1.1810E-01	6.7629E-03	2.2124E-03	3.2713E-01
4	25	1.1406E-02	8.6912E-04	3.5348E-03	6.6106E-04	1.4659E+00	8.6638E-02	6.7627E-03	2.2130E-03	3.2724E-01
5	20	1.1431E-02	9.1520E-04	3.5029E-03	6.1236E-04	1.4885E+00	7.6239E-02	6.7625E-03	2.2138E-03	3.2735E-01
10	10	1.1555E-02	1.2522E-03	3.4025E-03	4.2988E-04	1.5176E+00	4.5284E-02	6.7612E-03	2.2162E-03	3.2777E-01

D1.265 In the case of R-GSM-F2-C1-10 (t_{total} = 14365 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.4622E-02	4.5000E-06	1.5901E-02	7.7229E-05	1.7162E+01	1.2470E-01	8.6339E-03	2.8299E-03	3.2777E-01
2	50	1.4589E-02	4.5000E-06	1.1942E-02	4.9921E-05	1.1094E+01	1.0827E-01	8.6341E-03	2.8308E-03	3.2786E-01
4	25	1.4571E-02	2.2500E-06	9.1354E-03	2.6875E-05	1.1944E+01	9.0092E-02	8.6343E-03	2.8366E-03	3.2853E-01
5	20	1.4557E-02	2.7000E-06	8.6496E-03	1.9339E-05	7.1627E+00	8.1132E-02	8.6343E-03	2.8405E-03	3.2898E-01
10	10	1.4533E-02	2.1150E-05	6.0481E-03	3.9950E-05	2.6207E+00	4.7155E-02	8.6342E-03	2.8561E-03	3.3079E-01

D1.266 In the case of R-GSM-F2-C2-3 (t_{total} = 5506 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.3638E-02	1.1814E-02	1.5660E-02	2.8154E-03	7.1831E-01	1.0729E-01	2.7350E-02	6.5547E-03	2.3966E-01
2	50	4.3458E-02	1.1789E-02	1.5711E-02	2.0195E-03	7.0964E-01	7.8121E-02	2.7343E-02	6.5305E-03	2.3883E-01
4	25	4.2950E-02	1.1712E-02	1.5861E-02	9.9772E-04	6.9643E-01	5.1633E-02	2.7213E-02	6.4915E-03	2.3855E-01
5	20	4.2654E-02	1.1680E-02	1.5917E-02	7.5365E-04	6.9024E-01	3.8979E-02	2.7206E-02	6.4744E-03	2.3798E-01
10	10	4.1191E-02	1.1547E-02	1.5882E-02	3.9727E-04	6.4846E-01	2.0593E-02	2.7179E-02	6.3897E-03	2.3509E-01

D1.267 In the case of R-GSM-F2-C2-6 (t_{total} = 2149 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	8.5396E-02	4.6598E-02	2.8980E-02	8.4997E-03	3.8616E-01	1.2156E-01	6.9983E-02	1.0286E-02	1.4698E-01
2	50	8.5682E-02	4.6501E-02	2.8312E-02	7.5069E-03	3.7424E-01	9.8166E-02	6.9982E-02	1.0359E-02	1.4803E-01
4	25	8.5582E-02	4.6665E-02	2.7294E-02	6.0743E-03	3.5533E-01	7.3376E-02	6.9959E-02	1.0404E-02	1.4872E-01
5	20	8.5395E-02	4.6947E-02	2.6803E-02	5.4850E-03	3.4647E-01	6.6194E-02	6.9949E-02	1.0398E-02	1.4865E-01
10	10	8.4133E-02	4.8623E-02	2.3663E-02	3.0848E-03	2.9671E-01	3.6893E-02	6.9899E-02	1.0435E-02	1.4928E-01

D1.268 In the case of R-GSM-F2-C2-9 (t_{total} = 1532 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1726E-01	8.7601E-02	2.5205E-02	1.0526E-02	2.6001E-01	1.1320E-01	9.8441E-02	8.4397E-03	8.5734E-02
2	50	1.1696E-01	8.7723E-02	2.4753E-02	8.9359E-03	2.5410E-01	9.8024E-02	9.8460E-02	8.4340E-03	8.5659E-02
4	25	1.1636E-01	8.8163E-02	2.4618E-02	7.5899E-03	2.5035E-01	8.2351E-02	9.8441E-02	8.3878E-03	8.5206E-02
5	20	1.1598E-01	8.8316E-02	2.4698E-02	7.2350E-03	2.4980E-01	7.8750E-02	9.8438E-02	8.3571E-03	8.4898E-02
10	10	1.1475E-01	8.8214E-02	2.5265E-02	5.7003E-03	2.4936E-01	5.9548E-02	9.8396E-02	8.3092E-03	8.4447E-02

D1.269 In the case of R-GSM-F2-C2-10 (t_{total} = 1302 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.3254E-01	9.1134E-02	3.5381E-02	1.3848E-02	3.2365E-01	1.1912E-01	1.1789E-01	1.2954E-02	1.0988E-01
2	50	1.3234E-01	9.1726E-02	3.5355E-02	1.1542E-02	3.1016E-01	9.0097E-02	1.1790E-01	1.2795E-02	1.0852E-01
4	25	1.3196E-01	9.2580E-02	3.3432E-02	6.5390E-03	3.0635E-01	5.1119E-02	1.1793E-01	1.2588E-02	1.0674E-01
5	20	1.3183E-01	9.2944E-02	3.2181E-02	5.2937E-03	3.0559E-01	4.1412E-02	1.1794E-01	1.2563E-02	1.0652E-01
10	10	1.3166E-01	9.3511E-02	2.8439E-02	4.0269E-03	3.0044E-01	3.1463E-02	1.1797E-01	1.2389E-02	1.0502E-01

D1.270 In the case of R-GSM-F2-C3-3 (t_{total} = 1466 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1404E-01	9.8780E-02	3.4319E-02	6.7942E-03	3.4178E-01	6.3131E-02	1.0586E-01	4.5564E-03	4.3042E-02
2	50	1.1416E-01	9.8683E-02	2.9307E-02	3.8549E-03	2.8898E-01	3.5895E-02	1.0593E-01	4.4921E-03	4.2408E-02
4	25	1.1423E-01	9.8471E-02	2.0334E-02	2.2222E-03	1.9642E-01	1.9931E-02	1.0606E-01	4.3900E-03	4.1391E-02
5	20	1.1429E-01	9.8415E-02	1.6449E-02	1.8054E-03	1.5757E-01	1.6199E-02	1.0612E-01	4.3697E-03	4.1176E-02
10	10	1.1430E-01	9.8363E-02	6.0927E-03	1.2730E-03	6.0242E-02	1.2574E-02	1.0620E-01	4.3737E-03	4.1181E-02

D1.271 In the case of R-GSM-F2-C3-6 (t_{total} = 602 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	2.6751E-01	2.4857E-01	2.5108E-02	1.4856E-02	1.0101E-01	5.6209E-02	2.5974E-01	9.2780E-03	3.5720E-02
2	50	2.6785E-01	2.4908E-01	2.3117E-02	9.1663E-03	9.2811E-02	3.4665E-02	2.5969E-01	9.3796E-03	3.6118E-02
4	25	2.6810E-01	2.4873E-01	2.0958E-02	6.9742E-03	8.4166E-02	2.6404E-02	2.5947E-01	9.7903E-03	3.7732E-02
5	20	2.6819E-01	2.4815E-01	2.0146E-02	6.5140E-03	8.0933E-02	2.4671E-02	2.5935E-01	1.0001E-02	3.8561E-02
10	10	2.6865E-01	2.4686E-01	1.7010E-02	5.3260E-03	6.8375E-02	2.0220E-02	2.5912E-01	1.0537E-02	4.0665E-02

D1.272 In the case of R-GSM-F2-C3-9 (ttotal = 417 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.8766E-01	3.6197E-01	3.6342E-02	2.1350E-02	9.6773E-02	5.5466E-02	3.7752E-01	1.1593E-02	3.0707E-02
2	50	3.8740E-01	3.6190E-01	3.0151E-02	1.4691E-02	8.0204E-02	3.8195E-02	3.7747E-01	1.1470E-02	3.0387E-02
4	25	3.8670E-01	3.6193E-01	2.6385E-02	1.1980E-02	7.0107E-02	3.0980E-02	3.7745E-01	1.1279E-02	2.9882E-02
5	20	3.8645E-01	3.6177E-01	2.5189E-02	1.1067E-02	6.6909E-02	2.8637E-02	3.7743E-01	1.1332E-02	3.0023E-02
10	10	3.8569E-01	3.7720E-01	2.0391E-02	7.8512E-03	5.4060E-02	2.0374E-02	3.8275E-01	4.8106E-03	1.2569E-02

D1.273 In the case of R-GSM-F2-C3-10 (ttotal = 711 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.4392E-01	5.9036E-02	1.1996E-01	1.3521E-02	3.5145E-01	5.7798E-02		1.8218E-01	8.5571E-01
2	50	4.4436E-01	5.9196E-02	1.1978E-01	1.1695E-02	3.5435E-01	3.5684E-02	2.1248E-01	1.8185E-01	8.5587E-01
4	25	4.4378E-01	5.9607E-02	1.2191E-01	9.2280E-03	3.6758E-01	2.6388E-02	2.1143E-01	1.8093E-01	8.5577E-01
5	20	4.4375E-01	5.9821E-02	1.2335E-01	7.9609E-03	3.7541E-01	2.2714E-02	2.1090E-01	1.8052E-01	8.5593E-01
10	10	4.4387E-01	6.0428E-02	1.3053E-01	4.8715E-03	4.1647E-01	1.0975E-02	2.3032E-01	1.8475E-01	8.0213E-01

D1.274 In the case of R-GSM-F3-C1-3 (ttotal = 14353 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0045E-02	3.0600E-04	7.6311E-03	2.0941E-04	9.8701E-01	2.7525E-01	4.2743E-03	1.5488E-03	3.6236E-01
2	50	1.0067E-02	3.0400E-04	6.8479E-03	1.7840E-04	9.3664E-01	2.5037E-01	4.2743E-03	1.5515E-03	3.6297E-01
4	25	1.0105E-02	3.0250E-04	5.7044E-03	1.3437E-04	8.1796E-01	1.8984E-01	4.2744E-03	1.5518E-03	3.6305E-01
5	20	1.0131E-02	3.0400E-04	5.2646E-03	1.1966E-04	7.6140E-01	1.5726E-01	4.2745E-03	1.5510E-03	3.6285E-01
10	10	1.0119E-02	3.1230E-04	4.6422E-03	8.6718E-05	6.3719E-01	9.0203E-02	4.2746E-03	1.5439E-03	3.6119E-01

D1.275 In the case of R-GSM-F3-C1-6 (ttotal = 14336 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.6289E-02	1.2235E-03	9.9694E-03	6.5999E-04	1.1250E+00	2.9045E-01	8.6255E-03	3.7458E-03	4.3426E-01
2	50	1.6244E-02	1.3073E-03	9.5729E-03	5.6760E-04	1.0581E+00	2.3172E-01	8.6260E-03	3.7435E-03	4.3398E-01
4	25	1.6315E-02	1.4909E-03	9.1408E-03	4.4695E-04	9.9879E-01	1.5163E-01	8.6271E-03	3.7445E-03	4.3405E-01
5	20	1.6411E-02	1.5307E-03	8.8774E-03	4.2231E-04	1.0380E+00	1.1994E-01	8.6276E-03	3.7456E-03	4.3414E-01
10	10	1.6456E-02	1.5378E-03	7.7688E-03	2.3503E-04	1.0624E+00	6.2205E-02	8.6298E-03	3.7450E-03	4.3396E-01

D1.276 In the case of R-GSM-F3-C1-9 (ttotal = 884 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.1516E-02	8.6480E-03	6.9151E-03	3.0053E-03	6.4053E-01	3.4266E-01	1.0224E-02	1.1835E-03	1.1576E-01
2	50	1.1539E-02	8.6538E-03	6.2042E-03	2.3763E-03	5.7755E-01	2.4036E-01	1.0228E-02	1.1733E-03	1.1472E-01
4	25	1.1559E-02	8.6449E-03	5.0371E-03	1.7019E-03	4.7463E-01	1.4749E-01	1.0225E-02	1.1674E-03	1.1417E-01
5	20	1.1575E-02	8.6491E-03	4.6130E-03	1.3738E-03	4.3701E-01	1.1913E-01	1.0220E-02	1.1685E-03	1.1433E-01
10	10	1.1631E-02	8.7548E-03	3.7413E-03	7.8366E-04	3.6613E-01	6.8336E-02	1.0205E-02	1.1367E-03	1.1138E-01

D1.277 In the case of R-GSM-F3-C1-10 (t_{total} = 373 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0898E-02	4.5055E-03	4.2075E-03	3.0412E-03	9.3386E-01	3.4039E-01	7.3220E-03	3.2632E-03	4.4567E-01
2	50	1.0830E-02	4.6700E-03	4.3161E-03	2.8530E-03	9.2421E-01	2.9051E-01	7.3483E-03	3.1574E-03	4.2968E-01
4	25	1.0790E-02	4.9130E-03	4.3066E-03	2.2700E-03	8.7657E-01	2.1039E-01	7.3824E-03	3.0486E-03	4.1296E-01
5	20	1.0808E-02	5.0114E-03	4.2719E-03	1.9215E-03	8.5243E-01	1.7779E-01	7.4025E-03	3.0281E-03	4.0907E-01
10	10	1.1252E-02	5.4462E-03	4.0986E-03	1.3287E-03	7.5255E-01	1.1809E-01	7.5741E-03	3.1982E-03	4.2226E-01

D1.278 In the case of R-GSM-F3-C2-3 (ttotal = 4902 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.0527E-02	1.8384E-02	2.1506E-02	6.1496E-03	1.0044E+00	2.0180E-01	2.9624E-02	6.1346E-03	2.0708E-01
2	50	4.0445E-02	1.8317E-02	1.2372E-02	5.2453E-03	5.4763E-01	1.6356E-01	2.9626E-02	6.1545E-03	2.0774E-01
4	25	4.0304E-02	1.8502E-02	9.2604E-03	3.4214E-03	4.2246E-01	9.7987E-02	2.9625E-02	6.1352E-03	2.0709E-01
5	20	4.0208E-02	1.8537E-02	8.8638E-03	3.0311E-03	4.0517E-01	8.6850E-02	2.9624E-02	6.1240E-03	2.0672E-01
10	10	4.0193E-02	1.8639E-02	8.2747E-03	1.2958E-03	3.5937E-01	4.0845E-02	2.9627E-02	6.0956E-03	2.0575E-01

D1.279 In the case of R-GSM-F3-C2-6 (t_{total} = 2055 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.0550E-01	3.8014E-02	2.6660E-02	1.1736E-02	4.2507E-01	1.3628E-01	7.2191E-02	1.8369E-02	2.5445E-01
2	50	1.0557E-01	3.7913E-02	2.5906E-02	8.4744E-03	4.1183E-01	9.9571E-02	7.2175E-02	1.8375E-02	2.5458E-01
4	25	1.0555E-01	3.7677E-02	2.5353E-02	6.7556E-03	4.0083E-01	8.2188E-02	7.2150E-02	1.8383E-02	2.5479E-01
5	20	1.0557E-01	3.7603E-02	2.5505E-02	6.0425E-03	4.0068E-01	7.3918E-02	7.2139E-02	1.8376E-02	2.5473E-01
10	10	1.0608E-01	3.7920E-02	2.5884E-02	4.0863E-03	3.9148E-01	5.6449E-02	7.2115E-02	1.8347E-02	2.5442E-01

D1.280 In the case of R-GSM-F3-C2-9 (t_{total} = 1474 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.2377E-01	7.6603E-02	3.0463E-02	1.5705E-02	2.8616E-01	1.4992E-01	1.0235E-01	1.5530E-02	1.5173E-01
2	50	1.2315E-01	7.5962E-02	2.6854E-02	1.0792E-02	2.5967E-01	1.1572E-01	1.0238E-01	1.5574E-02	1.5212E-01
4	25	1.2197E-01	7.5006E-02	2.3174E-02	6.7030E-03	2.5378E-01	7.7407E-02	1.0240E-01	1.5454E-02	1.5092E-01
5	20	1.2141E-01	7.4468E-02	2.2162E-02	6.1072E-03	2.5498E-01	7.0417E-02	1.0240E-01	1.5372E-02	1.5012E-01
10	10	1.2104E-01	7.3409E-02	2.0872E-02	4.2232E-03	2.3909E-01	4.8518E-02	1.0234E-01	1.5055E-02	1.4711E-01

D1.281 In the case of R-GSM-F3-C2-10 (t_{total} = 1125 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.5668E-01	1.2303E-01	3.7409E-02	2.4522E-02	2.8721E-01	1.5691E-01	1.3701E-01	9.8709E-03	7.2044E-02
2	50	1.5626E-01	1.2290E-01	3.5814E-02	2.0775E-02	2.6764E-01	1.3988E-01	1.3714E-01	9.8523E-03	7.1843E-02
4	25	1.5605E-01	1.2286E-01	3.5465E-02	1.6654E-02	2.6241E-01	1.1421E-01	1.3735E-01	9.8755E-03	7.1898E-02
5	20	1.5610E-01	1.2298E-01	3.5517E-02	1.5376E-02	2.6179E-01	1.0516E-01	1.3744E-01	9.8589E-03	7.1730E-02
10	10	1.5617E-01	1.2379E-01	3.5330E-02	9.3884E-03	2.5579E-01	6.4084E-02	1.3772E-01	9.6013E-03	6.9718E-02

D1.282 In the case of R-GSM-F3-C3-3 (t_{total} = 975 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8362E-01	1.4340E-01	3.0843E-02	1.0455E-02	1.9064E-01	6.0850E-02	1.5766E-01	1.3466E-02	8.5410E-02
2	50	1.8428E-01	1.4314E-01	2.9068E-02	6.6152E-03	1.7963E-01	3.8474E-02	1.5770E-01	1.3663E-02	8.6641E-02
4	25	1.8486E-01	1.4321E-01	2.7024E-02	3.5630E-03	1.6650E-01	2.3832E-02	1.5775E-01	1.3834E-02	8.7697E-02
5	20	1.8477E-01	1.4323E-01	2.5995E-02	3.2113E-03	1.5970E-01	2.1452E-02	1.5776E-01	1.3820E-02	8.7606E-02
10	10	1.8177E-01	1.4373E-01	1.8808E-02	1.9598E-03	1.1310E-01	1.3155E-02	1.5761E-01	1.3369E-02	8.4822E-02

D1.283 In the case of R-GSM-F3-C3-6 (t_{total} = 531 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	3.0576E-01	2.8016E-01	4.6537E-02	2.2849E-02	1.6611E-01	7.7790E-02	2.9194E-01	1.0804E-02	3.7006E-02
2	50	3.0555E-01	2.8095E-01	3.8458E-02	1.7421E-02	1.3689E-01	5.9297E-02	2.9217E-01	1.0386E-02	3.5549E-02
4	25	3.0514E-01	2.8116E-01	3.0747E-02	1.2109E-02	1.0936E-01	4.1177E-02	2.9232E-01	1.0037E-02	3.4335E-02
5	20	3.0480E-01	2.8152E-01	2.9080E-02	1.0416E-02	1.0330E-01	3.5366E-02	2.9239E-01	9.8020E-03	3.3524E-02
10	10	3.0304E-01	2.8206E-01	2.5561E-02	5.0125E-03	9.0623E-02	1.6939E-02	2.9263E-01	8.8920E-03	3.0387E-02

D1.284 In the case of R-GSM-F3-C3-9 (t_{total} = 388 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.1709E-01	3.9980E-01	4.4189E-02	3.1574E-02	1.1053E-01	7.5702E-02	4.0641E-01	9.3359E-03	2.2972E-02
2	50	4.1688E-01	4.0164E-01	3.3265E-02	2.2058E-02	8.2824E-02	5.2911E-02	4.0692E-01	8.6337E-03	2.1217E-02
4	25	4.1599E-01	4.0283E-01	2.5142E-02	1.5453E-02	6.2374E-02	3.7148E-02	4.0730E-01	7.5256E-03	1.8477E-02
5	20	4.1557E-01	4.0331E-01	2.3203E-02	1.1868E-02	5.7494E-02	2.8558E-02	4.0748E-01	7.0083E-03	1.7199E-02
10	10	4.1395E-01	4.0454E-01	1.7564E-02	5.8782E-03	4.3395E-02	1.4200E-02	4.0775E-01	5.3706E-03	1.3171E-02

D1.285 In the case of R-GSM-F3-C3-10 (t_{total} = 329 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	5.1173E-01	4.4740E-01	4.9079E-02	3.9313E-02	1.0420E-01	7.6824E-02	4.7671E-01	3.2545E-02	6.8270E-02
2	50	5.1106E-01	4.4894E-01	4.3481E-02	3.0391E-02	9.2126E-02	6.2273E-02	4.7732E-01	3.1403E-02	6.5790E-02
4	25	5.1072E-01	4.4984E-01	4.0266E-02	1.9976E-02	8.4941E-02	4.4407E-02	4.7820E-01	3.0654E-02	6.4103E-02
5	20	5.1032E-01	4.5006E-01	3.9069E-02	1.8357E-02	8.2237E-02	4.0788E-02	4.7849E-01	3.0271E-02	6.3264E-02
10	10	5.0916E-01	4.5013E-01	3.5379E-02	1.3147E-02	7.3704E-02	2.9207E-02	4.7977E-01	2.9512E-02	6.1514E-02

D1.286 In the case of R-PErSr-F1-C3-3 (t_{total} = 6901 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	1.8680E-02	1.0547E-02	8.0937E-03	2.2191E-03	5.4388E-01	1.3171E-01	1.5137E-02	1.7778E-03	1.1745E-01
2	50	1.8629E-02	1.0533E-02	6.9979E-03	1.8835E-03	4.7205E-01	1.1170E-01	1.5137E-02	1.7760E-03	1.1732E-01
4	25	1.8493E-02	1.0527E-02	5.3627E-03	1.4802E-03	4.0046E-01	8.6132E-02	1.5138E-02	1.7663E-03	1.1668E-01
5	20	1.8459E-02	1.0528E-02	4.7625E-03	1.3207E-03	3.9097E-01	7.6811E-02	1.5139E-02	1.7623E-03	1.1641E-01
10	10	1.8356E-02	1.0579E-02	3.9902E-03	8.1703E-04	3.4116E-01	4.7193E-02	1.5138E-02	1.7576E-03	1.1610E-01

D1.287 In the case of R-PErSr-F1-C3-6 (t_{total} = 2938 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	4.8887E-02	3.8147E-02	1.3567E-02	5.2905E-03	3.5565E-01	1.1973E-01	4.3512E-02	3.0600E-03	7.0327E-02
2	50	4.8920E-02	3.8059E-02	1.3002E-02	3.7008E-03	3.4162E-01	8.3842E-02	4.3509E-02	3.0796E-03	7.0782E-02
4	25	4.9010E-02	3.7797E-02	1.2081E-02	2.1686E-03	3.1961E-01	4.9181E-02	4.3504E-02	3.0917E-03	7.1066E-02
5	20	4.9044E-02	3.7654E-02	1.1550E-02	1.9845E-03	3.0673E-01	4.3955E-02	4.3504E-02	3.0819E-03	7.0842E-02
10	10	4.8900E-02	3.7065E-02	9.0815E-03	8.8441E-04	2.4502E-01	1.9512E-02	4.3502E-02	3.0761E-03	7.0712E-02

D1.288 In the case of R-PErSr-F1-C3-9 (t_{total} = 2115 sec)

n	m	Q_m		σ_Q		σ_Q / Q_m		$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
		Max	Min	Max	Min	Max	Min			
1	100	7.2430E-02	3.2718E-02	1.2856E-02	6.6699E-03	3.2344E-01	1.1364E-01	5.7658E-02	1.4263E-02	2.4738E-01
2	50	7.2422E-02	3.2629E-02	1.1572E-02	5.2839E-03	2.6980E-01	8.6642E-02	5.7646E-02	1.4277E-02	2.4767E-01
4	25	7.2510E-02	3.2317E-02	9.8499E-03	3.5297E-03	2.2142E-01	5.9439E-02	5.7608E-02	1.4325E-02	2.4866E-01
5	20	7.2487E-02	3.2263E-02	1.0076E-02	3.1967E-03	2.0926E-01	5.3937E-02	5.7585E-02	1.4337E-02	2.4898E-01
10	10	7.2749E-02	3.1882E-02	1.0996E-02	1.9048E-03	1.8014E-01	2.8843E-02	5.8566E-02	1.3841E-02	2.3632E-01

D1.289 In the case of R-PErSr-F1-C3-10 (t_{total} = 1783 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	7.8503E-02	6.4460E-02	1.5302E-02	8.9454E-03	2.1848E-01	1.1689E-01	7.1494E-02	3.3743E-03	4.7197E-02
2	50	7.8576E-02	6.4516E-02	1.3079E-02	6.0011E-03	1.8723E-01	8.1094E-02	7.1496E-02	3.3880E-03	4.7387E-02
4	25	7.8795E-02	6.4801E-02	1.0257E-02	3.3017E-03	1.4732E-01	4.4691E-02	7.1488E-02	3.4229E-03	4.7880E-02
5	20	7.8835E-02	6.5133E-02	9.4407E-03	2.5905E-03	1.3575E-01	3.5073E-02	7.1491E-02	3.4156E-03	4.7777E-02
10	10	7.8605E-02	6.5741E-02	7.4098E-03	1.2352E-03	1.0712E-01	1.6685E-02	7.1509E-02	3.3848E-03	4.7334E-02

D1.290 In the case of R-GSMSr-F1-C3-3 (t_{total} = 2092 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	7.4872E-02	5.0398E-02	1.8541E-02	6.4147E-03	3.2228E-01	9.1207E-02	6.5008E-02	7.1444E-03	1.0990E-01
2	50	7.5109E-02	5.0625E-02	1.8016E-02	5.1638E-03	3.1457E-01	7.3263E-02	6.5022E-02	7.1365E-03	1.0976E-01
4	25	7.5424E-02	5.1140E-02	1.7029E-02	4.1133E-03	3.0152E-01	5.8934E-02	6.5034E-02	7.1153E-03	1.0941E-01
5	20	7.5547E-02	5.1429E-02	1.6435E-02	3.8535E-03	2.9320E-01	5.1008E-02	6.5037E-02	7.1180E-03	1.0945E-01
10	10	7.5573E-02	4.9739E-02	1.4563E-02	2.3386E-03	2.6749E-01	3.2295E-02	6.5049E-02	7.1755E-03	1.1031E-01

D1.291 In the case of R-GSMSr-F1-C3-6 (t_{total} = 805 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	1.9699E-01	1.1698E-01	5.4089E-02	1.7312E-02	4.6239E-01	8.7885E-02	1.6337E-01	3.2917E-02	2.0148E-01
2	50	1.9721E-01	1.1629E-01	5.3311E-02	1.2908E-02	4.5841E-01	6.5457E-02	1.6335E-01	3.2925E-02	2.0156E-01
4	25	1.9719E-01	1.1496E-01	5.2238E-02	9.4407E-03	4.5440E-01	4.7877E-02	1.6747E-01	3.3245E-02	1.9852E-01
5	20	1.9714E-01	1.1438E-01	5.1819E-02	8.1272E-03	4.5304E-01	4.1225E-02	1.6738E-01	3.3334E-02	1.9915E-01
10	10	1.9679E-01	1.1143E-01	4.9269E-02	5.4898E-03	4.4214E-01	2.8755E-02	1.6697E-01	3.3823E-02	2.0256E-01

D1.292 In the case of R-GSMSr-F1-C3-9 (t_{total} = 848 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	2.9173E-01	5.9578E-02	1.0201E-01	1.3794E-02	1.1112E+00	1.1773E-01	1.4587E-01	9.1167E-02	6.2498E-01
2	50	2.9204E-01	5.9423E-02	1.0073E-01	1.2180E-02	1.0596E+00	7.5417E-02	1.4591E-01	9.1095E-02	6.2432E-01
4	25	2.9258E-01	5.9158E-02	1.0136E-01	1.0214E-02	1.0227E+00	4.4432E-02	1.4598E-01	9.0856E-02	6.2241E-01
5	20	2.9275E-01	5.9081E-02	1.0174E-01	9.6191E-03	1.0138E+00	4.0397E-02	1.4600E-01	9.0730E-02	6.2145E-01
10	10	2.9050E-01	5.8337E-02	1.0199E-01	7.2066E-03	1.0039E+00	2.7603E-02	1.4583E-01	8.9184E-02	6.1158E-01

D1.293 In the case of R-GSMSr-F1-C3-10 (t_{total} = 734 sec)

n	m	Q_m Max	Q_m Min	σ_Q Max	σ_Q Min	σ_Q / Q_m Max	σ_Q / Q_m Min	$\bar{Q}_m$	σ_{Qm}	$\sigma_{Qm} / \bar{Q}_m$
1	100	3.0731E-01	1.0216E-01	1.0157E-01	1.4964E-02	4.3765E-01	1.0090E-01	1.7208E-01	7.8478E-02	4.5605E-01
2	50	3.0714E-01	1.0279E-01	1.0157E-01	1.1094E-02	4.2299E-01	7.4773E-02	1.7184E-01	7.8078E-02	4.5436E-01
4	25	3.0720E-01	1.0433E-01	1.0314E-01	9.6310E-03	4.1424E-01	6.4732E-02	1.7143E-01	7.7342E-02	4.5115E-01
5	20	3.0764E-01	1.0501E-01	1.0393E-01	9.3508E-03	4.2114E-01	6.2753E-02	1.7127E-01	7.7075E-02	4.5001E-01
10	10	3.1088E-01	1.0632E-01	1.0743E-01	6.7398E-03	4.5657E-01	4.2480E-02	1.7063E-01	7.5848E-02	4.4451E-01

VITA

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