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APPENDIX

A1. Data for tear resistance of rice starch-based HDPE blown films

Machine Direction (MD)

Starch Content (%)	Sample No.	Force (mN)
0	1	820
	2	680
	3	720
	4	700
	5	780
	6	760
	7	740
	8	780
	9	720
	10	720
2.5	1	480
	2	660
	3	480
	4	640
	5	580

Starch Content (%)	Sample No.	Force (mN)
2.5	6	490
	7	620
	8	570
	9	540
	10	500
5.0	1	470
	2	470
	3	540
	4	510
	5	480
	6	470
	7	490
	8	520
	9	460
	10	440

A1. Data for tear resistance of rice starch-based HDPE blown films (cont.)

Machine Direction (MD)

Starch Content (%)	Sample No.	Force (mN)
7.5	1	360
	2	530
	3	440
	4	620
	5	350
	6	410
	7	460
	8	480
	9	420
	10	390
10.0	1	440
	2	430
	3	430
	4	410
	5	410

Starch Content (%)	Sample No.	Force (mN)
10.0	6	420
	7	420
	8	400
	9	430
	10	430
12.5	1	370
	2	380
	3	400
	4	430
	5	420
	6	460
	7	390
	8	420
	9	410
	10	400

A2. Data for tear resistance of rice starch-based HDPE blown films

Transverse Direction (TD)

Starch Content (%)	Sample No.	Force (mN)
0	1	1600
	2	1480
	3	1640
	4	1560
	5	1400
	6	1460
	7	1580
	8	1540
	9	1480
	10	1480
2.5	1	1170
	2	1140
	3	1190
	4	1080
	5	1080

Starch Content (%)	Sample No.	Force (mN)
2.5	6	1130
	7	1170
	8	1090
	9	1080
	10	1180
5.0	1	930
	2	770
	3	800
	4	940
	5	1160
	6	1020
	7	950
	8	910
	9	990
	10	870

A2. Data for tear resistance of rice starch-based HDPE blown films (cont.)

Transverse Direction (TD)

Starch Content (%)	Sample No.	Force (mN)
7.5	1	860
	2	830
	3	950
	4	650
	5	670
	6	630
	7	780
	8	760
	9	740
	10	730
10.0	1	600
	2	650
	3	560
	4	520
	5	670

Starch Content (%)	Sample No.	Force (mN)
10.0	6	510
	7	640
	8	650
	9	620
	10	570
12.5	1	520
	2	510
	3	500
	4	470
	5	530
	6	470
	7	540
	8	520
	9	460
	10	480

A3. Data for tear resistance of tapioca starch-based HDPE blown films

Machine Direction (MD)

Starch Content (%)	Sample No.	Force (mN)
0	1	820
	2	680
	3	720
	4	700
	5	780
	6	760
	7	740
	8	780
	9	720
	10	720
2.5	1	640
	2	700
	3	620
	4	640
	5	700

Starch Content (%)	Sample No.	Force (mN)
2.5	6	660
	7	680
	8	580
	9	600
	10	720
5.0	1	920
	2	820
	3	780
	4	830
	5	890
	6	780
	7	840
	8	860
	9	830
	10	870

A3. Data for tear resistance of tapioca starch-based HDPE blown films (cont.)

Machine Direction (MD)

Starch Content (%)	Sample No.	Force (mN)
7.5	1	1070
	2	920
	3	1050
	4	1030
	5	1000
	6	1010
	7	980
	8	1000
	9	880
	10	930
10.0	1	800
	2	710
	3	900
	4	880
	5	790

Starch Content (%)	Sample No.	Force (mN)
10.0	6	820
	7	810
	8	820
	9	830
	10	840
12.5	1	690
	2	680
	3	410
	4	370
	5	460
	6	570
	7	610
	8	590
	9	690
	10	600

A4. Data for tear resistance of tapioca starch-based HDPE blown films

Transverse Direction (TD)

Starch Content (%)	Sample No.	Force (mN)
0	1	1600
	2	1480
	3	1640
	4	1560
	5	1400
	6	1460
	7	1580
	8	1540
	9	1480
	10	1480
2.5	1	1630
	2	1180
	3	1300
	4	1450
	5	1400

Starch Content (%)	Sample No.	Force (mN)
2.5	6	1370
	7	1420
	8	1340
	9	1410
	10	1290
5.0	1	1530
	2	1580
	3	1870
	4	1830
	5	1590
	6	1480
	7	1650
	8	1680
	9	1720
	10	1610

A4. Data for tear resistance of tapioca starch-based HDPE blown films (cont.)

Transverse Direction (TD)

Starch Content (%)	Sample No.	Force (mN)
7.5	1	2850
	2	3060
	3	2700
	4	3090
	5	2990
	6	2550
	7	2920
	8	2640
	9	3190
	10	2570
10.0	1	1500
	2	1380
	3	1630
	4	1530
	5	1370

Starch Content (%)	Sample No.	Force (mN)
10.0	6	1450
	7	1440
	8	1590
	9	1610
	10	1440
12.5	1	790
	2	880
	3	780
	4	780
	5	850
	6	900
	7	770
	8	930
	9	800
	10	840

A5. Data for tensile strength at yield of rice starch-based HDPE blown films

Machine Direction (MD)

Starch Content (%)	Sample No.	Tensile strength (MPa)
0	1	30.11
	2	30.15
	3	28.80
	4	29.14
	5	30.01
2.5	1	19.45
	2	19.69
	3	20.21
	4	21.63
	5	19.65
5.0	1	15.24
	2	15.07
	3	15.15
	4	15.41
	5	15.31

Starch Content (%)	Sample No.	Tensile strength (MPa)
7.5	1	12.36
	2	12.20
	3	12.06
	4	11.99
	5	12.44
10.0	1	11.09
	2	11.36
	3	11.15
	4	11.18
	5	11.47
12.5	1	11.10
	2	11.10
	3	10.69
	4	10.78
	5	10.90

A6. Data for tensile strength at yield of rice starch-based HDPE blown films

Transverse Direction (TD)

Starch Content (%)	Sample No.	Tensile strength (MPa)
0	1	27.38
	2	27.61
	3	28.04
	4	29.17
	5	28.43
2.5	1	18.88
	2	18.47
	3	18.23
	4	19.36
	5	19.31
5.0	1	14.09
	2	13.25
	3	13.77
	4	13.90
	5	13.41

Starch Content (%)	Sample No.	Tensile strength (MPa)
7.5	1	11.63
	2	12.05
	3	11.85
	4	11.58
	5	11.49
10.0	1	10.96
	2	10.98
	3	9.84
	4	10.39
	5	9.99
12.5	1	9.89
	2	9.23
	3	9.55
	4	9.61
	5	9.20

A7. Data for tensile strength at yield of tapioca starch-based HDPE blown films

Machine Direction (MD)

Starch Content (%)	Sample No.	Tensile strength (MPa)
0	1	30.11
	2	30.15
	3	28.80
	4	29.14
	5	30.01
2.5	1	26.43
	2	28.46
	3	26.97
	4	27.24
	5	25.62
5.0	1	24.44
	2	22.56
	3	24.59
	4	23.25
	5	23.87

Starch Content (%)	Sample No.	Tensile strength (MPa)
7.5	1	20.97
	2	22.44
	3	21.61
	4	20.96
	5	21.24
10.0	1	19.24
	2	19.86
	3	19.24
	4	20.08
	5	20.16
12.5	1	18.05
	2	18.34
	3	18.31
	4	16.39
	5	17.07

A8. Data for tensile strength at yield of tapioca starch-based HDPE blown films

Transverse Direction (TD)

Starch Content (%)	Sample No.	Tensile strength (MPa)
0	1	27.38
	2	27.61
	3	28.04
	4	29.17
	5	28.43
2.5	1	25.48
	2	25.54
	3	25.83
	4	25.64
	5	27.35
5.0	1	21.44
	2	21.82
	3	22.16
	4	22.70
	5	22.68

Starch Content (%)	Sample No.	Tensile strength (MPa)
7.5	1	19.49
	2	22.10
	3	19.63
	4	19.59
	5	22.05
10.0	1	18.05
	2	17.65
	3	17.66
	4	17.73
	5	17.72
12.5	1	16.91
	2	16.05
	3	16.73
	4	17.34
	5	16.96

A9. Data for elongation at yield of rice starch-based HDPE blown films

Machine Direction (MD)

Starch Content (%)	Sample No.	Elongation (%)
0	1	19.52
	2	20.52
	3	20.34
	4	19.86
	5	20.84
2.5	1	16.74
	2	17.38
	3	16.82
	4	16.24
	5	17.58
5.0	1	15.02
	2	14.94
	3	14.36
	4	15.18
	5	15.76

Starch Content (%)	Sample No.	Elongation (%)
7.5	1	12.22
	2	12.32
	3	11.84
	4	12.56
	5	12.68
10.0	1	10.72
	2	10.16
	3	9.88
	4	9.74
	5	10.40
12.5	1	8.08
	2	8.28
	3	8.62
	4	8.90
	5	8.36

A10. Data for elongation at yield of rice starch-based HDPE blown films

Transverse Direction (TD)

Starch Content (%)	Sample No.	Elongation (%)
0	1	35.60
	2	33.13
	3	33.65
	4	35.00
	5	34.12
2.5	1	30.20
	2	29.55
	3	29.17
	4	29.04
	5	28.96
5.0	1	22.55
	2	22.53
	3	22.03
	4	22.24
	5	22.80

Starch Content (%)	Sample No.	Elongation (%)
7.5	1	23.25
	2	22.90
	3	22.51
	4	23.16
	5	22.98
10.0	1	19.73
	2	19.76
	3	19.67
	4	19.75
	5	19.98
12.5	1	20.77
	2	22.16
	3	21.00
	4	21.14
	5	22.07

A11. Data for elongation at yield of tapioca starch-based HDPE blown films

Machine Direction (MD)

Starch Content (%)	Sample No.	Elongation (%)
0	1	19.52
	2	20.52
	3	20.34
	4	19.86
	5	20.84
2.5	1	16.62
	2	18.52
	3	17.94
	4	17.22
	5	18.36
5.0	1	15.66
	2	16.88
	3	16.24
	4	15.52
	5	15.30

Starch Content (%)	Sample No.	Elongation (%)
7.5	1	14.32
	2	15.68
	3	14.84
	4	14.50
	5	14.82
10.0	1	12.98
	2	13.64
	3	14.12
	4	14.46
	5	13.58
12.5	1	12.22
	2	12.46
	3	11.80
	4	11.76
	5	12.24

A12. Data for elongation at yield of tapioca starch-based HDPE blown films

Transverse Direction (TD)

Starch Content (%)	Sample No.	Elongation (%)
0	1	18.02
	2	17.86
	3	17.28
	4	18.34
	5	18.36
2.5	1	15.22
	2	15.52
	3	14.86
	4	15.86
	5	16.02
5.0	1	14.22
	2	13.98
	3	14.64
	4	14.20
	5	14.70

Starch Content (%)	Sample No.	Elongation (%)
7.5	1	12.52
	2	12.64
	3	13.54
	4	14.08
	5	13.36
10.0	1	11.12
	2	11.58
	3	11.64
	4	10.82
	5	11.36
12.5	1	9.84
	2	10.54
	3	10.52
	4	11.04
	5	10.68

A13. Data for tensile strength at yield of rice starch-based HDPE blown films after water treatment

Machine Direction (MD)

Starch Content (%)	Sample No.	Tensile strength (MPa)
0	1	30.21
	2	30.12
	3	28.99
	4	29.12
	5	30.18
2.5	1	17.64
	2	17.81
	3	18.11
	4	18.24
	5	17.10
5.0	1	13.82
	2	13.42
	3	13.42
	4	13.32
	5	13.34

Starch Content (%)	Sample No.	Tensile strength (MPa)
7.5	1	10.75
	2	10.69
	3	10.44
	4	10.69
	5	10.51
10.0	1	10.27
	2	9.67
	3	9.91
	4	9.75
	5	9.42
12.5	1	9.47
	2	8.89
	3	8.99
	4	8.96
	5	9.04

A14. Data for tensile strength at yield of rice starch-based HDPE blown films after water treatment

Transverse Direction (TD)

Starch Content (%)	Sample No.	Tensile strength (MPa)
0	1	27.29
	2	27.72
	3	27.98
	4	28.98
	5	28.56
2.5	1	17.00
	2	17.24
	3	16.65
	4	17.41
	5	17.05
5.0	1	12.49
	2	12.48
	3	12.23
	4	12.28
	5	12.21

Starch Content (%)	Sample No.	Tensile strength (MPa)
7.5	1	9.55
	2	10.02
	3	9.79
	4	9.89
	5	9.51
10.0	1	8.96
	2	8.72
	3	8.79
	4	8.94
	5	9.33
12.5	1	7.99
	2	8.21
	3	8.13
	4	8.20
	5	8.00

A15. Data for tensile strength at yield of tapioca starch-based HDPE blown films after water treatment

Machine Direction (MD)

Starch Content (%)	Sample No.	Tensile strength (MPa)
0	1	30.21
	2	30.12
	3	28.99
	4	29.12
	5	30.18
2.5	1	24.82
	2	25.97
	3	24.67
	4	25.13
	5	24.73
5.0	1	22.26
	2	21.55
	3	22.68
	4	22.31
	5	22.21

Starch Content (%)	Sample No.	Tensile strength (MPa)
7.5	1	19.84
	2	20.01
	3	20.51
	4	19.12
	5	19.11
10.0	1	16.74
	2	16.61
	3	16.25
	4	17.41
	5	17.40
12.5	1	15.89
	2	16.27
	3	16.11
	4	16.15
	5	16.07

A16. Data for tensile strength at yield of tapioca starch-based HDPE blown films after water treatment

Transverse Direction (TD)

Starch Content (%)	Sample No.	Tensile strength (MPa)
0	1	27.29
	2	27.72
	3	27.98
	4	28.98
	5	28.56
2.5	1	23.33
	2	23.45
	3	23.06
	4	23.22
	5	24.74
5.0	1	19.85
	2	20.11
	3	19.94
	4	20.10
	5	20.14

Starch Content (%)	Sample No.	Tensile strength (MPa)
7.5	1	17.72
	2	18.67
	3	17.31
	4	17.59
	5	18.42
10.0	1	15.85
	2	15.41
	3	16.10
	4	15.56
	5	16.01
12.5	1	14.99
	2	14.67
	3	15.33
	4	14.89
	5	15.39

CURRICULUM VITAE

Name : Suppawat Suranakapan

Birth Date : 19 February 1971

Nationality : Thai

University Education :

1988 - 1994 Bachelor's Degree of science in Chemistry
Washington State University

Working Experience :

1995 - 1996 Internal ISO 9002 auditor
Tipco Asphalt Public Company Ltd.
Surat Bitumen Co., Ltd.
Raycol Asphalt Co., Ltd.

1990 - 1992 Librarian
Holland Library, Washington State University

1989 Sales
Photo & Graphic Tech. Co., Ltd.