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APPENDICES

Appendix A Calibration Curve of Gas Products

The relationship between the peak area from GC analysis and the gas concentration was conducted for the possible gas products such as hydrogen, oxygen, carbon monoxide, carbon dioxide, and methane.

Hydrogen (H₂)

Peak Area	Amount (%mole, %vol.)
0	0
16362	16.59
27261	24.15
48612	34.53
69406	43.57
86573	51.18

Oxygen (O₂)

Peak Area	Amount (%mole, %vol.)
0	0
563283	2.79
877943	5.51
1095138	7.50
1287342	13.42
1511888	16.83

Carbon dioxide (CO₂)

Peak Area	Amount (%mole, %vol.)
0	0
419327	8.18
751480	15.22
1006975	21.52
1253819	27.30

Carbon monoxide (CO)

Peak Area	Amount (%mole, %vol.)
0	0
208035	3.71
250596	4.52
289848	5.28
328812	6.48

Methane (CH₄)

Peak Area	Amount (%mole, %vol.)
0	0
805614	15.16
1509033	25.47
2113099	34.31
2711355	42.09

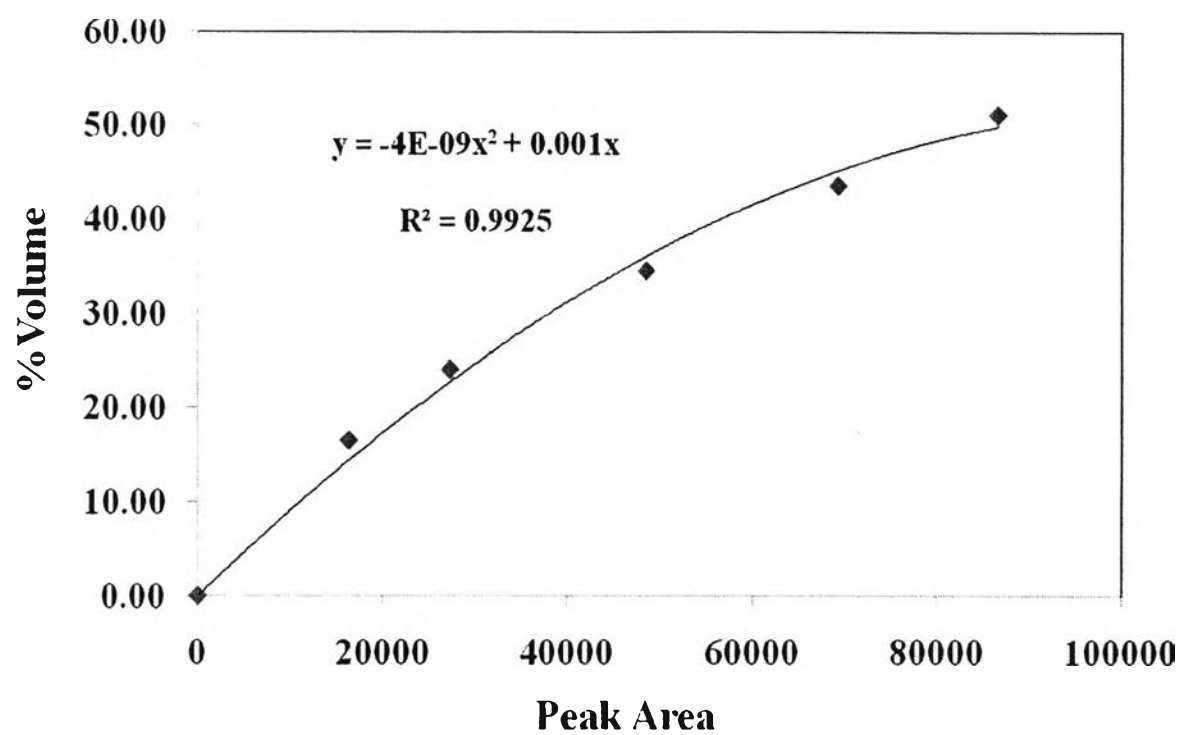


Figure A1 Calibration curve of hydrogen gas.

Where x is peak area from GC analysis

y is concentration (%)

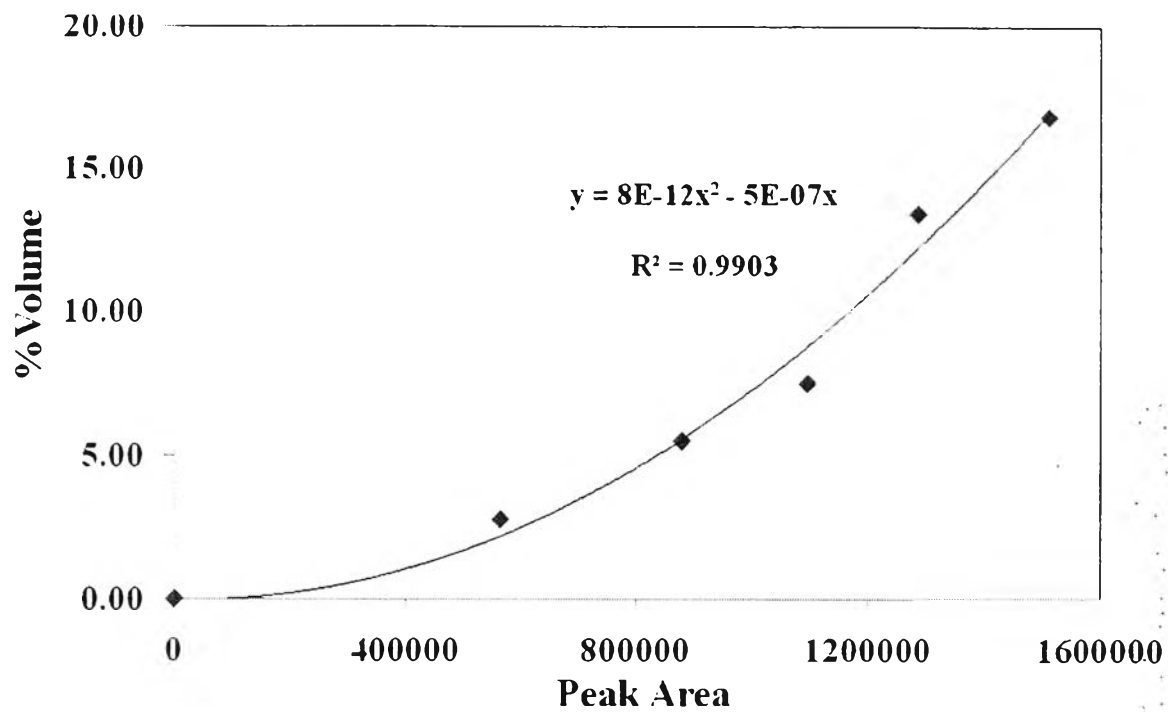


Figure A2 Calibration curve of oxygen gas.

Where x is peak area from GC analysis
 y is concentration (%)

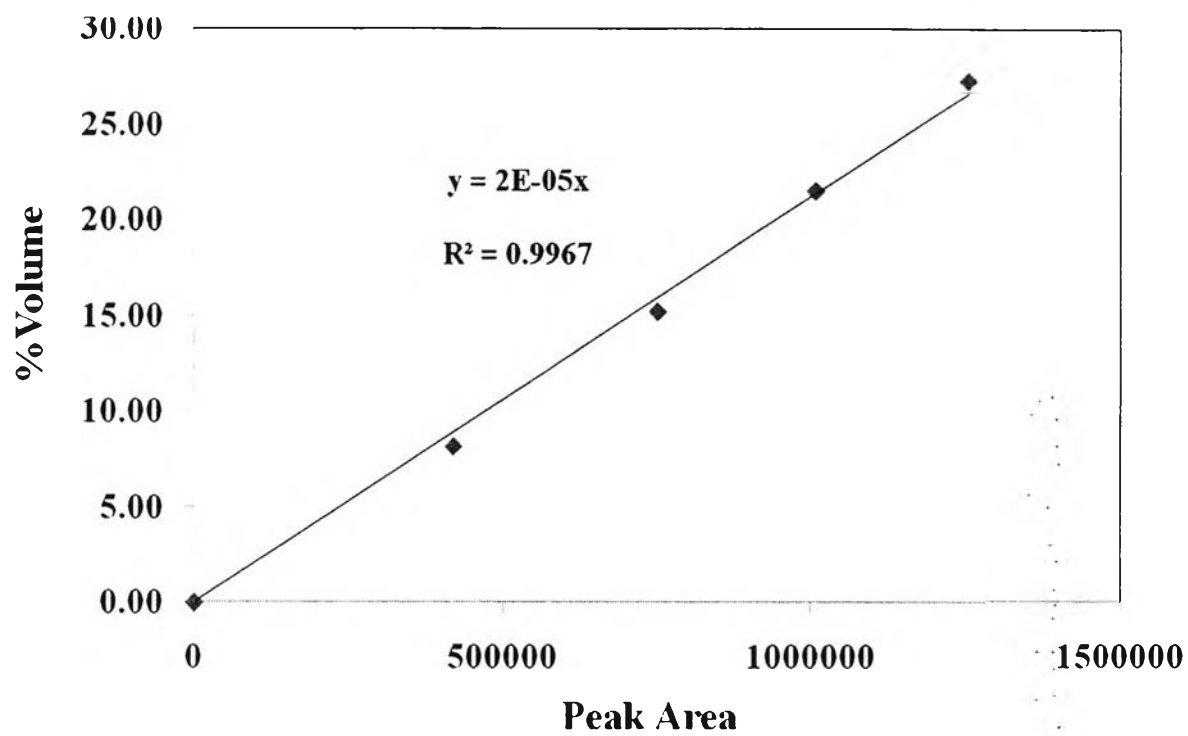


Figure A3 Calibration curve of carbon dioxide gas.

Where x is peak area from GC analysis
 y is concentration (%)

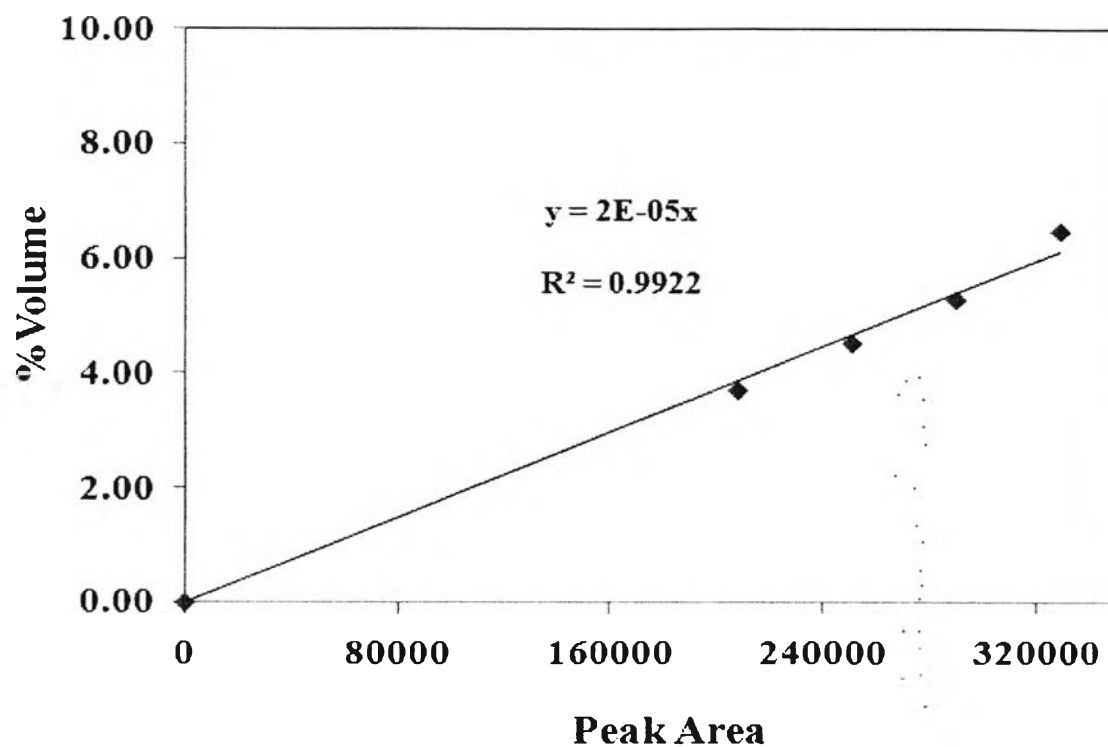


Figure A3 Calibration curve of carbon monoxide gas.

Where x is peak area from GC analysis

y is concentration (%)

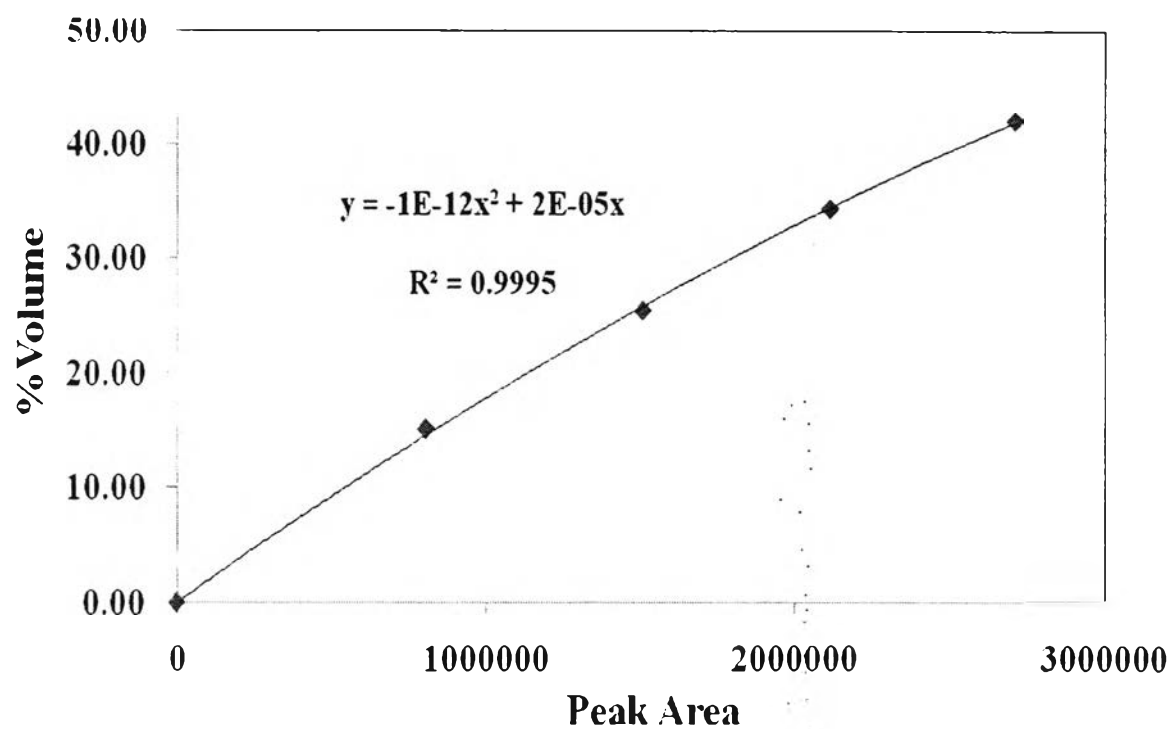


Figure A5 Calibration curve of methane gas.

Where x is peak area from GC analysis

y is concentration (%)

