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APPENDICES

Appendix

A-1 Calculation of Selectivity to Other Hydrocarbons

% Selectivity of gas products

$$\% \text{ Selectivity of X} = \frac{\text{concentration of X} \times 100}{\text{total concentration of products}}$$

$$\text{Concentration of X} = \frac{(a/3) \times b}{c/1.5}$$

a = Peak area of X in standard gas

b = % molar of X in standard gas

c = Peak area of X in sample products

% Selectivity of volatile liquid products

$$\% \text{ Selectivity of Y} = \frac{\text{mol Y} \times 100}{\text{total mol of products}}$$

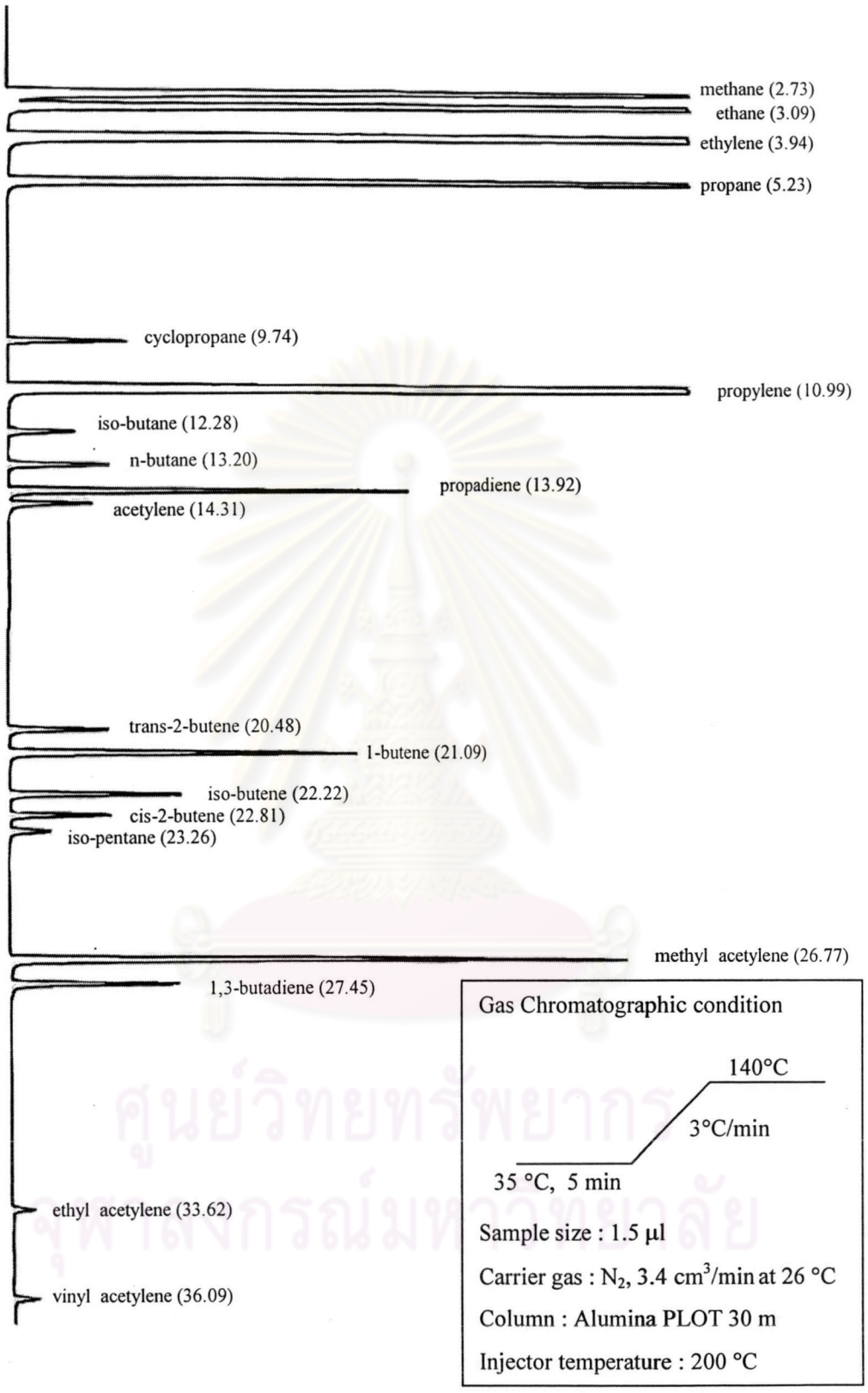

Figure A-1 Gas chromatogram of standard mixture gas.

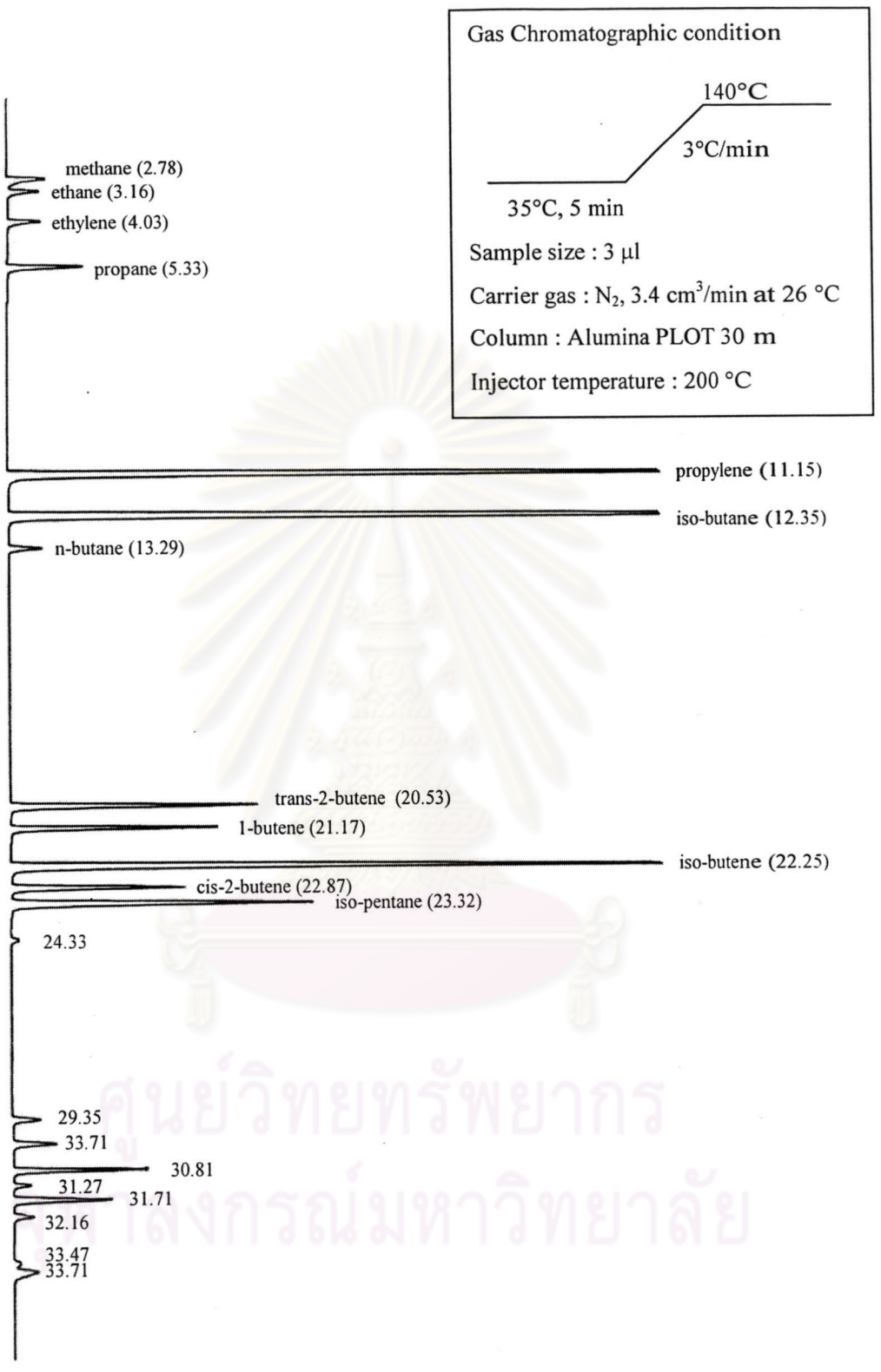

Figure A-2 Gas chromatogram of gas product from catalytic cracking reaction on Al-MCM-41 (Si/Al ratio = 20) at 450 °C.

VITAE

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