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APPENDIX

Appendix I Formulae of Student's t-test by paired comparison and unpaired comparison

a. The formula for Student's t-test by paired comparison

(161) is :

$$t = \frac{\bar{d} - \mu_d}{S_{\bar{d}}}$$

$$\bar{d} = \frac{\sum d_i}{n}$$

$$d_i = x_2 - x_1$$

$$\mu_d = \mu_2 - \mu_1$$

$$S_{\bar{d}} = \frac{S_d}{n}$$

$$S_d^2 = \frac{n \sum d_i^2 - (\sum d_i)^2}{n(n-1)}$$

x = The sample value

$\bar{x}$  = The sample mean

n = The number of samples tested

$\mu$  = The population variance

S = Standard deviation

b. The formula for unpaired comparison test (161) is :

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

$$S_p^2 = \frac{(n_1 - 1) S_1^2 + (n_2 - 1) S_2^2}{(n_1 - 1) + (n_2 - 1)}$$

$S_p$  = The pooled variance



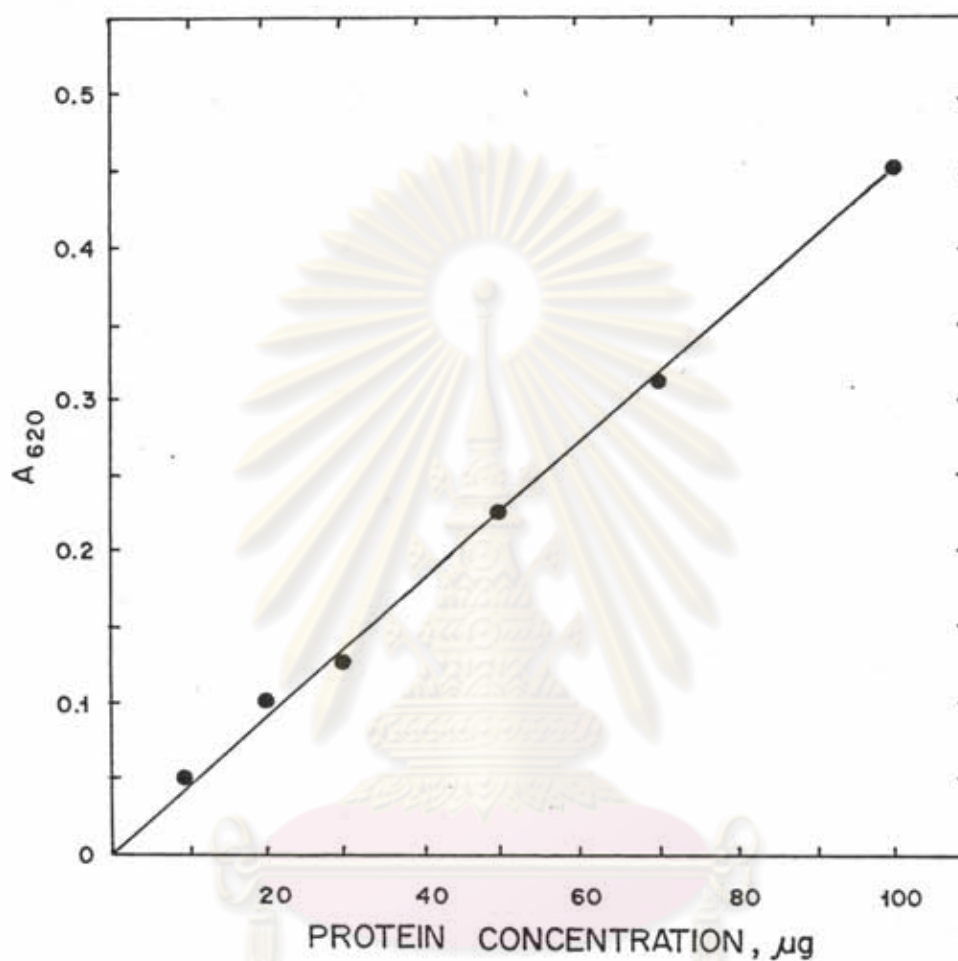
Appendix II The standard curve of BSA

Figure 27 The standard curve of BSA determined by the Lowry's method.

The standard BSA was prepared in 50 mM Tris·HCl  
buffer, pH 8.2.

Appendix III The standard curve of adrenochrome

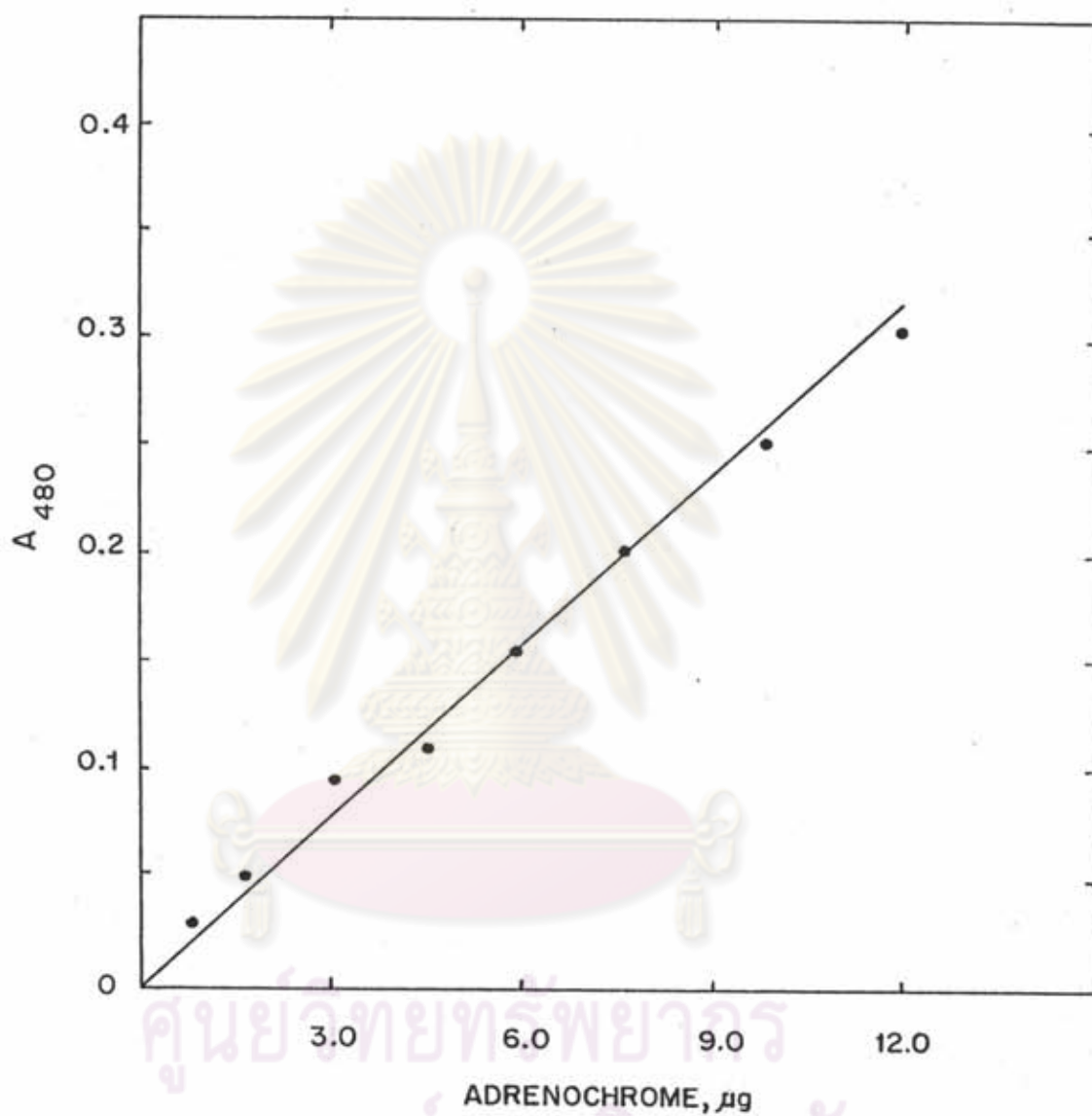


Figure 28 The standard curve of adrenochrome.

The standard solution of adrenochrome was prepared in 50 mM Tris·HCl buffer, pH 8.2.

## BIOGRAPHY

Miss Duangsuda Siriyanonda was born on August 10, 1958 in Chanthaburi, Thailand. She graduated with the Bachelor degree of Science in Chemistry from the Faculty of Science, Chiangmai University in 1980.



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