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APPENDICES

APPENDIX A

Standard curve for TNBS

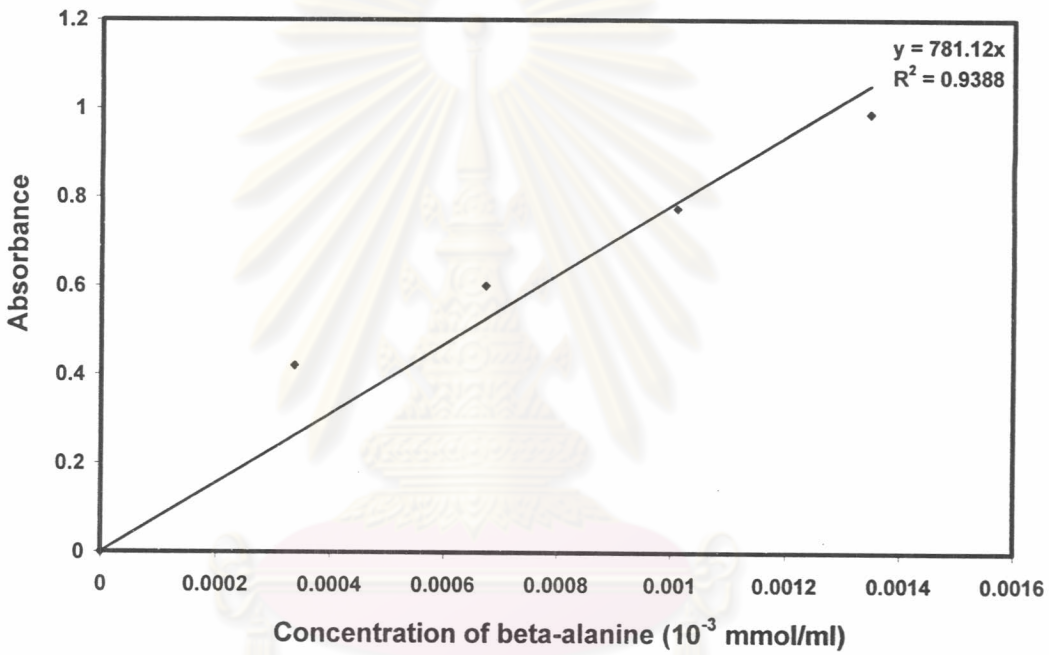

Figure A-1: β-alanine standard curve for amino group content analysis

APPENDIX B

Standard curve for *in vitro* cell culture test

Table B-1: Absorbance of MTT standard.

Number of cells	Absorbance					
	#1	#2	#3	#4	mean	SD
5,000	0.05	0.044	0.052	0.047	0.048	0.004
10,000	0.07	0.081	0.07	0.074	0.074	0.005
20,000	0.144	0.131	0.159	0.166	0.150	0.016
40,000	0.282	0.276	0.283	0.302	0.286	0.011
80,000	0.514	0.51	0.526	0.559	0.527	0.022

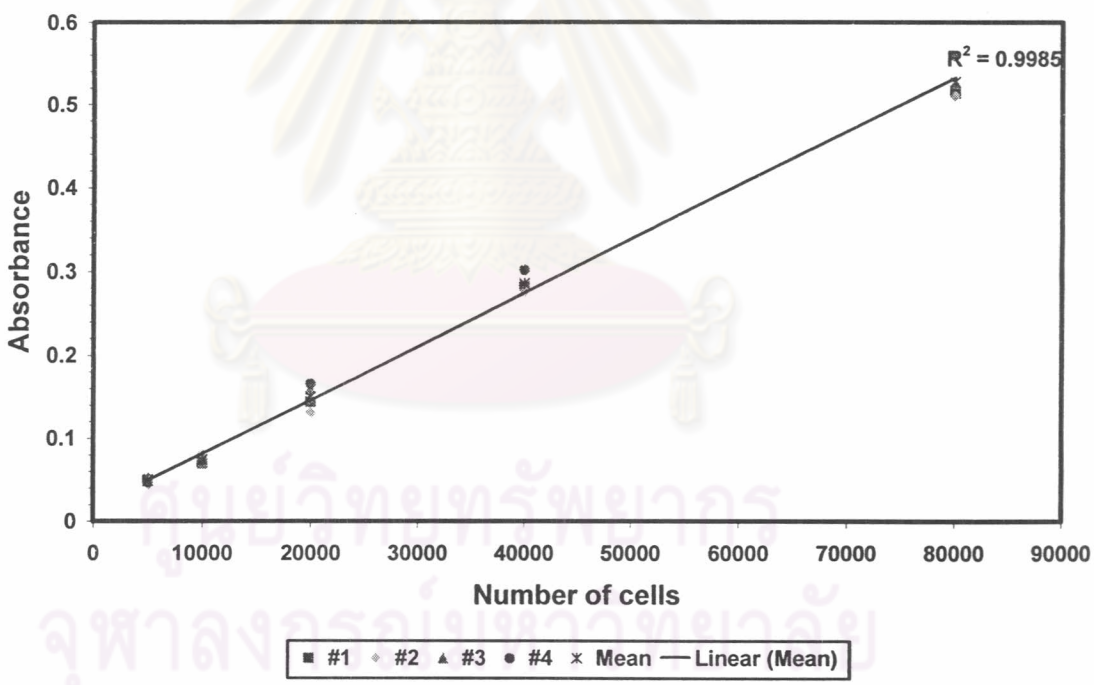

Figure B-1: MTT standard curve

APPENDIX C

Calculation of scaffold cost

Basis: 10×10×0.5 cm^3 scaffold size

Gelatin: 2,160 baht/kg

Collagen: 30,000 baht/kg of 0.6wt% solution

Scaffold size = 10×10×0.5 cm^3 ≈ 50 g of collagen/gelatin solution

Table C-1: Cost of gelatin and collagen in scaffold fabrication.

Solution concentration	Scaffold type	collagen used* (g)	collagen solution used** (g solution)	cost of collagen*** (baht)	cost of gelatin (baht)	saving cost (baht)
0.4wt%	C100	0.2	33.00	990	0.00	0
	CG30/70	0.06	9.90	297	0.30	693
	CG20/80	0.04	6.60	198	0.35	792
	CG10/90	0.02	3.30	99	0.39	891
	A	0.2	-	-	0.43	-
0.6wt%	C100	0.3	49.50	1485	0.00	0
	CG30/70	0.09	14.85	446	0.45	1040
	CG20/80	0.06	9.90	297	0.52	1188
	CG10/90	0.03	4.95	149	0.58	1337
	A	0.3	-	-	0.65	-

Example: 0.4C100

* collagen used = (0.4wt%)×50 g of solution = 0.2 g collagen = 200 mg collagen

** collagen solution used = (200 mg collagen) /(6.06 mg collagen/g collagen solution) = 33 g collagen solution

*** cost of collagen = ((33 g collagen solution)×(30000 baht))/1000 g collagen solution = 990 baht

VITAE

Miss Juthamas Ratanavaraporn was born in Bangkok, Thailand on January 16, 1982. She finished the high school education in 1999 from Horwang school. In 2003, she received her Bachelor Degree of Engineering with a major of Chemical Engineering from Faculty of Engineering, Chulalongkorn University. After the graduation, she pursued her graduate study to a Master of Engineering (chemical engineering), the Faculty of Engineering, Chulalongkorn University.

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