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APPENDIXS

APPENDIX I

DSC THERMOGRAM

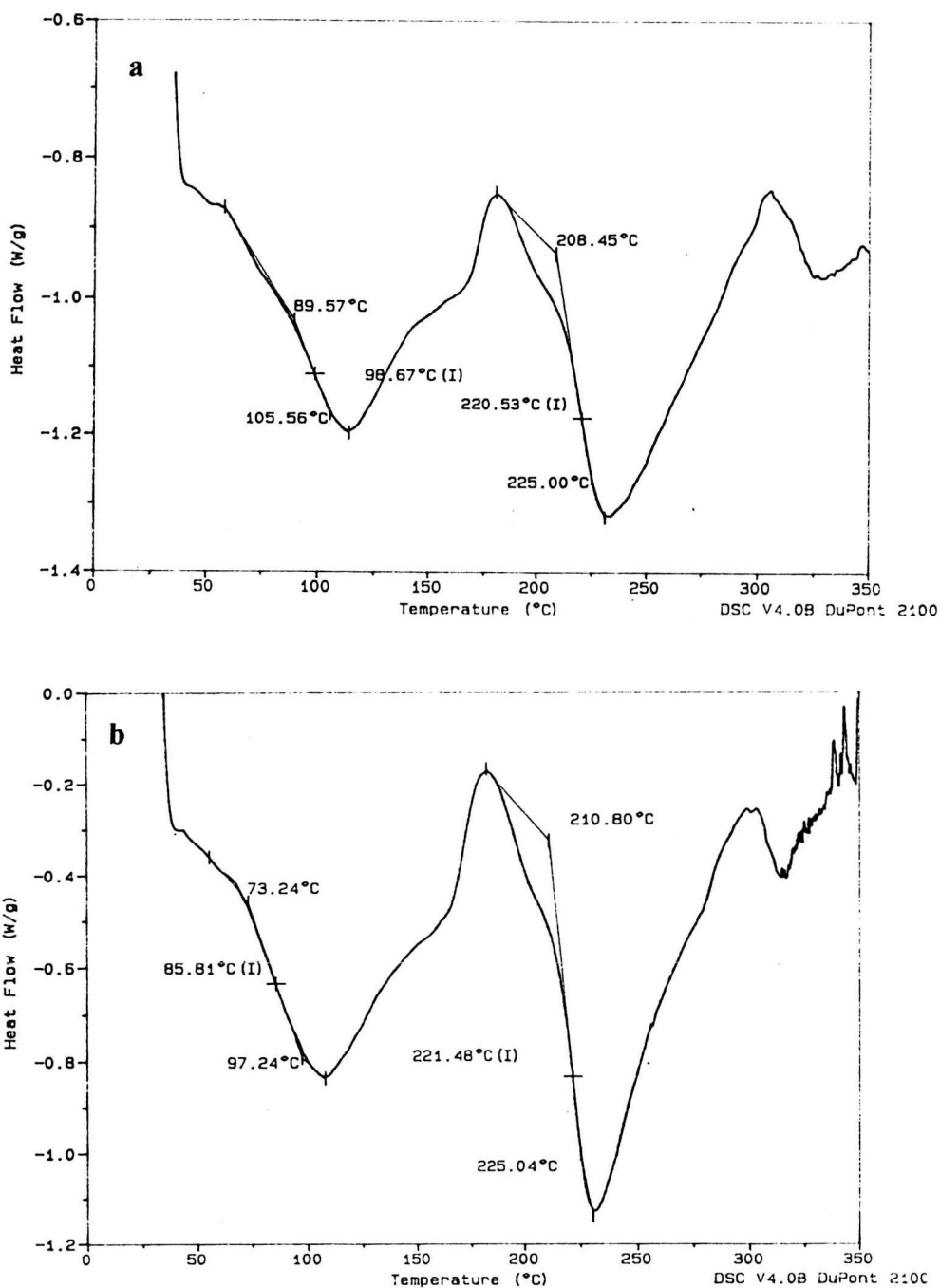


Figure A-1.1 DSC thermograms of different acrylamide/methacrylic acid ratios,
(a) 100/0, (b) 97.5/2.5% W/W

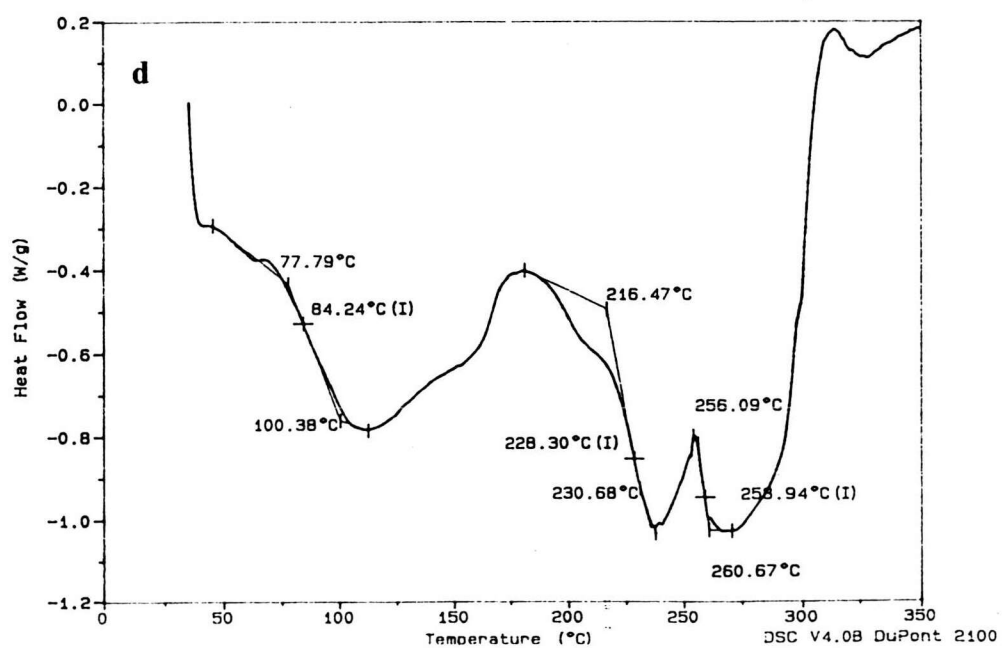
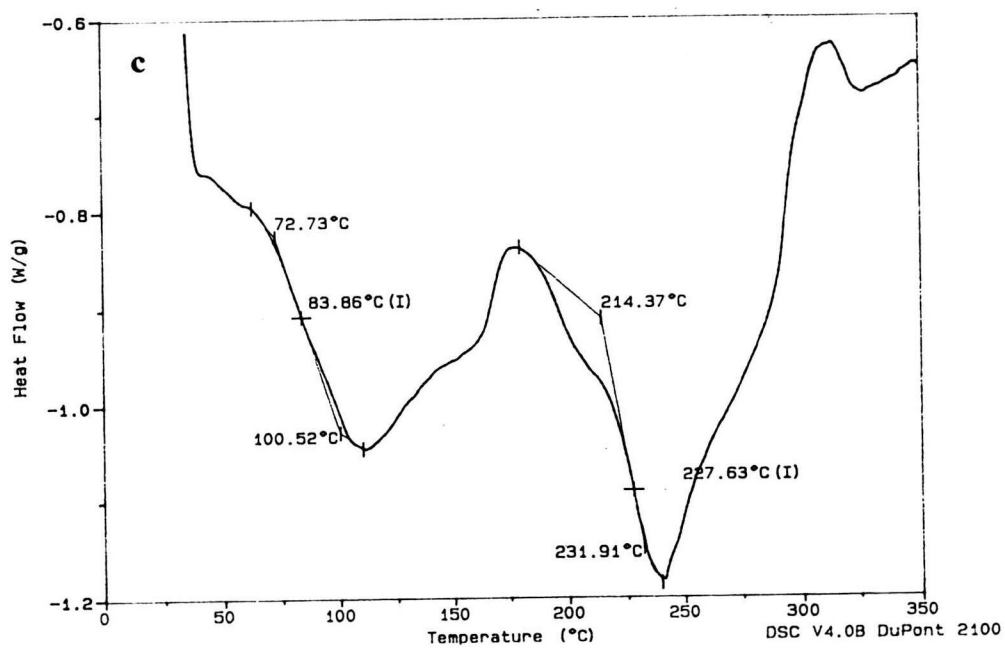


Figure A-1.1 (continued) DSC thermograms of different acrylamide/methacrylic acid ratios, (c) 95/5, (d) 90/10% W/W

APPENDIX II

ACRYLAMIDE CALIBRATION CURVE AND HPLC CHROMATOGRAM

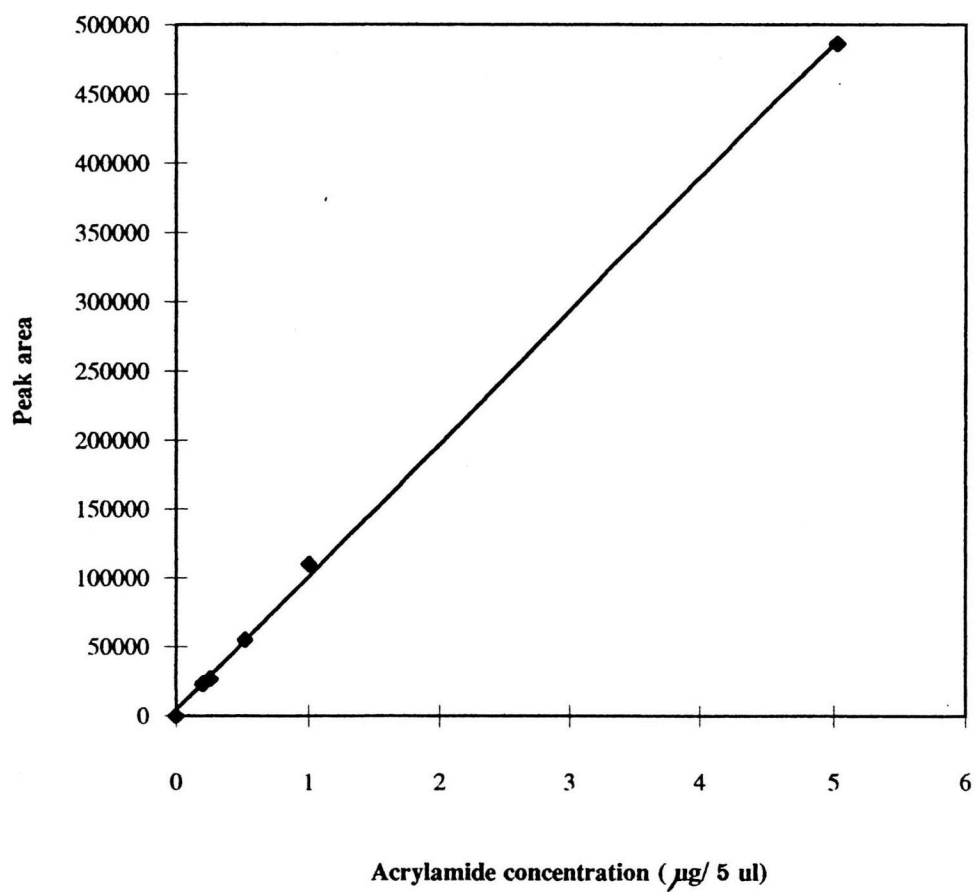
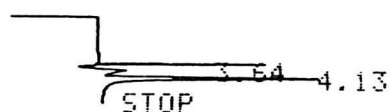
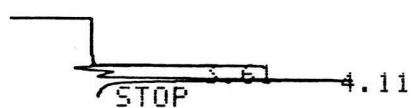


Figure A-2.1 Acrylamide calibration curve



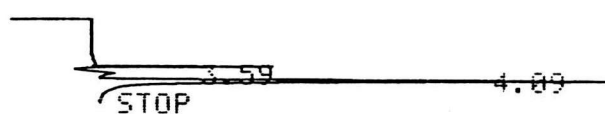
a

#	NAME	TIME	CONC	MK	AREA
0		3.64	11.8205		3085
0		4.13	88.1794	V	23017
	TOTAL		99.9999		26102



b

#	NAME	TIME	CONC	MK	AREA
0		3.61	5.8503		1663
0		4.11	94.1496	V	26772
	TOTAL		99.9999		28435



c

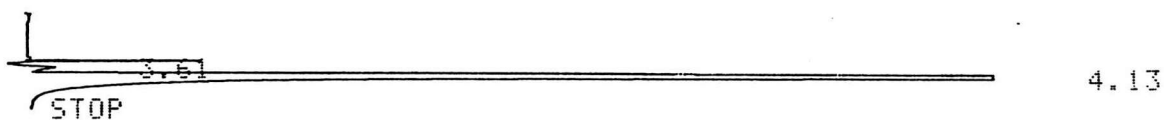
#	NAME	TIME	CONC	MK	AREA
0		3.59	1.912		1073
0		4.09	98.0879		55076
	TOTAL		99.9999		56149

Figure A-2.2 The HPLC chromatogram of the standard acrylamide

(a) $0.20 \mu\text{g}/\text{cm}^3$, (b) $0.25 \mu\text{g}/\text{cm}^3$, (c) $0.50 \mu\text{g}/\text{cm}^3$,



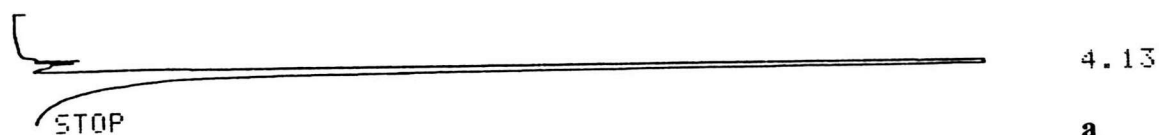
#	NAME	TIME	CONC	MK	AREA
0		3.62	1.4865		1656
0		4.1	98.5134	V	109790
	TOTAL		99.9999		111447



#	NAME	TIME	CONC	MK	AREA
0		3.61	1.3991		6897
0		4.13	98.6008	V	486047
	TOTAL		99.9999		492944

Figure A-2.2 (continued) The HPLC chromatogram of the standard acrylamide

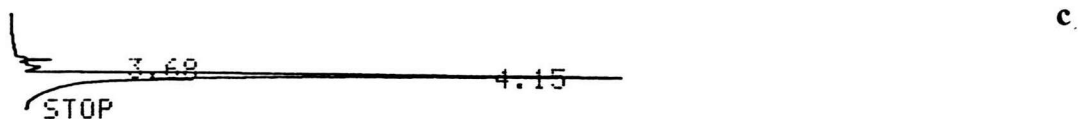
(d) $1.0 \mu\text{g}/\text{cm}^3$, (e) $5.0 \mu\text{g}/\text{cm}^3$



#	NAME	TIME	CONC	MK	AREA
0		4.13	99.9999		454804
	TOTAL		99.9999		454804



#	NAME	TIME	CONC	MK	AREA
0		3.66	2.6161		3012
0		4.12	97.3838	V	112149
	TOTAL		99.9999		115161



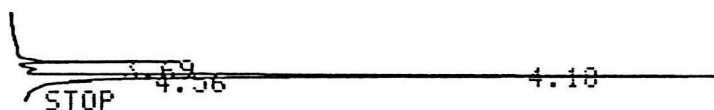
#	NAME	TIME	CONC	MK	AREA
0		3.68	1.6934		1765
0		4.15	98.3065		102516
	TOTAL		100		104282

Figure A-2.3 The HPLC chromatogram of the residual acrylamide at any interval time (a) 5 min, (b) 10 min, (c) 15 min,

d

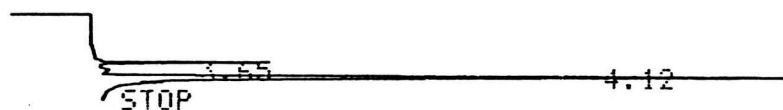


#	NAME	TIME	CONC	MK	AREA
0		3.65	2.0094		1619
0		4.13	88.8328	V	71580
0		4.5	9.1577	V	7379
	TOTAL		99.9999		80579



e

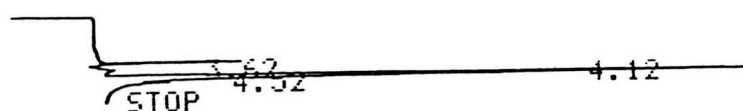
#	NAME	TIME	CONC	MK	AREA
0		3.69	1.8479		1468
0		4.18	96.7012	V	76824
0		4.56	1.4508	T	1152
	TOTAL		100.		79445



f

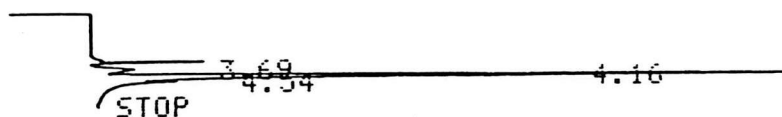
#	NAME	TIME	CONC	MK	AREA
0		3.65	1.3142		998
0		4.12	98.6857	V	74990
	TOTAL		99.9999		75989

Figure A-2.3 (continued) The HPLC chromatogram of the residual acrylamide at any interval time (d) 20 min, (e) 25 min, (f) 30 min



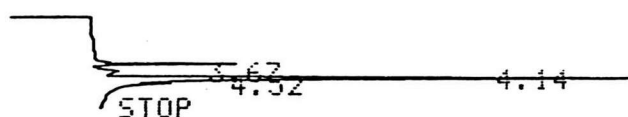
g

#	NAME	TIME	CONC	MK	AREA
0		3.62	1.6733		1200
0		4.12	96.7637	V	69396
0		4.52	1.5629	T	1120
TOTAL			99.9999		71717



h

#	NAME	TIME	CONC	MK	AREA
0		3.69	6.4116		5356
0		4.16	82.651	V	69042
0		4.54	10.9372	V	9136
TOTAL			99.9999		83535



i

#	NAME	TIME	CONC	MK	AREA
0		3.67	4.0959		2596
0		4.14	84.9583	V	53864
0		4.52	10.9456	V	6939
TOTAL			99.9999		63401



j

#	NAME	TIME	CONC	MK	AREA
0		3.66	4.4955		3470
0		4.15	85.0495	V	65660
0		4.53	10.4549	V	8071
TOTAL			99.9999		77202

Figure A-2.3 (continued) The HPLC chromatogram of the residual acrylamide at any interval time (g) 45 min, (h) 60 min, (i) 90 min, (j) 120 min

APPENDIX III

TYROSINE CALIBRATION CURVE

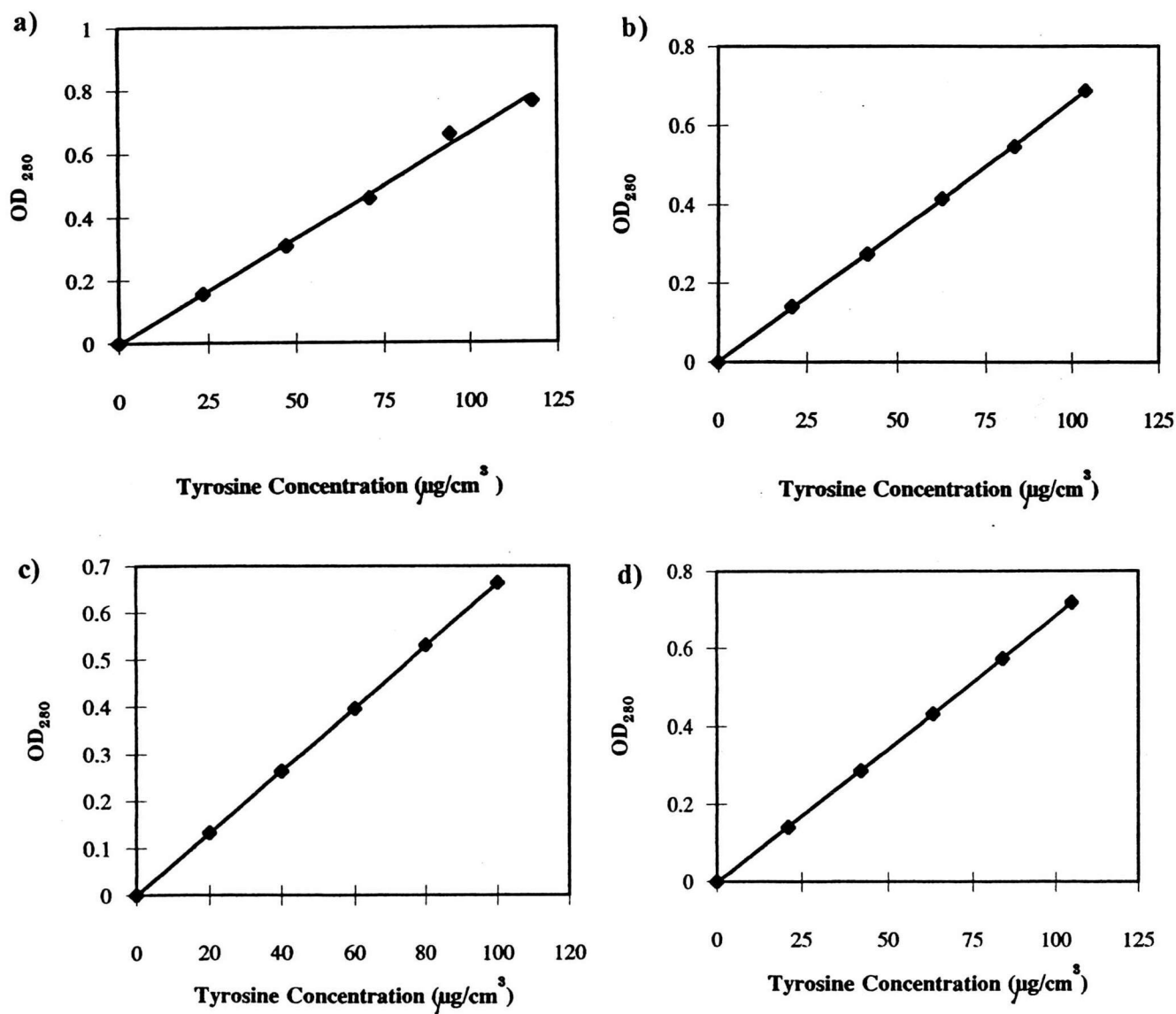


Figure A-3.1 Calibration curve of L-tyrosine in different buffers at 280 nm

(a, b) In Phosphate buffer solutions of pH 7.5 and 8.0

(c, d) In Tris-buffer solutions of pH 8.5 and 9.0

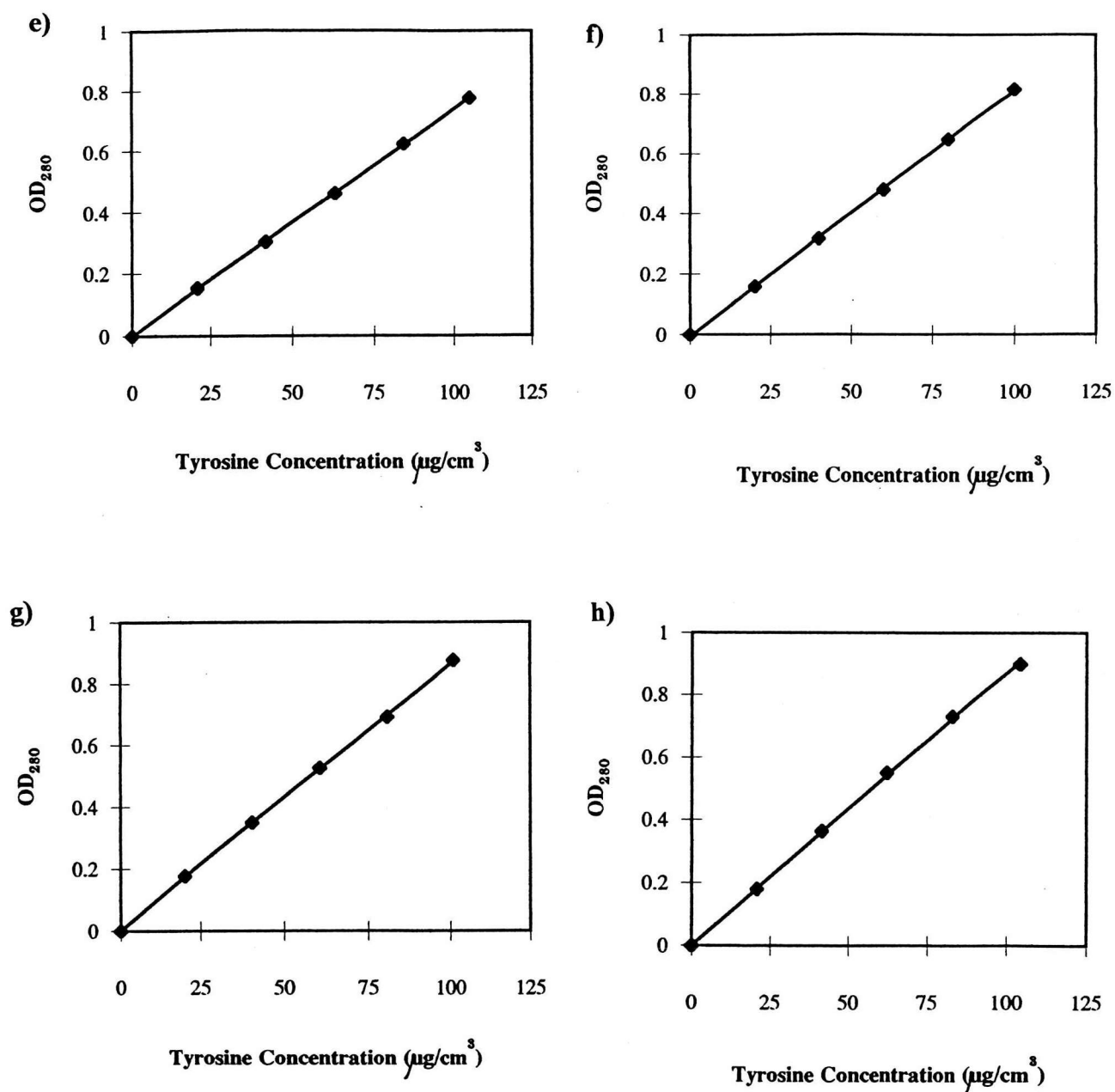


Figure A-3.1 (continued) Calibration curve of L-tyrosine in different buffers

at 280 nm (e, f, g) In carbonate-bicarbonate buffer

solutions of pH 9.5, 10.0, and 10.5, (h) In carbonate

buffer solution of pH 11.0

VITA

Miss Areerat Nganbunsri was born on September, 7, 1969. She graduated Bachelor of Science Degree with second class honor from Narasuan University, Phitsanuloke in 1992. She continued to study in the Multidisciplinary Program of Petrochemical and Polymer Science, concentrated in Polymer Science Program, Chulalongkorn University in 1994.