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APPENDIX

EXPERIMENTAL DATA

Table 1. Experimental Data on ELM Extration of 0.006 M Phenylalamine (Phe) Solution.

	Concentration of Phe in the Feed Phase (M)		
Time (min.)	pH 2	pH 3	pH 5
1	$5.25*10^{-3}$	$4.75*10^{-3}$	$4.15*10^{-3}$
2	$5.05*10^{-3}$	$4.13*10^{-3}$	$3.75*10^{-3}$
4	$4.40*10^{-3}$	$3.47*10^{-3}$	$3.25*10^{-3}$
8	$4.10*10^{-3}$	$0.30*10^{-3}$	$2.90*10^{-3}$
15	$3.75*10^{-3}$	$0.28*10^{-3}$	$2.60*10^{-3}$
30	$3.25*10^{-3}$	$0.23*10^{-3}$	$2.15*10^{-3}$

Table 2. Experimental Data on ELM Extration of 0.006 M Tryptophan (Trp) Solution.

	Concentration of Trp in the Feed Phase (M)		
Time (min.)	pH 2	pH 3	pH 5
1	$5.00*10^{-3}$	$3.80*10^{-3}$	$2.75*10^{-3}$
2	$4.65*10^{-3}$	$3.35*10^{-3}$	$2.55*10^{-3}$
4	$3.95*10^{-3}$	$2.75*10^{-3}$	$2.05*10^{-3}$
8	$3.40*10^{-3}$	$2.30*10^{-3}$	$1.80*10^{-3}$
15	$2.80*10^{-3}$	$2.10*10^{-3}$	$1.65*10^{-3}$
30	$2.70*10^{-3}$	$1.95*10^{-3}$	$1.50*10^{-3}$

Table 2. Experimental Data on ELM Extration of 0.006 M Tryptophan (Trp) Solution.

	Concentration of Trp in the Feed Phase (M)		
Time (min.)	pH 2	pH 3	pH 5
1	$5.00*10^{-3}$	$3.80*10^{-3}$	$2.75*10^{-3}$
2	$4.65*10^{-3}$	$3.35*10^{-3}$	$2.55*10^{-3}$
4	$3.95*10^{-3}$	$2.75*10^{-3}$	$2.05*10^{-3}$
8	$3.40*10^{-3}$	$2.30*10^{-3}$	$1.80*10^{-3}$
15	$2.80*10^{-3}$	$2.10*10^{-3}$	$1.65*10^{-3}$
30	$2.70*10^{-3}$	$1.95*10^{-3}$	$1.50*10^{-3}$

Table 3. Experimental Data on ELM Extration of 0.001 M Tryptophan (Trp) Solution.

	Concentration of Trp in the Feed Phase (M)		
Time (min.)	pH 2	pH 3	pH 5
1	$9.00*10^{-4}$	$6.40*10^{-4}$	$6.00*10^{-4}$
2	$8.30*10^{-4}$	$5.90*10^{-4}$	$4.80*10^{-4}$
4	$7.30*10^{-4}$	$5.00*10^{-4}$	$3.90*10^{-4}$
8	$6.80*10^{-4}$	$4.20*10^{-4}$	$3.60*10^{-4}$
15	$5.80*10^{-4}$	$3.60*10^{-4}$	$3.00*10^{-4}$
30	$5.20*10^{-4}$	$2.60*10^{-4}$	$2.60*10^{-4}$

Table 4. Experimental Data on ELM Extration of 0.006 M Phe + 0.006 M Trp Solution.

Time (min.)	Conc. of amino acid in the Feed Phase (M)					
	pH 2		pH 3		pH 5	
	Phe	Trp	Phe	Trp	Phe	Trp
1	$5.60*10^{-3}$	$5.60*10^{-3}$	$3.68*10^{-3}$	$3.48*10^{-3}$	$3.70*10^{-3}$	$3.80*10^{-3}$
2	$5.40*10^{-3}$	$5.40*10^{-3}$	$3.48*10^{-3}$	$3.20*10^{-3}$	$3.33*10^{-3}$	$3.33*10^{-3}$
4	$4.90*10^{-3}$	$4.60*10^{-3}$	$3.28*10^{-3}$	$3.07*10^{-3}$	$3.16*10^{-3}$	$2.80*10^{-3}$
8	$4.40*10^{-3}$	$3.90*10^{-3}$	$2.85*10^{-3}$	$2.52*10^{-3}$	$2.59*10^{-3}$	$2.47*10^{-3}$
15	$4.20*10^{-3}$	$3.75*10^{-3}$	$2.70*10^{-3}$	$2.46*10^{-3}$	$2.28*10^{-3}$	$2.17*10^{-3}$
30	$3.90*10^{-3}$	$3.40*10^{-3}$	$2.64*10^{-3}$	$2.22*10^{-3}$	$2.04*10^{-3}$	$1.99*10^{-3}$

Table 5. Experimental Data on ELM Extration of 0.006 M Phe + 0.001 M Trp Solution.

Time (min.)	Conc. of amino acid in the Feed Phase (M)					
	pH 2		pH 3		pH 5	
	Phe	Trp	Phe	Trp	Phe	Trp
1	$5.25*10^{-3}$	$8.75*10^{-4}$	$4.95*10^{-3}$	$8.00*10^{-4}$	$3.90*10^{-3}$	$7.00*10^{-4}$
2	$4.95*10^{-3}$	$8.13*10^{-4}$	$4.05*10^{-3}$	$6.37*10^{-4}$	$3.60*10^{-3}$	$6.00*10^{-4}$
4	$4.44*10^{-3}$	$7.35*10^{-4}$	$3.98*10^{-3}$	$6.13*10^{-4}$	$3.00*10^{-3}$	$5.60*10^{-4}$
8	$3.96*10^{-3}$	$6.35*10^{-4}$	$3.30*10^{-3}$	$4.75*10^{-4}$	$2.70*10^{-3}$	$4.50*10^{-4}$
15	$3.75*10^{-3}$	$5.50*10^{-4}$	$3.00*10^{-3}$	$4.00*10^{-4}$	$2.20*10^{-3}$	$3.70*10^{-4}$
30	$3.39*10^{-3}$	$5.50*10^{-4}$	$2.55*10^{-3}$	$3.75*10^{-4}$	$1.90*10^{-3}$	$3.00*10^{-4}$

VITA

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