

## ➔ 70-MIN AMINO ACID ANALYSIS OF PHYSIOLOGICAL SAMPLES

Pickering Laboratories specializes in the manufacturing of cation-exchange columns and eluants for amino acid analysis. Post-column derivatization with Ninhydrin offers unmatched selectivity and reproducibility of the analysis for most challenging matrices.

Pinnacle PCX post-column derivatization system allows analysts to combine eluant gradient capabilities of modern HPLC instruments with column temperature gradients. We introduce new accelerated Amino Acids Analysis method for physiological samples that utilizes temperature and eluant gradients.

COLUMN OVEN PROGRAM		HPLC PROGRAM				
TIME	TEMP °C	TIME	1700-1125 %	Li365 %	Li375 %	RG003 %
0	34	0	100	0	0	0
6	34	10	100	0	0	0
17	65	19	40	60	0	0
25	70	32	0	100	0	0
70	70	43	0	100	0	0
71	34	43.1	0	0	100	0
		57	0	0	100	0
		57.1	0	0	70	30
		72	0	0	70	30
		72.1	100	0	0	0

## METHOD

### Analytical Conditions

**Column:** High-efficiency Lithium cation-exchange column, 4.6 x 75 mm, 5 µm  
Catalog number 0354675T

**Flow Rate:** 0.55 mL/min

**Mobile Phase:** 1700-1125, Li365, Li375, RG003

### Post-Column Conditions

**Post-Column System:** Pinnacle PCX

**Reactor Volume:** 0.5 mL

**Temperature:** 130 °C

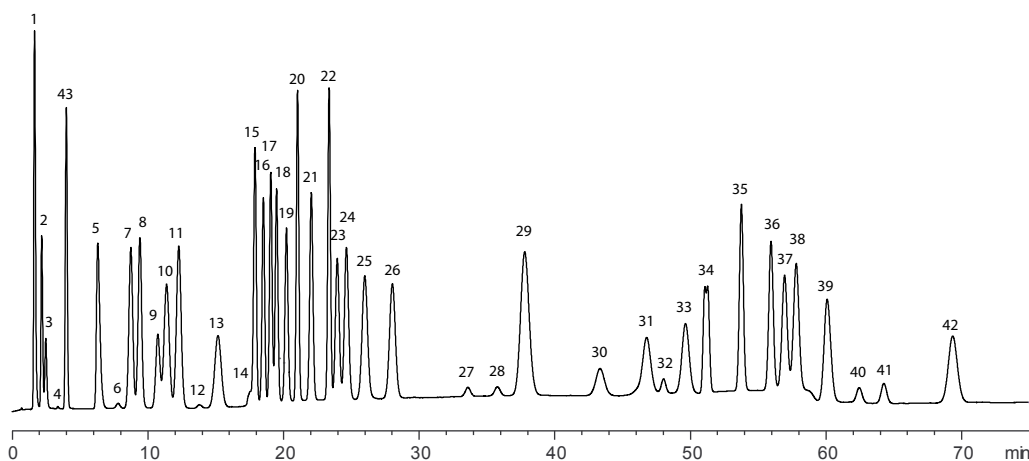
**Reagent:** Trione

**Flow Rate:** 0.5 mL/min

**Detection:** UV/VIS 570 nm for primary amino acids  
440 nm for secondary amino acids

**Runtime:** 72 min

**Equilibration Time:** 15 min



1 Phosphoserine	10 Glutamic acid	19 Valine	28 β-Amino-i-butyric acid	37 1-Methylhistidine
2 Taurine	11 Glutamine	20 Cystine	29 Homocystine	38 Histidine
3 Phosphoethanolamine	12 Sarcosine	21 Methionine	30 γ-Aminobutyric acid	39 3-Methylhistidine
4 Urea	13 α-Amino adipic acid	22 Cystathionine	31 Tryptophan	40 Anserine
5 Aspartic acid	14 Proline	23 Isoleucine	32 Ethanolamine	41 Carnosine
6 Hydroxyproline	15 Glycine	24 Leucine	33 Ammonia	42 Arginine
7 Threonine	16 Alanine	25 Tyrosine	34 Hydroxylysines	43 Glucosaminic Acid*
8 Serine	17 Citrulline	26 Phenylalanine	35 Ornithine	
9 Asparagine	18 α-Amino-n-butyric acid	27 β-Alanine	36 Lysine	

\*Internal Standard