



Amino Acid Analysis

Pickering Laboratories specializes in manufacturing of cation-exchange columns and eluants for amino acid analysis. No other techniques have been shown to match the reproducibility and sensitivity of this post-column methodology. Advantages of this method, such as absence of matrix interferences, are especially important in analysis of native samples.

Pickering provides several options for the laboratory to run amino acids. Depending on the type of sample, the amount and types of amino acids that are required to be analyzed, and the type of detection, the customer has the option to choose between Lithium or Sodium separation chemistry, and between our patented TRIONE® ninhydrin or our high sensitivity *o*-phthalaldehyde reagents.

COLUMNS

Lithium columns and buffer systems have high selectivity and are perfect for physiological fluids and food analysis. Lithium columns are used for the complex samples such as blood plasma, plant extracts, fermentation broth or urine where metabolic intermediates, alkaloids, secondary metabolites, drugs, or waste products may be present.

Sodium columns and buffer systems are designed for amino acid analysis of hydrolyzed samples from culture media, recombinant and synthetic peptides, feeds, and many others.

ELUANTS

Pickering Laboratories eluants are manufactured under strictly controlled conditions to guarantee purity, stability and consistency for a reproducible high quality chromatogram. This quality standard guarantees the resulting chromatogram will be free of any noise and interference.

Matrix Independent Analysis of Free Amino Acids

The Lithium and Sodium eluants are not sensitive to oxidation and do not need refrigeration, either in storage or use. Degassing is not required.

However, they should be protected from air to prevent contamination. Ambient air actually contains amines and amino acids that will dissolve in the low-pH eluants and will appear in the chromatograms.

REAGENTS

The amino acids can be detected using either a visible or a fluorescent detection method. Pickering's patented TRIONE® ninhydrin reagent gives you the convenience of ready-made reagent and simultaneous detection of both primary and secondary amino acids. Pickering's Chromatographic™ Grade *o*-phthalaldehyde provides excellent sensitivity for primary amines.

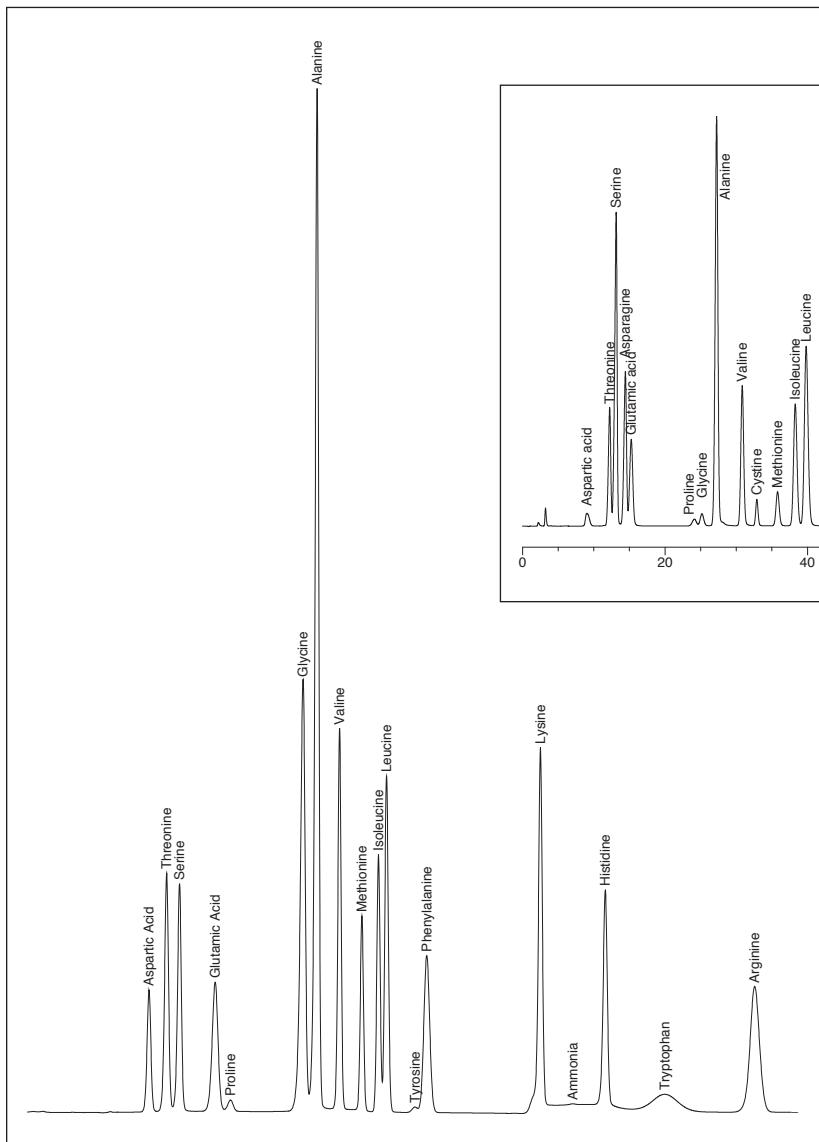
SEPARATION PROFILES

There are many customized programs available for each of the Pickering columns. The programs are either shortened to separate a few key amino acids, or expanded to show separation of metabolites, alkaloids, or any unusual amino acids which may be present.

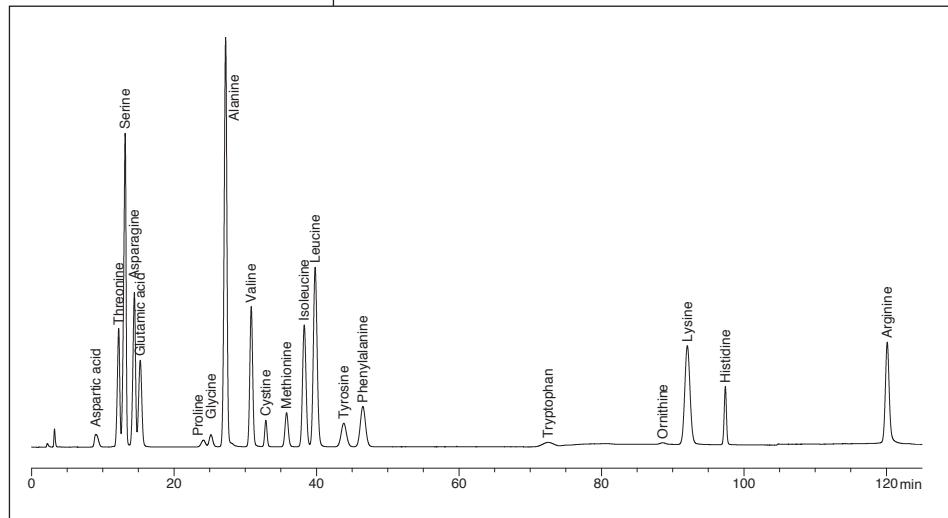
Custom methods are available to suit your specific requirements. Please contact Pickering Laboratories, Inc. if you would like to discuss a custom program.

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IV Solution



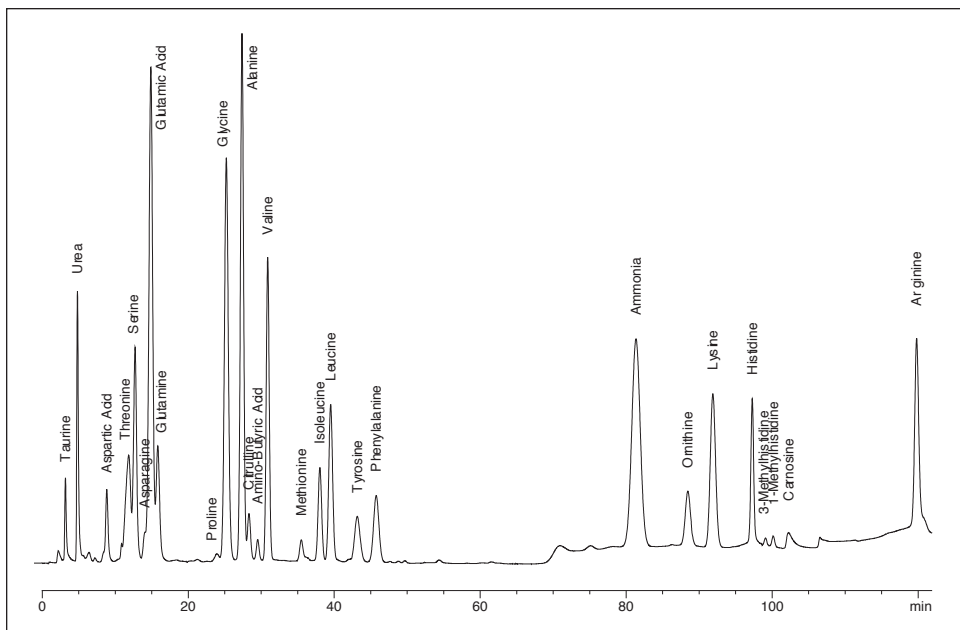
Cell Media



Separation of amino acids in cell culture media using Lithium column 0354100A and Lithium elution buffers

Separation of amino acids in intra-venous solution using Sodium column 1154150 and Sodium elution buffers

Human Plasma



Separation of amino acids in human plasma using Lithium column 0354100A and Lithium elution buffers