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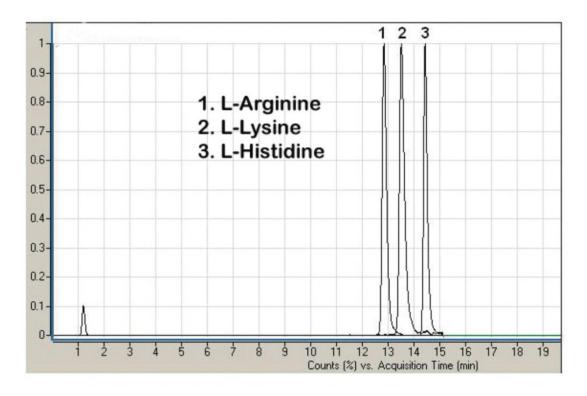
Arginine, Lysine and Histidine Analyzed with LCMS – AppNote

Basic Amino Acids In Synthetic or Human Urine Can be Analyzed

A "Cleanup" procedure for the isolation of the Basic Amino Acids in Urine was developed in this Method and no derivatization procedure was used. Three Basic Amino Acids were Separated using an inverse gradient or Aqueous Normal Phase (ANP) Chromatography.

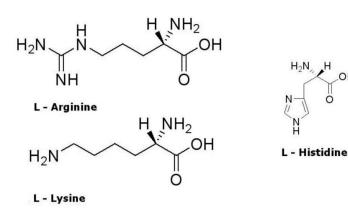
The advantages of this Method are: (1) Isolation and stable recovery (>95%) of the desired Basic Amino Acids, (2) Sensitivity of detection (low pico mole range), (3) Complete resolution of non-derivatized Amino Acids and (4) Low amount of Sample required for Analysis.

The "cleanup" procedure used proved additionally advantageous by eliminating the use of C-18 Solid Phase Extraction Columns normally required by techniques described in the Literature.



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Peaks:

1. L – Arginine 175 m/z RT = 12.83 minutes

2. L – Lysine 147 m/z RT = 13.49 minutes

3. L - Histidine 156 m/z 14.42 minutes

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å

Catalog No.: 70000-15P-2

Dimensions: 2.1 x 150mm

Mobile Phase:

A: DI Water / 0.1% Formic Acid

B: 95% Acetonitrile / 0.1% Formic Acid / 0.005% Trifluoroacetic Acid (TFA)

Gradient:

Time (minutes)	%B
0	100
5	100
6	95
7	95
9	85
10	85
12	70
12.1	100

Post Time: 5 minutes

Flow rate: 0.4mL / minute

Detection: ESI - pos - Agilent 6210 MSD TOF Mass Spectrometer

Sample Preparation: 400μL of Acetonitrile was added to 100μL of synthetic or human urine and the Sample was Printed from the Chrom Resource Center centrifuged (3000g). Next 20μL of the supernatant was mixed with 10μL of the 50:50 Acetonitrile / DI Water / 0.1% Copyright 2024, All Rights Apply Formic Acid.

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Notes: The level of amino acids in biological fluids can be correlated with several heurological (Aizheined's Disease, Ischemic Stroke and others) and Metabolic disorders (Argininemia, Phenyloketohu732, Maple 89) Puper for the Disease and Email: customers@mtc-usa.com



and others).



Attachment

No 60 Arginine, Lysine and Histidine Analyzed with LCMS pdf 0.3 Mb Download File

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