# Histamine Analyzed with HPLC – AppNote

LCMS Compatible Method for the Separation of Histamine

As a Heterocyclic primary amine, Histamine is a very polar compound and is difficult to retain on a Reversed Phase Column. This Method provides adequate Retention and a symmetrical Peak shape for this challenging compound without the use of ion pairing reagents in the Mobile Phase. The Method can be readily transferred to LCMS since the eluents used are MS compatible.

Overlay of 5 runs
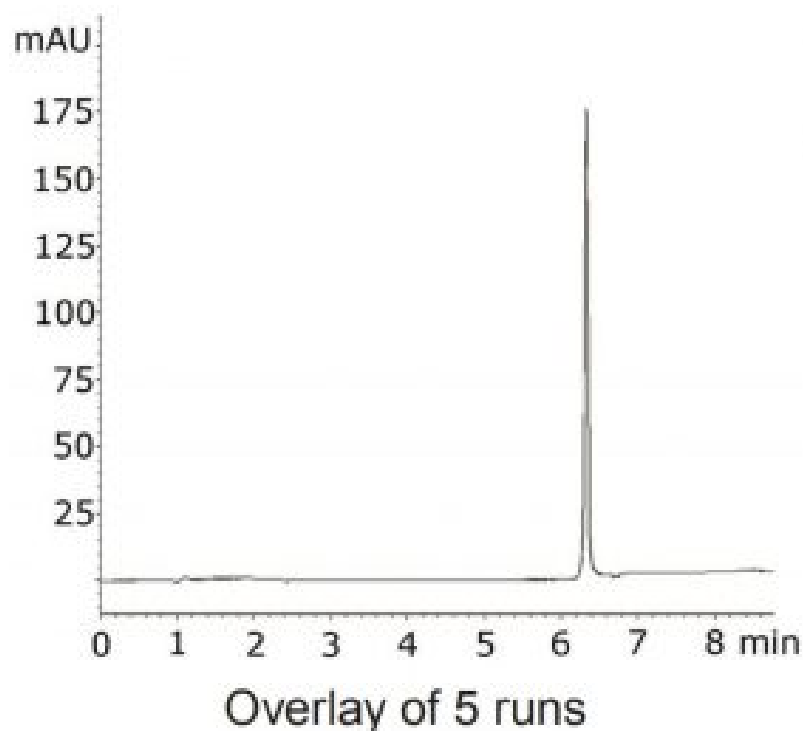
Chromatograms shown were blank subtracted

Peak:

Histamine
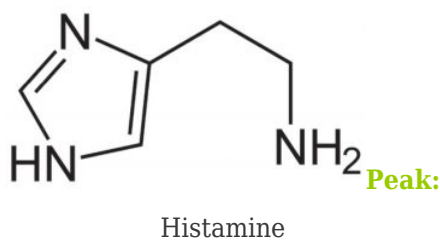
Method Conditions

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

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75mm

Mobile Phase:

  A: DI Water / 0.1% Formic Acid

  B: Acetonitrile / 0.1% Formic Acid

Gradient:

Time *(minutes)*	%B
0	80
5	30
7	30
8	80

Post Time: 5 minutes

Injection vol.: 1µL

Flow rate: 0.5mL / minute

Detection: UV @ 220nm

Sample Preparation: Stock Solution: 1mg / mL in 80:20 DI Water / Methanol diluent. The solution was filtered through a 0.45µm Nylon Syringe Filter, AQ™ Brand (MicroSolv Tech Corp.).

Working Solution: Stock solution was diluted 1:10 with 50:50 Solvent A / Solvent B mixture.

t$_0$: 0.9 minutes

Note: *Histamine is known for its role in allergic response. Release of Histamine plays a role in inflammation, gastric acid secretion, microcirculation and neurotransmission in mammalian brains. Measurement of Histamine levels in body fluids has been used in clinical analysis in various diseases such as Pre-eclampsia, Asthma, Cancer, Mastocytosis and in the progression of Periodontitis. Histamine is also present in many foods and beverages, especially red wine and spoiled food. Ingesting Histamine can cause migraines, sweating and nausea.*

COGENT
HPLC Columns™

Attachment

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