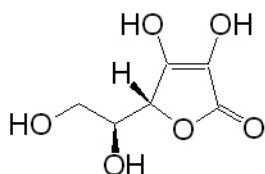
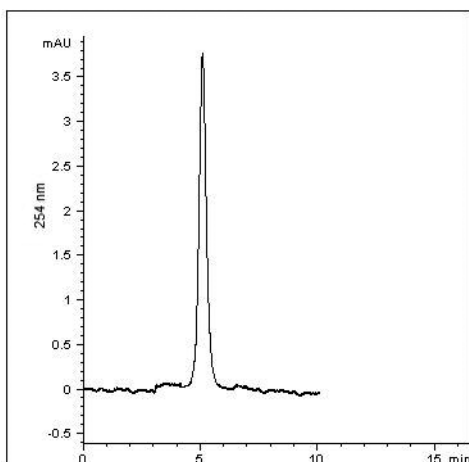


Analysis of Ascorbic Acid (AA) Fast and Easy Methodology



Ascorbic acid



Notes:

The function of ascorbic acid in living organisms is very complex. AA vitamin has a protective role against the harmful effects of free radicals, and its presence is necessary for the function of numerous enzymes. Ascorbic acid is a powerful reducing compound and the ratio of ascorbic acid and dehydroascorbic acid could be a biomarker of oxidative-reductive processes. It was reported in the literature¹ that in dementia patients, ascorbic acid and dehydroascorbic acid levels are different than in healthy people. In the plasma of dementia patients, very low ascorbic acid levels were found (ca. 30% of the healthy control). Ascorbic acid level is an important factor to determine the protection of the central nervous system against free radicals..

Method Conditions

Column: Cogent Diamond Hydride™ 4µm, 100Å.
Catalog No.: 70000-7.5P
Dimensions: 4.6x75mm
Solvents: A: DI water/10 mM amm acetate
 B: 90% acetonitrile/10% DI water/
 10 mM amm acetate.
Gradient:

Time (min)	%B
2 min	hold 100% B
5.0 min	to 50% B
10 min	hold 50% B
10.1 min	to 100% B

Post Tme: 5 min.
Flow Rate: 0.5 mL/min.
Injection: 5 microL
Samples: Ascorbic Acid (AA) (0.2 mg in DI water)
Detection: UV 254 nm

Discussion

A robust and rapid HPLC–UV detection method was developed for the accurate determination of ascorbic acid (AA). This very fast method can be used for very sensitive analysis of AA in human plasma. It is known that ascorbic acid is not stable in plasma samples and therefore it is recommended that the samples for analysis of this vitamin be kept at -70°C or -196°C.

Also, use of this column can be used in conjunction with LC-MS for analysis of AA in cerebrospinal fluid.

1. Ascorbic acid in cerebrospinal fluid — a possible protection against free radicals in the brain Archives of Gerontology and Geriatrics, Volume 21, Issue 1, July-August 1995, Pages 43-48 Judit Barabás, Erzsébet Nagy, István Degrell

For more information visit www.MTC-USA.com

Cat. No.	Description
70000-7.5P	Cogent Diamond Hydride™ HPLC Column, 100Å, 4µm, 4.6x75mm