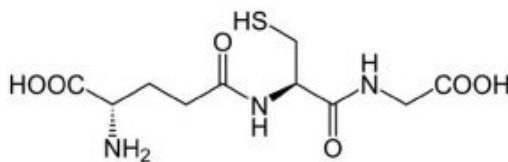
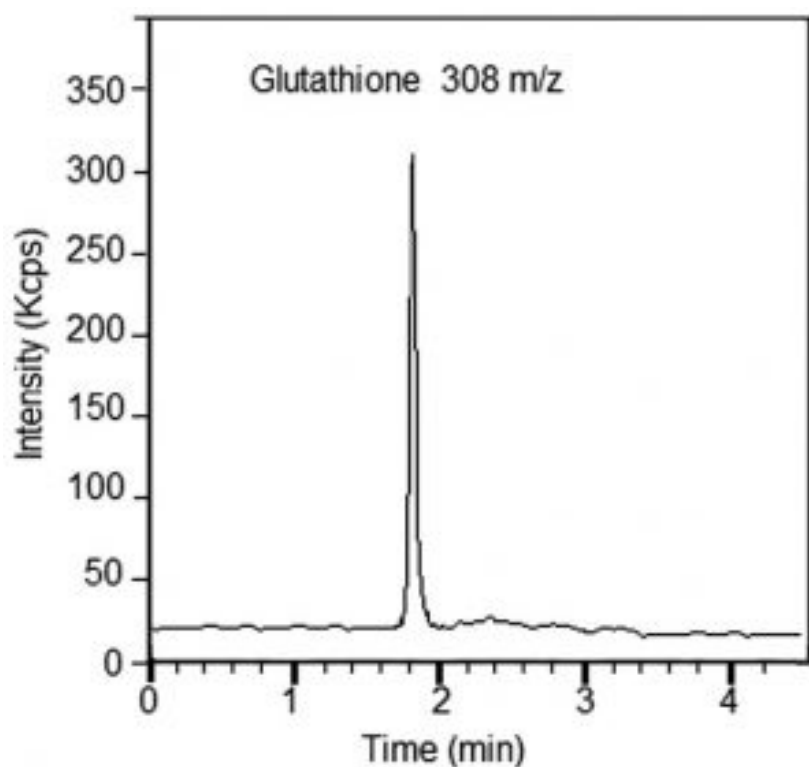


Glutathione (GSH) Analyzed by LCMS – AppNote

LCMS Method without Derivatization

The major benefit of this analysis method for Glutathione which uses the Cogent Diamond Hydride Column and MS detection is that it is performed without derivatization, unlike other LCMS approaches. A GSH signal of MS is stable after repeated analyses. The unique design of the ESI offers efficient supersoft ionization which helps to preserve the structure of the analyte.

This Method ensures low variability of the results. After validation, it could be applied to routine analysis of oxidative stress in clinical samples (blood or plasma).



Glutathione

Peak:

Glutathione 308 m/z

Method Conditions

Column: Cogent Diamond Hydride 2.0™, 2.2μm, 120Å

Catalog No.: 70200-05P-2

Dimensions: 2.1 x 50mm

Mobile Phase:

A: DI Water / 0.1% Formic Acid (v/v)

B: Acetonitrile / 0.1% Formic Acid (v/v)

Gradient:

Time (minutes)	%B
0	85
2	30
4	30
5	85

Post Time: 3 minutes

Flow rate: 0.3 mL/minute

Detection: ESI - POS - PerkinElmer Flexar SQ 300 Mass Spectrometer

Injection vol.: 1µL

Sample Preparation: 1 ppm of Glutathione in 50% Acetonitrile / 50% DI Water / 0.1% Formic Acid

t₀: 0.7 minutes

Note: Glutathione (GSH, Gamma-L-Glutamyl- L-Cysteinyl-Glycine) is a non-protein Thiol compound which plays an important role in protecting cells against oxidative stress. Lower levels of Glutathione were found in different diseases, like cardiovascular disease, cancers, and aging [3,3]. Under oxidative stress, GSH is converted into its oxidized form Glutathione Disulfide (GSSG). A lower level of GSH is an early indicator of disease risk.



Attachment

No 279 Glutathione pdf 0.2 Mb [Download File](#)

Printed from the Chrom Resource Center

MicroSolv Technology Corporation

9158 Industrial Blvd. NE, Leland, NC 28451

tel. (732) 380-8900, fax (910) 769-9435

Email: customers@mtc-usa.com

Website: www.mtc-usa.com

Date: 05-08-2024