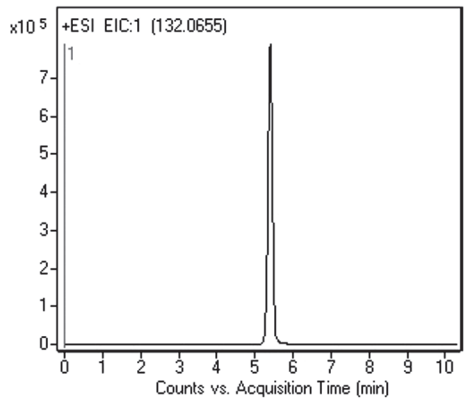
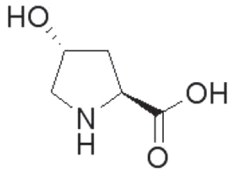
# *trans*-4-Hydroxy-L-Proline

## Rapid, high efficiency method by LC-MS




*Trans*-4-Hydroxy-L-proline

**Note:** Isomers of hydroxyproline have been found in nature. *Trans*-4-hydroxy-L-proline is the major component of collagen, gelatin, plant wall proteins, etc. It is a useful material for synthesis of pharmaceuticals such as angiotensin converting enzyme inhibitors and carbapenem antibiotics.

## Method Conditions

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

**Catalog No.:** 70000-05P-2

**Dimensions:** 2.1 x 50 mm

**Solvents:** A: 50% methanol / 50% DI $H_2O$ / 0.05% acetic acid
B: 97% acetonitrile / 3% DI $H_2O$ / 0.05% acetic acid

**Gradient:**

| time (min.) | %B |
|---|---|
| 0 | 95 |
| 10 | 30 |
| 11 | 30 |
| 12 | 95 |

**Post Time:** 5 min

**Injection vol.:** 1µL

**Flow rate:** 0.4 mL/min

**Detection:** ESI – POS - Agilent 6210 MSD TOF mass spectrometer

**Sample:** **Stock Solution:** 1 mg/mL in methanol diluent.
**Working Solution:** Stock aliquot was diluted using 50% solvent A and 50% solvent B mixture for the final concentration 0.5 mg/L. Before injection, solution was filtered using a 0.45 µm nylon filter (MicroSolv Tech Corp.).

**Peak:** *trans*-4-hydroxy-L-proline 132.0655 m/z $(M + H)^+$

## Discussion

This method is highly specific, efficient and fast for the analysis of *trans*-4-hydroxy-L-proline. Due to the high specificity of the detection, small volumes of the reaction mixture can be injected and the amount of the produced compound can be determined. No derivatization is required for the detection of this important compound.



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