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### Determination of total L-Ascorbic Acid by high performance liquid chromatography in human plasma

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#### Abstract:

The total vitamin C content in human plasma is widely accepted as an indicator of the tissue status of vitamin C. A liquid chromatography method with ultraviolet detector (264 nm) for measuring ascorbic acid in human plasma was developed. A C18 reversed-phase column and cetrimide as an ion-pairing agent was employed. Ascorbic acid (AA) was measured after reducing L-dehydroascorbic acid to L-ascorbic acid with dithiothreitol. The stability of the ascorbic acid in plasma, metaphosphoric acid and trichloroacetic acid was also evaluated. The analytical parameters, including linearity (1-60 µg/ml), accuracy (98.98%), repeatability (2.8%) and reproducibility (7.2%), showed that the method is reliable for measuring the total vitamin C content in plasma.

#### Keywords:

L-Ascorbic acid . Total vitamin C

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