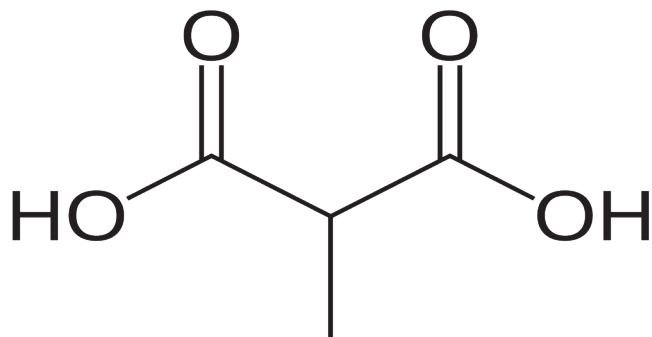


Methylmalonic Acid From Serum Or Plasma For GC/MS Analysis Using: 500 mg Clean-Up® QAX Extraction Column



UCT Part Numbers

CUQAX15Z
Clean-Up® Quaternary Amine
with Chloride Counter Ion
500 mg 10 mL

Procedure:

1. Prepare Sample

- Add 100 µL of internal standard D₃-MMA and 1 mL of acetonitrile to 1 mL of plasma or serum.
- Vortex for 20 sec.
- Centrifuge for 5 min at 2000 rpm.

2. Condition Clean Up® Extraction Column

- 1 x 3 mL CH₃OH.
- 1 x 3 mL D.I. H₂O.

3. Apply Sample

- Decant supernatant onto SPE column.

4. Wash Column

- 1 x 10 mL of D.I. H₂O.
- Dry with vacuum for 3 min.
- 1 x 5 mL of CH₃OH.
- Dry with vacuum for 3 min.
- 1 x 2 mL of MTBE*.
- Dry with vacuum for 3 min.

5. Elute Methylmalonic Acid

- 1 x 5 mL of 3% formic acid in MTBE, collect at 1 to 2 mL/min.

6. Dry Eluate

- Dry under a stream of nitrogen at < 35 °C.

7. Derivatize

- Reconstitute with 25 µL of MSTFA + 1% TMCS** and 25 µL ethyl acetate.
- Heat for 20 min at 60 °C.

8. Quantitate

- Inject 1 to 2 µL onto gas chromatograph.

* MTBE: methyl-tert-butyl ether

** Part # SMSTFA-1-1, 10, 25, 100



References:

[1] Compliments of Mark M. Kusmin and Gabor Kormaromy-Hiller ARUP LABORATORIES

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