

Supplementary data on method for analysis of α -Hydroxyglutaric acid (aHG)

Method based on article

Midttun et al (2016), PMID 27715010.

Material

α -Hydroxyglutaric acid (purity $\geq 98\%$) and α -Hydroxyglutaric acid- $^{13}\text{C}_5$ (purity $\geq 98\%$) was obtained from Sigma-Aldrich, St.Louis, MO 63103 USA or 89555 Steinheim Germany.

Instrumentation

Agilent 7010B GC/TQ and Agilent 8890 GC System.

Chromatography and detection

GC-MS/MS; positive-ion multiple reaction monitoring (MRM);
retention time = 4.01 min.

α -Hydroxyglutaric acid precursor ion = 189.0 m/z; product ion =
85.0 m/z.

α -Hydroxyglutaric acid- $^{13}\text{C}_5$ precursor ion = 193.0 m/z; product ion =
89.0 m/z.

Method performance

Linear range: 0.1 - 1000 $\mu\text{mol/L}$.

Linearity: r^2 : 0.996.

LOD (S/N >5): 0.1 $\mu\text{mol/L}$.

Within-day CV: 4-6 %.

Between-day CV: 5-7 %.