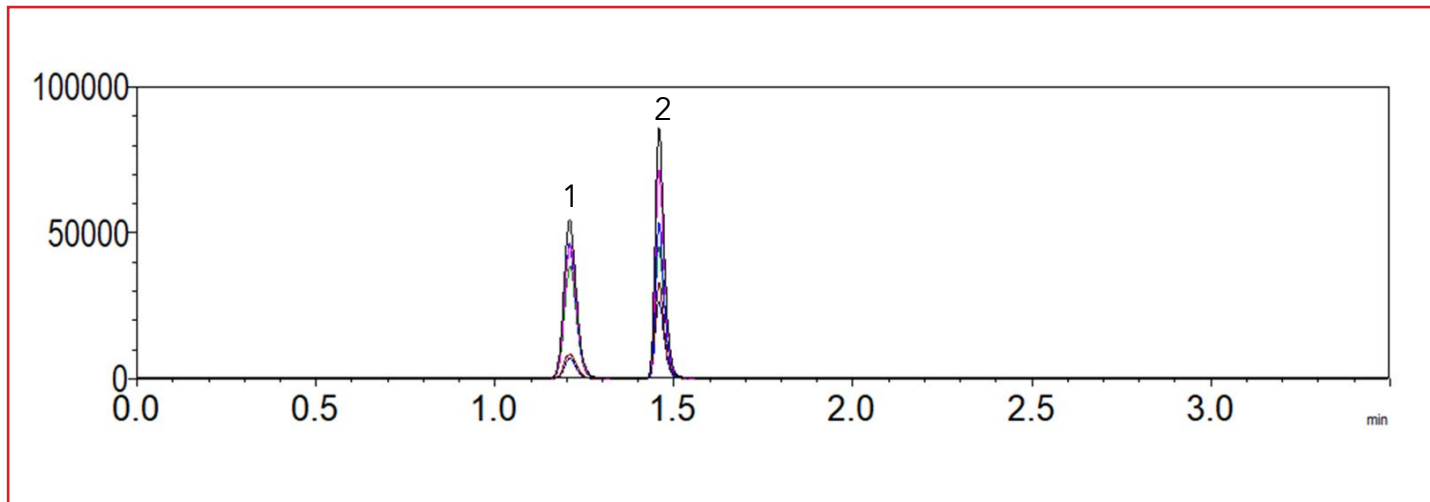




LCMS Separation of T3/rT3

224-HM



PEAK IDENTITIES

1. T3
2. rT3

Species	Precursor	Product	Collision Energy
T3	652.07	606.1	35 CE
	652.07	508.1	36 CE
rT3	652.07	606.1	35 CE
	652.07	508.1	36 CE

TEST CONDITIONS:

Column: 90 Å C18, 2.7µm 3.0 x 30 mm

Mobile Phase A: Water/ 0.1% Formic Acid

B: Methanol/ 0.1% Formic Acid

Gradient:	Time	%B
	0.0	55
	0.45	55
	1.50	100
	2.50	100
	2.51	55
	3.5	55

Flow Rate: 0.4 ml/min

Injection: 1.0 µl (20µg/mL, in SigMatrix Serum Diluent, w/ 0.1% Formic acid)

Temperature: 40 °C

Instrument: Shimadzu 8040 LCMS

Triiodothyronine (T3), produced from thyroxine (T4), is thyroid hormone that affects many physiological processes in the body, including growth, metabolism, body temperature, and heart rate.

Reverse triiodothyronine (rT3), an isomer of T3 and also produced from T4, if found in high levels in the thyroid, can be indicative of hypothyroidism. The high rT3 level generally means that most of the T4 is being converted to rT3 and a deleterious effect of rT3 is that it will bind to T3 receptors, but it has no activity. Increased rT3 levels have been attributed to illness, starvation and excessive cortisol (stress).

The separation of T3 and rT3 is challenging due to the isomeric nature of the compounds, and therefore good chromatography is imperative not only for separation, but also for identification.

