## Thyroid Hormones by LC-MS/MS (I)

Application #AN2170

### Conditions

**Column:** ACE Excel 2 C18-AR
**Dimensions:** 100 x 2.1 mm
**Part Number:** EXL-109-1002U
**Mobile Phase:** A: 2 mM ammonium acetate, 0.1% formic acid in $H_2O$
B: 2 mM ammonium acetate, 0.1% formic acid in MeOH

**Gradient:**

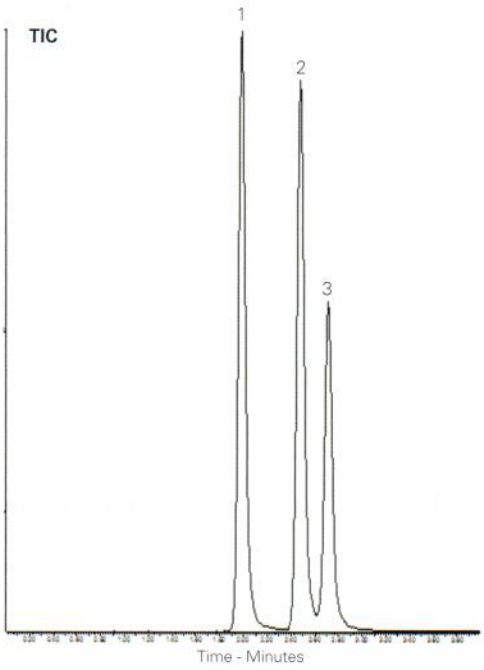
| Time (mins) | %B |
|---|---|
| 0.0 | 60 |
| 3.0 | 77 |
| 3.1 | 60 |

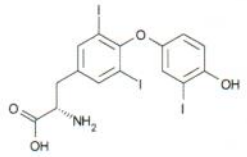
**Flow Rate:** 0.4 mL/min
**Injection:** 10 µL
**Temperature:** 40 °C
**Detection:** XEVO TQS triple quad MS
Desolvation temperature: 500 °C
Ion source temperature: 150 °C
Positive mode ESI, MRM
**Sample:** Serum samples extracted using Biotage EVOLUTE EXPRESS AX methodology

| Analyte | Q1 (Da) | Q3 (Da) |
|---|---|---|
| T3 | 651.8 | 605.8 |
| | (651.8) | (507.8) |
| | (651.8) | (478.9) |
| rT3 | 651.8 | 605.8 |
| | (651.8) | (507.8) |
| | (651.8) | (478.9) |
| T3/rT3-d6 I.S. | 657.8 | 611.8 |
| T4 | 777.7 | 731.7 |
| | (777.7) | (351) |
| | (777.7) | (633.8) |

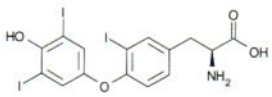
### Analytes

1. T3 (Tri-iodothyronine)
2. rT3 (Reversed tri-iodothyronine)
3. T4 (Thyroxine)

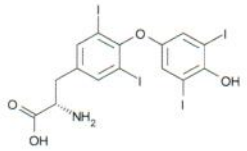



T3 (Tri-iodothyronine)




rT3 (Reversed tri-iodothyronine)




T4 (Thyroxine)

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## Tocopherols Mixture Separation

Application #AN3390

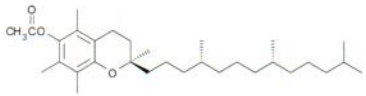
### Conditions

**Column:** ACE Excel 3 C18-PFP
**Dimensions:** 150 x 4.6 mm
**Part Number:** EXL-1110-1546U
**Mobile Phase:** A: 0.1% $H_3PO_4$/MeCN (1:3 v/v)
B: MeCN

**Gradient:**

| Time (mins) | %B |
|---|---|
| 0.00 | 0 |
| 0.10 | 0 |
| 0.11 | 80 |
| 8.00 | 80 |
| 8.01 | 100 |
| 12.00 | 100 |
| 12.01 | 0 |
| 14.00 | 0 |

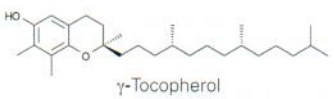
**Flow Rate:** 1.2 mL/min
**Injection:** 10 µL
**Temperature:** 40 °C
**Detection:** UV, 285 nm



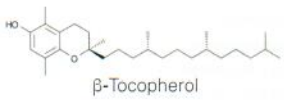

α-Tocopherol acetate

### Analytes

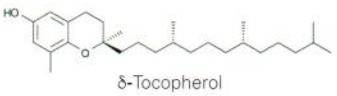
1. γ-Tocopherol
2. β-Tocopherol
3. δ-Tocopherol
4. α-Tocopherol
5. α-Tocopherol acetate



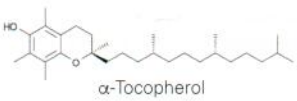

γ-Tocopherol



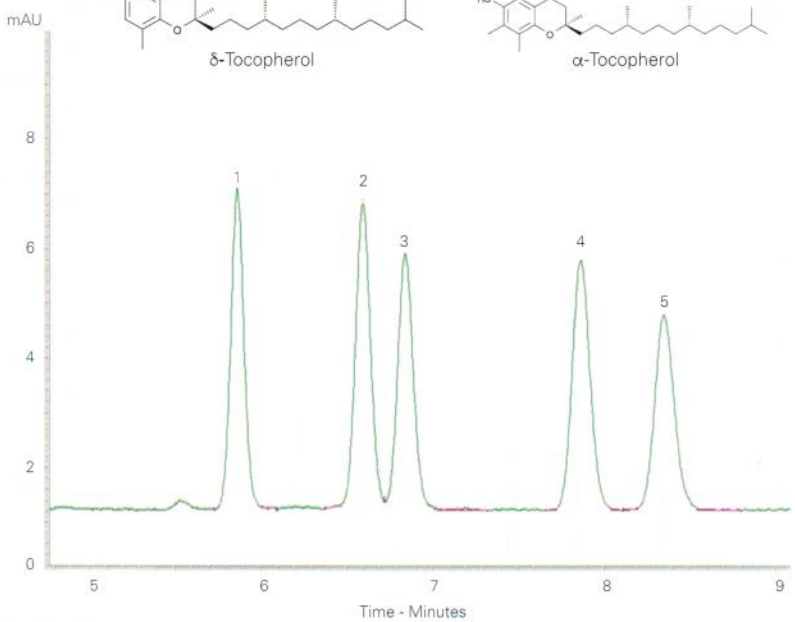

β-Tocopherol




δ-Tocopherol




α-Tocopherol

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