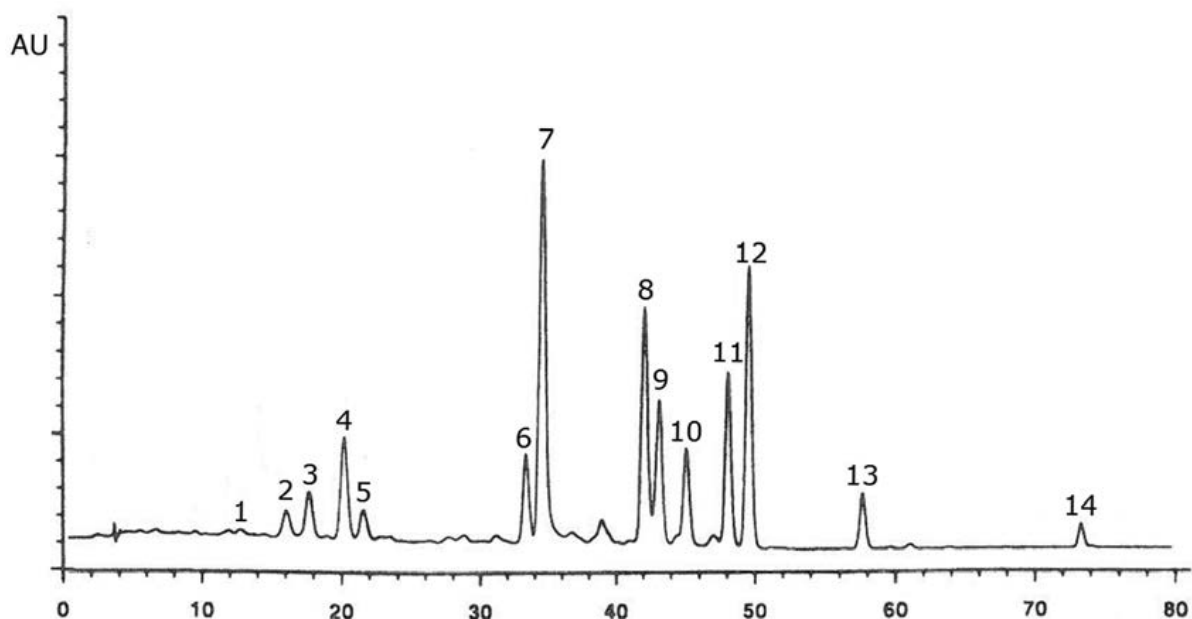


## Carotenoids Analyzed with HPLC – AppNote

### Compounds of the Carotenoid Family Retained

These compounds are very lipophilic and often have subtle differences in structure. Resolution of these compounds can be difficult with a standard Reversed Phase C8 or C18 Column because of these Similarities. The Cogent C30 Column on the other hand can further differentiate by analyte Shape in addition to Reversed Phase Interactions. At lower temperatures, the long alkyl chains become more rigid and steric effects become significant, leading to greater Selectivity.



#### Peaks:

1. Astaxanthin
2. Capsanthin
3. Lutein
4. Zeaxanthin
5. Canthaxanthin
6.  $\beta$ -Kryptoxanthin
7. Echinenone
8. 15-cis  $\beta$ -Carotene
9. 13-cis  $\beta$ -Carotene
10.  $\alpha$ -Carotene
11. trans  $\beta$ -Carotene
12. 9-cis  $\beta$ -Carotene
13. d-Carotene
14. Lycopene

### Method Conditions:

**Column:** Cogent C30™, 5µm, 200Å

**Catalog No.:** [71030-25P](#)

**Dimensions:** 4.6 x 250mm

**Mobile Phase:**

A: 81:15:4 Methanol / Methyl Tert-Butyl Ether / DI Water (v/v)

B: 6:90:4 Methanol / Methyl Tert-Butyl Ether / DI Water (v/v)

**Gradient:**

Time (minutes)	%B
0	0
90	100

**Temperature:** 20°C

**Flow rate:** 1.0ml / minute

**Detection:** UV @ 450nm

**Sample Preparation:** Reference Standards of each Analyte in a mixture.

**Notes:** Carotenoids are a broad class of more than 600 compounds. They can be divided into two types: Xanthophylls and Carotenes. Xanthophylls contain oxygen in their structure and get their name from the Greek words Xanthos (yellow) and Phyllon (leaf). Carotenes are unsaturated hydrocarbons which do not contain other elements in their structure.



**Attachment**

**No 262 Carotenoids Analyzed with HPLC pdf** 0.2 Mb [Download File](#)

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