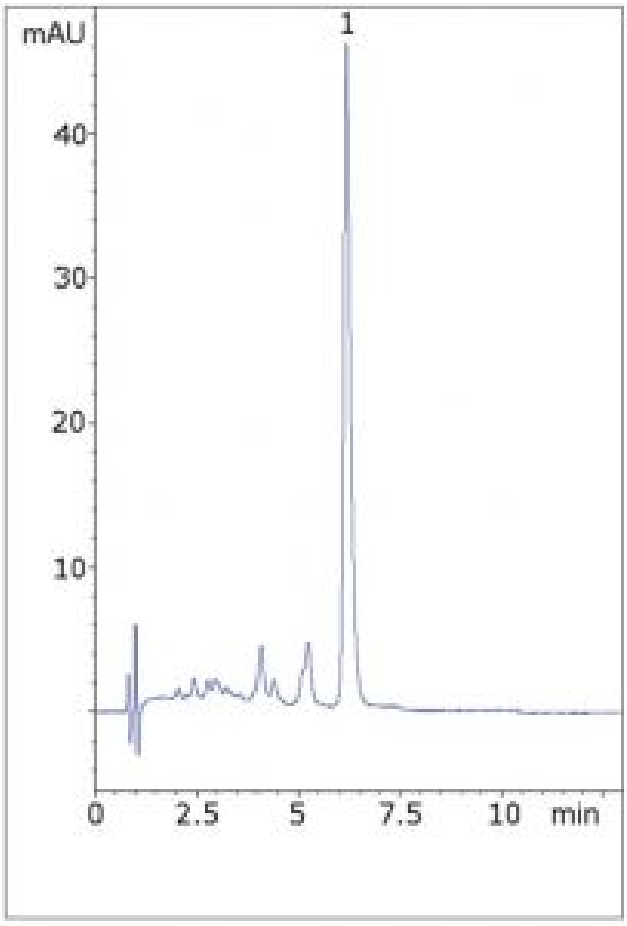
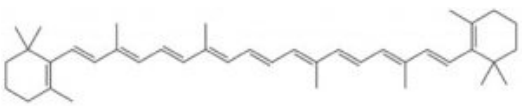
β-Carotene Capsule Analyzed with HPLC – AppNote

Separation from Matrix Peaks

Click *HERE* for Column Ordering Information.

Beta-carotene may be taken as a dietary supplement in capsule form. In this case, a wide variety of Matrix Peaks were observed in the chromatographic data. It is possible that some of these peaks are various isomers of all-trans ß-carotene or other similar carotenes. In any case, resolution was obtained from the other Matrix Peaks, which allows for accurate quantitation of ß-carotene in the capsule.





Peak:

ß-Carotene

Method Conditions

Column: Cogent Phenyl Hydride™, 4µm, 100Å

Catalog No.: 69020-7.5P

Dimensions: 4.6 x 75 mm

Mobile Phase:

A: DI Water / 0.1% Formic Acid (v/v)

B: Acetonitrile / 0.1% Formic Acid (v/v)

Gradient:

Time (minutes)	%B
0	70
7	100
8	100
8.1	70
10	70

Post Time: 3 minutes

Injection vol.: 10µL

Flow rate: 1.0 mL / minute

Detection: UV @ 452 nm

Sample Preparation: A Beta-carotene capsule was opened and the contents were transferred to a 25mL volumetric flask containing a portion of Methanol. The solution was sonicated 15 minutes and diluted to mark with Methanol. After mixing, a portion was filtered with a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.).

t_0: 0.9 minutes

Note: *Beta-carotene is found in many fruits and vegetables. It is responsible for the orange color in carrots, pumpkins, sweet potatoes, and others. In terms of nutrition, Beta-carotene is a metabolic precursor to Vitamin A.*

Attachment

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