



Technical Datasheet

Analysis Name: α - Carotene, β -Carotene, and Lutein Determination by HPLC

Method Number: LI-00.683; LI-00.683_Lutein

Scope of Application: Enriched foods, un-enriched foods and gummies.
Lutein validated for only infant formula and enterals. Lutein is not validated for premixes.

Description: Extraction of α -Carotene, β -Carotene, Lutein and Lycopene with THF after enzymatic treatment. Separation of the carotenoids by HPLC and detection at 445 nm. Quantitation by comparison with external standards.

Sample Weight Required: 50 g

Analytical Platform: HPLC

Special Information: Indicate which isomers are needed. α -Carotene by request only.

Analyte Reported	Alias	Unit of Measure	Limit of Quantification	Reproducibility
α -Carotene	Alpha Carotene	$\mu\text{g}/100\text{ g}$	12	15%
trans, β -Carotene	Trans beta Carotene	$\mu\text{g}/100\text{ g}$	12	15%
9-cis, β -Carotene	9-cis, beta Carotene	$\mu\text{g}/100\text{ g}$	12	15%
13-cis, β -Carotene	13-cis, beta Carotene	$\mu\text{g}/100\text{ g}$	12	15%
Sum of β -carotene (trans and cis)	Sum of beta carotene (trans and cis)	$\mu\text{g}/100\text{ g}$	12	15%
Lutein		$\mu\text{g}/100\text{ g}$	20	17%