



NQAC

Nestlé Quality Assurance Center  
Dublin

# Technical Datasheet

**Analysis Name:** Fat-Soluble Vitamins in Vitamin Premixes by HPLC

**Method Number:** LI-03.701

**Scope of Application:** Polyvitamin premixes, duomixes, and pure vitamins

**Description:** Dispersion of the fat-soluble vitamins in warm water followed by liquid-liquid extraction with THF and diethyl ether. In the presence of metals (duomixes), addition of BHT to prevent oxidation.

Separation of vitamins A, E, and K by reverse phase HPLC, normal phase HPLC for vitamin D, with UV detection and quantitation by comparison with external standards. Previtamin D is calculated as vitamin D using a response factor.

**Sample Weight Required:** 50 g

**Analytical Platform:** HPLC

**Special Information:** Certificate of Analysis or estimated levels must be provided for each sample. Form of vitamin must be disclosed in the specification. Method can't determine Tocopherol, vitamin D2 and K2

Analyte Reported	Alias	Unit of Measure	Limit of Quantification	Reproducibility
Vitamin A Acetate	Retinyl Acetate	µgRAE/g	30	10%
Vitamin A Palmitate	Retinyl Palmitate	µgRAE/g	30	10%
Sum of Vitamin A (acetate + palmitate)		µgRAE/g	30	
Vitamin E Acetate	α-Tocopheryl Acetate	mg/g	0.5	10%
Total Vitamin D3 (includes pre D)	Cholecalciferol	µg/g	7	10%
Vitamin K	Phylloquinone, phytonadione	µg/g	10	10%