



NQAC

Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Vitamins B₁, B₂, B₆ & PP by UHPLC-MS/MS, Biotin by UHPLC-MS/MS

Method Number: LI-00.610

Scope of Application: Infant formula, healthcare products, nutritional bars, culinary products, cereals, cocoa beverages, and gummy-based vitamins.

Description: The method consists of:
Acid hydrolysis in hydrochloric acid (100°C, 35 min)
pH adjustment (except for cocoa containing samples), filtration
Addition of internal standard, dilution
Analysis by UHPLC-MS/MS (using positive electrospray ionization)
Quantification using peak area ratio "Vitamin/IS"

Sample Weight Required: 50 g

Analytical Platform: UPLC – LC/MS/MS

Special Information: Provide Certificate of Analysis (COA) or estimated levels for premixes – Biotin testing.

| Analyte Reported | Alias | Unit of Measure | LOQ powders, nutrition bars, culinary | LOQ Concentrates, adult nutritionals, enterals | LOQ RTF liquids | Reproducibility |
|------------------------|------------------------|-----------------|---------------------------------------|--|-----------------|-----------------|
| Vitamin B ₁ | Thiamine hydrochloride | mg/100 g | 0.13 | 0.038 | 0.025 | 12% |
| Vitamin B ₁ | Thiamine base | mg/100 g | 0.1 | 0.03 | 0.02 | 12% |
| Vitamin B ₂ | Riboflavin | mg/100 g | 0.1 | 0.03 | 0.02 | 20% |
| Vitamin B ₃ | Niacin | mg/100 g | 0.5 | 0.18 | 0.12 | 15% |

TDS-LI-00.610-2

2/2/2021



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|------------------------|-----------------|----------|-----|------|------|-----|
| Vitamin B ₆ | Pyridoxine base | mg/100 g | 0.1 | 0.03 | 0.02 | 15% |
| Biotin | | µg/100 g | 6.4 | 2.4 | 1.6 | 15% |