



NQAC

Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Vitamin B₁₂ by UPLC-UV

Method Number: AOAC 2014.02

Scope of Application: Milk- and soy-based infant formula, infant cereals, breakfast cereals, beverages, clinical nutrition, raw materials (demineralized whey powder, skimmed milk and acid whey protein), vitamin premixes for human nutrition, and gummy-based vitamins. Not validated for pet foods.

Description: The method consists of:

Release of natural vitamin B₁₂ forms associated with proteins and conversion into cyanocobalamin by heating the sample in presence of cyanide, at pH 4.

Filtration and clean-up on a highly selective immuno-affinity cartridge. Elution with methanol. Evaporation under nitrogen. Dilution in water: acetonitrile: TFA mixture.

Analysis by UHPLC with UV detection at 361 nm. Quantitation by comparison with external standards using a multi-level calibration curve.

Sample Weight Required: 50 g

Analytical Platform: UPLC

Analyte Reported	Alias	Unit of Measure	Limit of Quantification	Reproducibility
Vitamin B12	Cobalamin	µg/100 g	0.1	15%