



NQAC

Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Aminoglycosides in Food by LC-MS/MS

Method Number: LI-00.055

Scope of Application: Milk-based products including milk fractions, infant formula, infant cereals and baby foods.
Meat-, fish- and seafood-based products including powdered, fresh, and cooked meat/fish/seafood, infant cereals and baby foods.
Fatty matrices including animal fats, milk fats and oil.
Egg-based products including white and whole egg powders.

Description: Aminoglycosides residues are extracted from the matrix via protein precipitation. After shaking and centrifugation, the supernatant is diluted and further cleaned up by solid phase extraction (SPE) using molecularly imprinted polymer (MIP) cartridges. Analytes are chromatographically separated and detected by ion-pair reversed phase chromatography coupled to tandem mass spectrometry.

Each routine sample is analyzed twice: one test portion is extracted as such (= unspiked sample) and a second one is fortified at the screening target concentration (STC) with a known amount of analyte (= spiked sample). This procedure allows checking the presence/absence of an analyte in the unspiked sample while ensuring the presence of this analyte at the STC in the corresponding spiked sample.
The goal of this screening method is to evidence samples with levels that may exceed the STC. The results are compared against a cut-off value. "< STC" results are those found below this cut-off value. Results listed as "Suspect" contain the target analyte residue.

**Sample Weight
Required:** 100 g

Analytical Platform: HPLC – LC-MS/MS



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Compound	Screening Target Concentration ($\mu\text{g}/\text{kg}$)
Amikacin	50
Apramycin	50
Dihydrostreptomycin	50
Gentamicin C1	13.5*
Gentamicin C1a	12.5*
Gentamicin C2 + C2a	24*
Hygromycin B	50
Kanamycin A	50
Neomycin B	50
Paromomycin	50
Sisomicin	50
Spectinomycin	50
Streptomycin	50
Tobramycin	50

*STC = 50 $\mu\text{g}/\text{kg}$ for the SUM of gentamicin (C1, C1a, C2+C2a)