



NQAC

Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Trace Elements Analysis by ICP-MS

Method Number: LI-00.848

Scope of Application: This method describes the determination of aluminum, arsenic, cadmium, chromium, cobalt, lead, nickel, mercury, molybdenum, selenium, and tin analysis by ICP-MS in foods, beverages (finished, concentrates, and powders), health products, gummy-based vitamins, pet foods, and raw materials such as premixes, food grade oils, salts, and tastemakers.

Description: Test portion is heated at 200°C with nitric acid in a closed vessel microwave digestion system. Digested samples are ionized through inductively coupled argon plasma. The ions are extracted from the plasma, separated in the mass spectrometer, and determined using a Dual Stage SEM/Analog detector system.

Sample Weight Required: 25 g

Method Reference: EN 13805:2013 Pressure digestion
EN 15763:2009 Determination of As, Cd, Hg and Pb in foodstuffs by ICP-MS after pressure digestion
EN 15765:2009 Determination of Sn by ICP-MS after pressure digestion
AOAC 2011.19 Cr, Se, and Mo in Infant Formula and Adult Nutritional Products

Analytical Platform: ICP-MS



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Analyte Reported	Alias	Unit of Measure	Limit of Quantification				Reproducibility
			Foods & Beverages	Juice Concentrates	Powders & Dried Foods	Fats & Volatiles	
Aluminum	Al	mg/kg	0.05	0.1	0.2	0.4	35%
Arsenic	As	µg/kg	1	2	4	8	35%
Cadmium	Cd	µg/kg	1	2	4	8	35%
Chromium	Cr	µg/100 g	1	2	4	8	35%
Lead	Pb	µg/kg	1	2	4	8	35%
Mercury	Hg	µg/kg	1	1	2	4	35%
Molybdenum	Mo	µg/100 g	1	2	4	8	35%
Nickel	Ni	µg/kg	50	100	200	400	35%
Selenium	Se	µg/100 g	1	2	4	8	35%
Tin	Sn	µg/kg	50	100	200	400	35%