

Technical Datasheet

Analysis Name:	Trace Elements Analysis by ICP-MS
Method Number:	LI-00.848
Scope Application:	This method describes the determination of Lead, Cadmium, Mercury, Aluminum Arsenic, Selenium, Chromium, Cobalt, Molybdenum and Tin by ICP-MS in foods, beverages (finished, concentrates, and powders), health products, pet foods, and raw materials such as premixes, food grade oils, salts, and tastemakers.
Description:	The test sample is mineralized by microwave digestion. After appropriate dilution and internal standard addition, the digestion solution is introduced and then nebulized and finally transferred to a high frequency inductively coupled argon plasma (ICP). The high temperature of the plasma allows to dry aerosol, to atomize and ionize the elements. The ions are extracted from the plasma torch by a set sampler and skimmer cones and transferred to a mass spectrometer, where the ions are separated by their mass/charge ratio using optionally a collision or reaction step with gas, and quantified by a pulse-count and/or analog detector
Sample Weight Required:	50g
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 AOAC 2011.19 Cr, Se, and Mo in Infant Formula and Adult Nutritional Products
Analytical Platform:	ICP-MS
Special information:	Indicate each element and heavy metal required. Include Certificate of Analysis for premix samples. QLs are dependent on the matrix and potential interferences.

Analyte Reported	Common name	Unit	Typical unit of quantification	Reproducibility
Aluminum	Al	mg/kg	0.1	35%
Arsenic	As	µg/kg	2	35%
Cadmium	Cd	µg/kg	2	35%
Chromium	Cr	µg/100 g	1	35%

Lead	Pb	µg/kg	2	35%
Mercury	Hg	µg/kg	1	35%
Molybdenum	Mb	µg/100 g	1	35%
Nickel	Ni	µg/kg	50	35%
Selenium	Se	µg/100 g	1	35%
Tin	Sn	µg/kg	50	35%