

Fapas® REFERENCE MATERIAL DATA SHEET	TWG002RM
Matrix	Infant Formula
Weight / Volume of Contents	50 g
Description of material: Infant formula purchased from a retail source. Iodine and selenium were present at natural levels and all other analytes were spiked into the material.	

Analyte	Reference Value	Expanded uncertainty U ($k = 2$)	Units	No. of data points producing Reference Value
Aluminium (Al)	2.96	± 0.08	mg/kg	62
Antimony (Sb)	66.9	± 2.0	$\mu\text{g}/\text{kg}$	46
Cadmium (Cd)	20.3	± 0.6	$\mu\text{g}/\text{kg}$	100
Chromium (Cr)	125	± 5	$\mu\text{g}/\text{kg}$	83
Iodine (I)	1.06	± 0.03	mg/kg	42
Lead (Pb)	58.5	± 1.2	$\mu\text{g}/\text{kg}$	111
Molybdenum (Mo)	302	± 6	$\mu\text{g}/\text{kg}$	53
Nickel (Ni)	206	± 5	$\mu\text{g}/\text{kg}$	74
Selenium (Se)	290	± 9	$\mu\text{g}/\text{kg}$	78
Tin (Sn)	16.6	± 0.3	mg/kg	82
Arsenic (As)	59.8	± 1.4	$\mu\text{g}/\text{kg}$	101
Arsenic (As) (inorganic)	56	± 5	$\mu\text{g}/\text{kg}$	23
Mercury (Hg)	2.61	± 0.22	$\mu\text{g}/\text{kg}$	45

Date reference values were generated	30/05/2025
Reference values are valid until	30/05/2027
Recommended storage conditions on receipt	-20°C
This material was approved on behalf of Fapas® by	Joe Holland

Notes
<ul style="list-style-type: none"> Mix the reference material thoroughly before taking a representative analytical sample. It is intended to be used as a single-analysis sample (plus confirmation) for analytical quality control purposes, method verification and as a characterised positive control sample. The recommended minimum analytical sub-sample size is 1 g. This is a reference material, not a certified reference material. This reference material has been produced according to the principles of ISO 17034:2016. The characterised reference values have been derived from the results consensus of ISO 17025 accredited laboratories in an interlaboratory comparison, using a variety of methods. The traceability is inherent in the accreditation status of the results used. The majority of methods contributing to the reference value generation were microwave digestion in nitric acid followed by ICP-MS determination. The Expanded Uncertainty U corresponds to a confidence level of about 95%. U has been derived from the observed standard deviation of the consensus data (the major component) plus

contributions from homogeneity and stability studies. U corresponds to real-world uncertainty of the analysis in a food matrix, not of a pure substance.

- The stability of the reference material has been established from a formal study. The stability components combine long term (ideal storage) and short term stability (transportation) conditions. The validity date may be extended if supporting data becomes available.