

Fapas® REFERENCE MATERIAL DATA SHEET	TWG019RM
Matrix	Soft Drink
Weight / Volume of Contents	50 ml
Description of material: Lemonade purchased from a retail source. All analytes were spiked into the test material.	

Analyte	Reference Value	Expanded uncertainty $U$ ( $k = 2$ )	Units	No. of data points producing Reference Value
Antimony (Sb)	360	$\pm 15$	$\mu\text{g/l}$	19
Arsenic (total) (As)	494	$\pm 15$	$\mu\text{g/l}$	27
Cadmium (Cd)	125	$\pm 5$	$\mu\text{g/l}$	20
Chromium (Cr)	355	$\pm 11$	$\mu\text{g/l}$	15
Copper (Cu)	621	$\pm 17$	$\mu\text{g/l}$	21
Zinc (Zn)	952	$\pm 56$	$\mu\text{g/l}$	11

Date reference values were generated	05/12/2025
Reference values are valid until	05/12/2027
Recommended storage conditions on receipt	-20°C
This material was approved on behalf of Fapas® by	Jessica Choi

Notes
<ul style="list-style-type: none"> <li>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 2 g.</li> <li>This is a reference material, not a certified reference material.</li> <li>This reference material has been produced according to the principles of ISO 17034:2016.</li> <li>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.</li> <li>The majority of the results used to generate the reference value were determined using ICP MS, following microwave digestion in nitric acid.</li> <li>The Expanded Uncertainty <math>U</math> corresponds to a confidence level of about 95%. <math>U</math> has been derived from the observed standard deviation of the consensus data (the major component) plus contributions from homogeneity and stability studies. <math>U</math> corresponds to real-world uncertainty of the analysis in a food matrix, not of a pure substance.</li> <li>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.</li> </ul>