Appendix 4: Summary of Analytical Methods

Sample Collection

The State and Territory Health Departments completed random sample collection, as per the sampling plan. Samples were delivered to the local AGAL facility in Melbourne VIC, Sydney NSW and Perth WA for overnight cold-storage and were dispatched to the AGAL Food Composition Laboratory in Melbourne, Victoria.

Sample Preparation

Upon receipt of the samples in the laboratory (2220 from 8 States/Territories) composites were prepared for analysis. The total number of composites was 740 and of these 381 required cooking or further preparation to a "ready to eat" stage. All perishable foods were prepared within 48 hours of purchasing. Preparation of frozen or shelf-stable foods was carried out within one week of purchase.

Iodine

A sub-sample of a well homogenised sample was extracted with Tetramethylammonium Hydroxide at elevated temperature. Following dilution and filtration, the iodine level in the solution was determined by Inductively Coupled Plasma Mass Spectrometry (ICP/MS).

Selenium, chromium, nickel, molybdenum

Sample was homogenised and a subsample (0.2-0.5 g) was digested with re-distilled nitric acid. After making up to appropriate volume with Milli-Q (high purity) water, the digest was analysed for trace elements using Inductively Coupled Plasma Mass Spectrometry (ICP/MS).

Table A4.1: Limit of reporting (LOR) for each analyte

Analyte	Matrix	LOR (mg/kg)
Iodine	Solid	0.01
	Liquid	0.01
Selenium	Solid	0.01
	Liquid	0.001
Chromium	Solid	0.01
	Liquid	0.001
Molybdenum	Solid	0.01
	Liquid	0.001
Nickel	Solid	0.01
	Liquid	0.001