



**Supplementary 1.** Ratio between concentrations obtained by using external calibration ( $C_{\text{ext cal}}$ ) and the standard addition method ( $C_{\text{sam}}$ ) of a supplementary food sample after a) microwave acid digestion-undiluted sample, b) dry ashing-undiluted sample, c) dry ashing with ashing aid -undiluted sample, d) microwave acid digestion-dilution 1:1, e) dry ashing- dilution 1:1, f) dry ashing with ashing aid -dilution 1:1, g) microwave acid digestion-dilution 1:3, h) dry ashing- dilution 1:3, i) dry ashing with ashing aid -dilution 1:3. ICP-OES measurements in all the cases without using internal standard ( $\square$ ), with Re ( $\blacksquare$ ) or Ru ( $\blacksquare$ ).

**Supplementary 2.** Effect of dilution factor of digested supplementary foods on concentrations (mg kg<sup>-1</sup>) obtained by ICP-OES after microwave digestion

	undiluted	1:1	1:3
Al	21.6	21.2	21.2
B	5.5	5.5	5.3
Ba	7.0	6.8	6.3
Ca	692	688	682
Co	0.6	0.4	nd
Cr	4.4	4.3	3.8
Cu	8.2	8.0	7.8
Dy	nd	nd	nd
Er	1.3	1.2	1.1
Fe	95.3	96.7	98.4
Gd	0.2	nd	nd
K	8010	7860	7750
La	1.2	0.9	0.1
Li	nd	nd	nd
Mg	2250	2220	2210
Mn	83.5	83.9	85.1
Mo	0.1	nd	nd
Na	80	80	80
Pb	6.1	6.5	6.3
Se	nd	nd	nd
Sn	37.9	40.1	39.3
Sr	3.5	2.8	nd
Ti	0.7	0.6	0.4
V	1.0	1.0	nd
Y	nd	nd	nd
Zn	57.2	59.4	61.1

0.5 g of dry sample was digested in microwave oven with HNO<sub>3</sub> and H<sub>2</sub>O<sub>2</sub>. Final volume was made to 25 mL. 50 mL or 100 mL.

**Supplementary 3.** Effect of dilution factor of digested supplementary foods on concentrations (mg kg<sup>-1</sup>) obtained by ICP-OES after dry ashing

	undiluted	1:1	1:3
Al	3.1	3.0	nd
B	nd	nd	nd
Ba	7.0	7.0	6.8
Ca	602	629	654
Co	0.5	0.5	nd
Cr	0.6	0.6	nd
Cu	7.6	7.4	7.2
Dy	0.1	0.1	nd
Er	0.6	0.6	0.5
Fe	68.0	68.7	69.2
Gd	0.2	0.2	0.3
K	5000	5040	5000
La	0.9	0.9	0.7
Li	1.0	0.9	0.8
Mg	-	-	-
Mn	79.0	80.0	80.5
Mo	0.3	nd	nd
Na	1260	1300	1320
Pb	5.9	6.0	6.1
Se	3.1	3.5	4.9
Sn	27.4	31.1	28.1
Sr	3.4	3.2	2.7
Ti	0.2	0.1	0.1
V	0.6	0.7	0.5
Y	0.0	0.1	nd
Zn	58.7	60.1	61.9

1 g of dry sample was dry assed in muffle furnace. Ashes were diluted in HCl and final volume was made to 20 mL, 40 mL or 80 mL.

**Supplementary 4.** Concentration of minerals in method blanks obtained from different sample treatments in supplementary foods analysis by ICP-OES

	Microwave acid digestion	Dry ashing	Dry ashing with ashing aid
Al	nq	nq	17.3 ± 0.3
B	nq	nq	30.3 ± 0.6
Ca	nq	nq	490 ± 4
Fe	nq	nq	7.9 ± 0.7
Mg	nq	nq	46700 ± 200
Mn	nq	nq	1.100 ± 0.004
Na	64.3 ± 0.7	nq	Nq
Ni	nq	nq	17.9 ± 0.3
Sr	nq	0.020 ± 0.002	1.503 ± 0.018
Ti	nq	0.068 ± 0.003	0.309 ± 0.017

Data expressed in  $\mu\text{g g}^{-1}$  as the mean ( $\pm$  standard deviation) of three independent analysis performed using the primary recommended conditions for ICP-OES.