

**Table S1.** Method detection limits (MDL) and results of the element quantification in standard reference materials used for quality control.

Element		MDL *	NIST SRM 1570a Spinach Leaves		NIST SRM 1573a Tomato Leaves	
			Certified (mean $\pm$ uncertainty)	Measured (mean $\pm$ SD)	Certified (mean $\pm$ uncertainty)	Measured (mean $\pm$ SD)
As	$\mu\text{g/kg}$	3.26	$68 \pm 12$	$67 \pm 5$	$112.6 \pm 2.4$	$111.0 \pm 4.9$
Ca	$\text{mg/kg}$	7.87	$15260 \pm 660$	$15177 \pm 654$	$50500 \pm 900$	$50187 \pm 758$
Cd	$\mu\text{g/kg}$	0.375	$2876 \pm 58$	$2836 \pm 71$	$1517 \pm 27$	$1520 \pm 93$
Co	$\mu\text{g/kg}$	0.916	$393 \pm 30$	$398 \pm 7$	$577.3 \pm 7.1$	$566.9 \pm 26.1$
Cr	$\mu\text{g/kg}$	6.67	/	$1671 \pm 125$	$1990 \pm 60$	$1935 \pm 46$
Cu	$\text{mg/kg}$	0.116	$12220 \pm 860$	$12250 \pm 890$	$4700 \pm 140$	$4620 \pm 100$
Fe	$\text{mg/kg}$	1.27	/	$272 \pm 15$	$368 \pm 7$	$367 \pm 2$
Hg	$\mu\text{g/kg}$	2.70	$29.7 \pm 2.1$	$28.8 \pm 0.4$	$34.1 \pm 1.5$	$34.8 \pm 4.3$
K	$\text{mg/kg}$	37.12	$29000 \pm 260$	$29723 \pm 500$	$27000 \pm 500$	$27794 \pm 783$
Mg	$\text{mg/kg}$	2.81	9000	$8877 \pm 31$	12000	$12062 \pm 207$
Mn	$\text{mg/kg}$	0.007	$76.0 \pm 1.2$	$73.8 \pm 3.3$	$246 \pm 8$	$246 \pm 4$
Na	$\text{mg/kg}$	3.35	$18210 \pm 230$	$18631 \pm 724$	$136 \pm 4$	$138 \pm 2.0$
Ni	$\mu\text{g/kg}$	5.01	$2142 \pm 58$	$2181 \pm 69$	$1582 \pm 41$	$1527 \pm 71$
P	$\text{mg/kg}$	12.26	$5190 \pm 67$	$5359 \pm 83$	$2161 \pm 28$	$2204 \pm 88$
Pb	$\mu\text{g/kg}$	1.399	200 <sup>b</sup>	$202 \pm 7$	/	$557 \pm 45$
Se	$\mu\text{g/kg}$	5.5	$115.2 \pm 4$	$112.5 \pm 2.8$	$54 \pm 3$	$54.8 \pm 3.8$
Sn	$\mu\text{g/kg}$	2.34	/	$27.6 \pm 1.3$	/	$48.4 \pm 7.3$
Tl	$\mu\text{g/kg}$	0.453	/	$21.0 \pm 1.0$	/	$37.9 \pm 2.6$
Zn	$\text{mg/kg}$	0.067	$82.3 \pm 3.9$	$83.2 \pm 3.1$	$30.9 \pm 0.7$	$31.9 \pm 0.9$

\*Calculated as mean plus three times of the blanks' standard deviation multiplied by dilution factor information value.