

Table 1 (supplementary) ICP-MS operating parameters

Parameter	Value
<i>Plasma conditions</i>	
Forward power	1550 W
Plasma gas flow	15.0 L min ⁻¹
Carrier gas flow	0.64 L min ⁻¹
Dilution gas flow	0.53 L min ⁻¹
Total carrier gas flow	1.17 L min ⁻¹
He gas flow	10 mL min ⁻¹
QP bias	- 97 V
Oct bias	-100 V
Cell entrance	-130 V
Cell exit	-150 V
Deflect	-80 V
Plate bias	-150 V
Nebuliser type	Miramist
Sample uptake rate	1.5 mL min ⁻¹
<i>Data acquisition parameters</i>	
m/z isotopes monitored in Cr speciation	⁵⁰ Cr, ⁵² Cr, ⁵³ Cr
m/z isotopes of internal standards	⁴⁵ Sc, ⁷² Ge
Total acquisition time	599 s

Table 2 (supplementary) Determination of total Cr in SRM 1573a Tomato leaves by ICP-MS and Cr(VI) in certified reference material CRM 544, Cr(VI) in lyophilised solution and CRM 545, Cr(VI) in welding dust by HPLC-ICP-MS (number of replicates = 3)

Concentration	SRM 1573a (mg Cr kg ⁻¹)	CRM 544 (µg Cr(VI) L ⁻¹)	CRM 545 (g Cr(VI) kg ⁻¹)
Determined	1.98±0.01	23.5±0.7	40.5±0.6
Certified	1.99±0.06	22.8±1.0	40.2±0.6

Table 3 (supplementary) LODs and LOQs for determination of Cr species by HPLC-ICP-MS in aqueous solutions (pH 4.5). Cr (VI) isotopes were recorded at m/z 50 and 52 and Cr(III) isotopes at m/z 52 and 53, respectively

Parameter	$(\mu\text{g Cr(VI) L}^{-1})$		$(\mu\text{g Cr(III) L}^{-1})$	
	m/z 50	m/z 52	m/z 52	m/z 53
LOD	0.02	0.03	0.02	0.03
LOQ	0.07	0.11	0.07	0.10