

Table S1 – Experimental levels and *p-values* obtained in the evaluation of the fractional factorial design implemented for assessing the robustness of the method.

Variables	Optimum	-2.5 % (-1)	+2.5 % (+1)
Extraction solvent vol. (mL)	15	14.63	15.38
Extraction time (min)	45	43.87	46.12
Volume loaded on SPE (mL)	7.5	7.31	7.69
Elution volume (mL)	7	6.83	7.18

p values

Tomato	AOH	ALT	AME	TeA	TEN	All analytes
Extraction solvent vol. (mL)	0.985	0.558	0.750	0.349	0.420	0.315
Extraction time (min)	0.783	0.868	0.616	0.804	0.900	0.850
Volume loaded on SPE (mL)	0.902	0.806	0.835	0.361	0.930	0.934
Elution volume (mL)	0.905	0.644	0.469	0.221	0.460	0.604

p values

Wheat	AOH	ALT	AME	TeA	TEN	All analytes
Extraction solvent vol. (mL)	0.918	0.904	0.971	0.447	0.476	0.749
Extraction time (min)	0.923	0.492	0.859	0.216	0.865	0.503
Volume loaded on SPE (mL)	0.774	0.692	0.853	0.905	0.578	0.724
Elution volume (mL)	0.565	0.813	0.145	0.675	0.769	0.684

p values

Sunflower	AOH	ALT	AME	TeA	TEN	All analytes
Extraction solvent vol. (mL)	0.800	0.843	0.704	0.354	0.938	0.860
Extraction time (min)	0.320	0.599	0.798	0.181	0.304	0.933
Volume loaded on SPE (mL)	0.612	0.443	0.824	0.476	0.653	0.337
Elution volume (mL)	0.446	0.895	0.977	0.638	0.309	0.442