

*Supporting Information*

**Simplified and rapid determination of Ca, K, Mg, and Na in fruit juices by flowing liquid cathode atmospheric glow discharge optical emission spectrometry**

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Table SI-1. Agilent 5110 SVDV ICP OES operating parameters.

RF power (kW)	1.50
Plasma Ar flow rate (L min <sup>-1</sup> )	12.0
Nebulizing Ar flow rate (L min <sup>-1</sup> )	0.7
Auxiliary Ar flow rate (L min <sup>-1</sup> )	1.0
Uptake delay time (s)	10
Read time (s)	5
Number of replicates	3
Stabilization time (s)	15
Viewing mode	SVDS
Viewing height (mm)	8
Pump speed (rpm)	12
Background correction	Off-peak, fitted, 2 pixels
Analytical line (nm)	280.3 (Mg), 422.7 (Ca), 589.6 (Na), 766.5 (K)

Table SI-2. The content of Ca and Mg determined in the analyzed juice samples, *i.e.*, apple (AT), banana (BX), blackcurrant (CF), lemon (LE), lime (ME), pomegranate (PH), quince (QK), and tomato (TT) juices, using simple standard solutions for calibration.

Juice	Method	Ca		Mg	
		Mean±CI	RSD (%)	Mean±CI	RSD (%)
AP	ICP OES	43.11±0.67	0.62	45.17±0.12	0.10
	FLC APGD	47.04±0.94	0.81	24.03±1.07	1.79
	Recovery (%)	109		53.2	
BX	ICP OES	18.41±2.58	5.67	70.35±0.67	0.39
	FLC APGD	28.94±1.29	1.80	37.87±3.40	3.62
	Recovery (%)	157		53.8	
CF	ICP OES	106.38±0.97	0.37	30.55±0.10	0.14
	FLC APGD	103.67±0.25	0.10	16.78±0.32	0.78
	Recovery (%)	97.5		54.9	
LE	ICP OES	196.25±41.93	8.60	125.15±0.89	0.29
	FLC APGD	204.79±10.63	2.09	61.06±3.40	2.24
	Recovery (%)	104		48.8	
ME	ICP OES	217.34±3.23	0.60	107.25±1.69	0.63
	FLC APGD	172.65±9.02	2.10	60.9±2.61	1.72
	Recovery (%)	79.4		56.8	
PH	ICP OES	96.42±1.09	0.46	78.33±0.84	0.43
	FLC APGD	70.58±2.01	1.15	42.65±4.74	4.48
	Recovery (%)	73.2		54.5	
QK	ICP OES	258.67±10.53	1.64	113.35±1.04	0.37
	FLC APGD	235.41±8.37	1.43	57.35±1.89	1.32
	Recovery (%)	91.0		50.6	
TT	ICP OES	106.63±1.37	0.52	105.26±2.14	0.82
	FLC APGD	77.22±5.69	2.97	54.79±1.19	0.87
	Recovery (%)	72.4		52.0	

CI – confidence interval (for 95% confidence level).