Supporting Information

Fast and simple analysis of selected beverages widely consumed by athletes on the content of Zn, Mg, Ca, Na, and K by flowing liquid cathode atmospheric pressure glow discharge optical emission spectrometry

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Table SI1. Agilent 5110 SVDV ICP-OES operating parameters.

RF power (kW)	1.50
Plasma Ar flow rate (L min^{-1})	12.0
Nebulizing Ar flow rate (L min^{-1})	0.7
Auxiliary Ar flow rate (L min^{-1})	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 SI2. Analytical performance of the investigated FLC-APGD system combined with the OES detection.

Element	DL (µg L^{-1})	ULR (mg L^{-1})	a (a.u. per µg L^{-1})
Zn	21	2.00	$1.33 \cdot 10^{1}$
Mg	0.91	1.00	$6.13 \cdot 10^{2}$
Ca	20	2.00	$1.57 \cdot 10^{1}$
Na	0.062	0.50	$5.70 \cdot 10^{3}$
K	0.14	0.50	$1.74 \cdot 10^{3}$

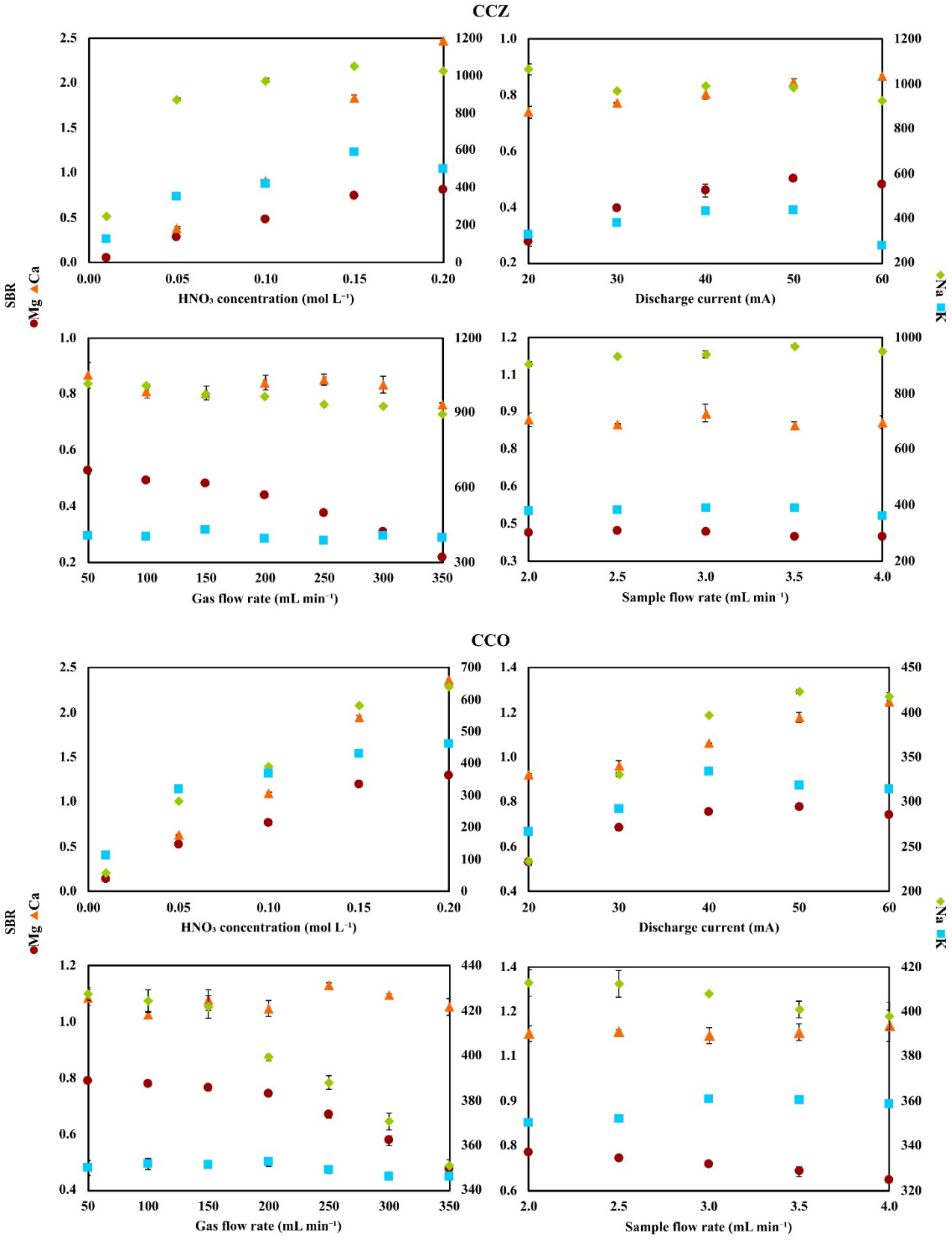

Fig. SI1. The impact of the HNO_3 concentration, the discharge current, the gas flow rate, and the sample flow rate on the SBR values of the analytical lines of the studied elements for the CCZ and CCO samples.

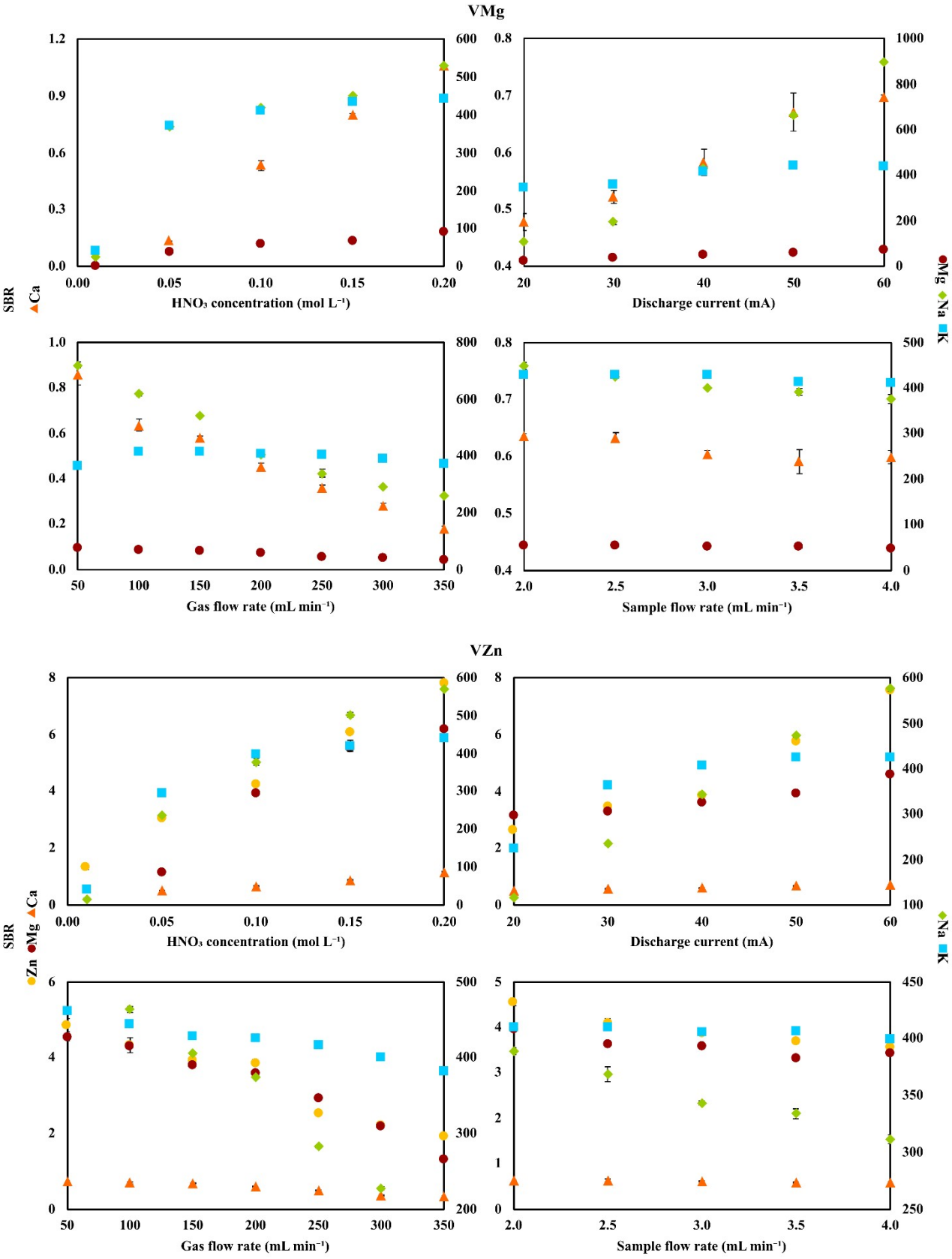

Fig. SI2. The impact of the HNO_3 concentration, the discharge current, the gas flow rate, and the sample flow rate on the SBR values of the analytical lines of the studied elements for the VMg and VZn samples.

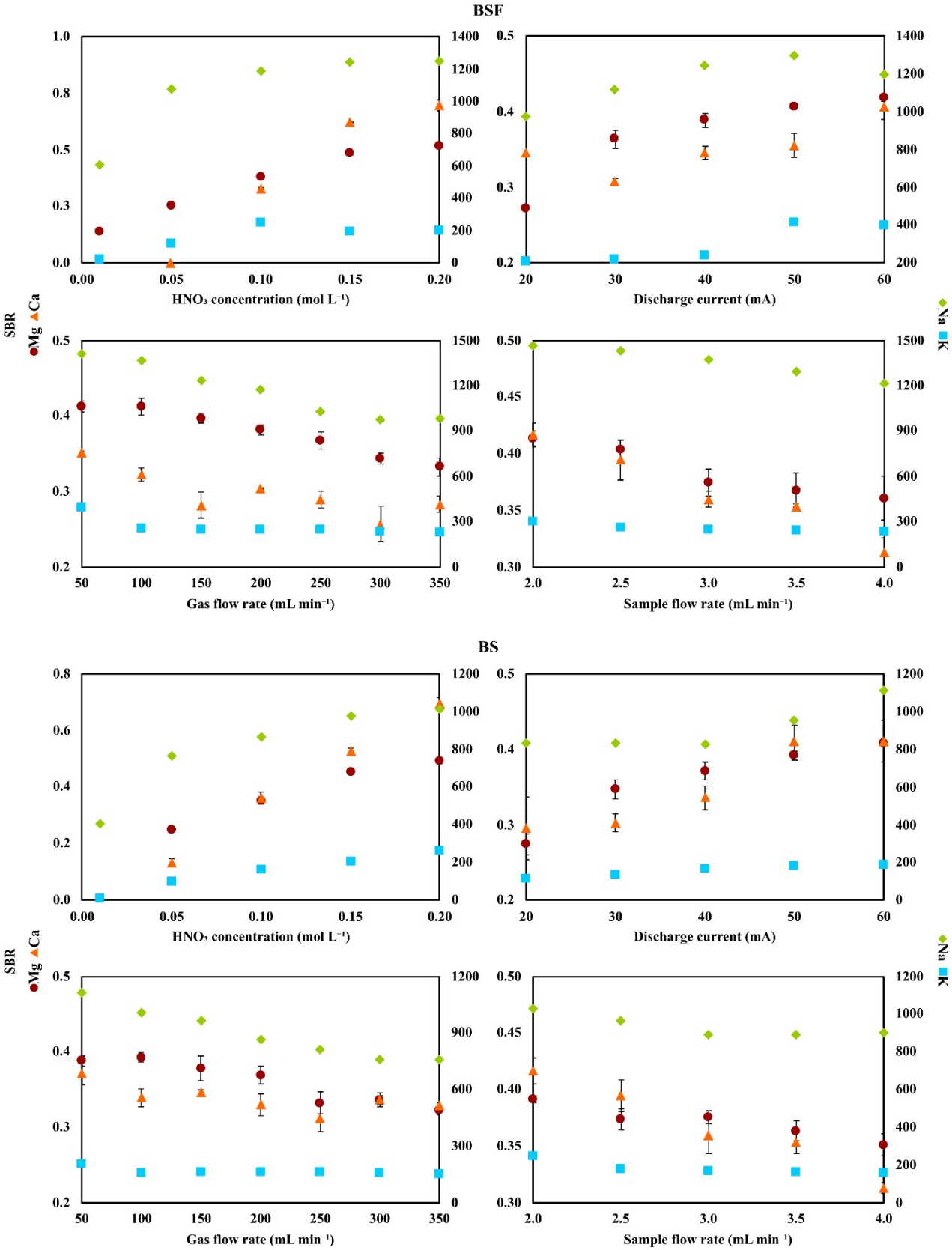

Fig. SI3. The impact of the HNO_3 concentration, the discharge current, the gas flow rate, and the sample flow rate on the SBR values of the analytical lines of the studied elements for the BSF and BS samples.

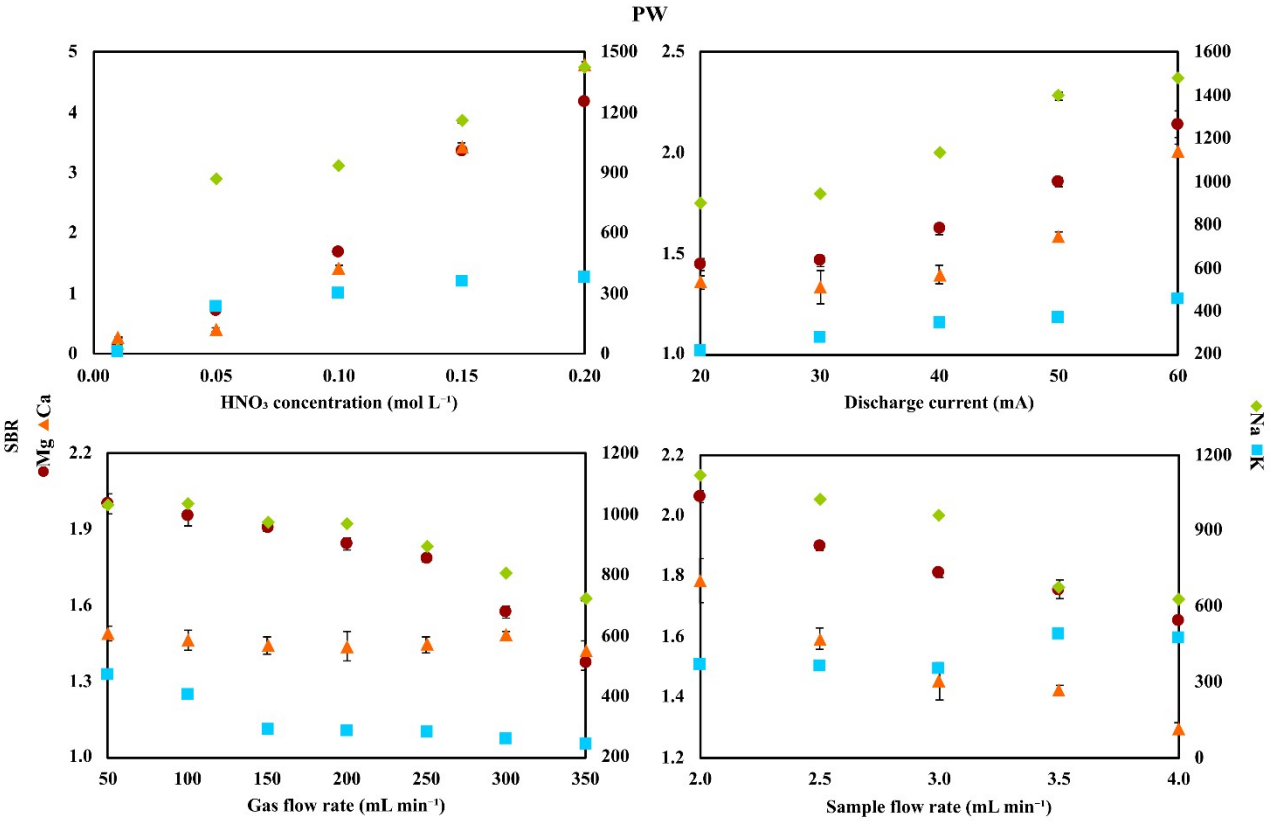

Fig. SI4. The impact of the HNO_3 concentration, the discharge current, the gas flow rate, and the sample flow rate on the SBR values of the analytical lines of the studied elements for the PW sample solution.

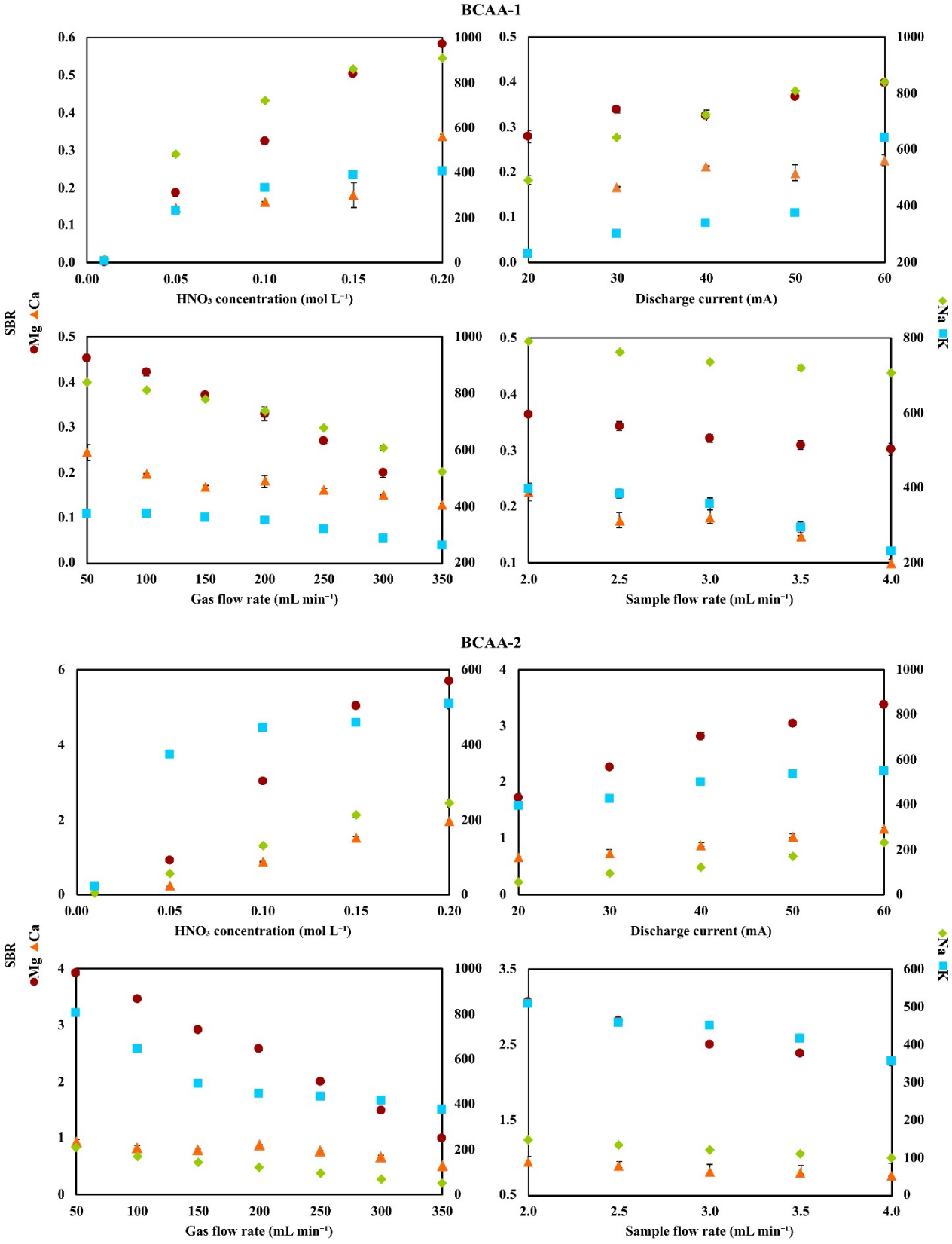

Fig. SI5. The impact of the HNO_3 concentration, the discharge current, the gas flow rate, and the sample flow rate on the SBR values of the analytical lines of the studied elements for the BCAA-1 and BCAA-2 samples.

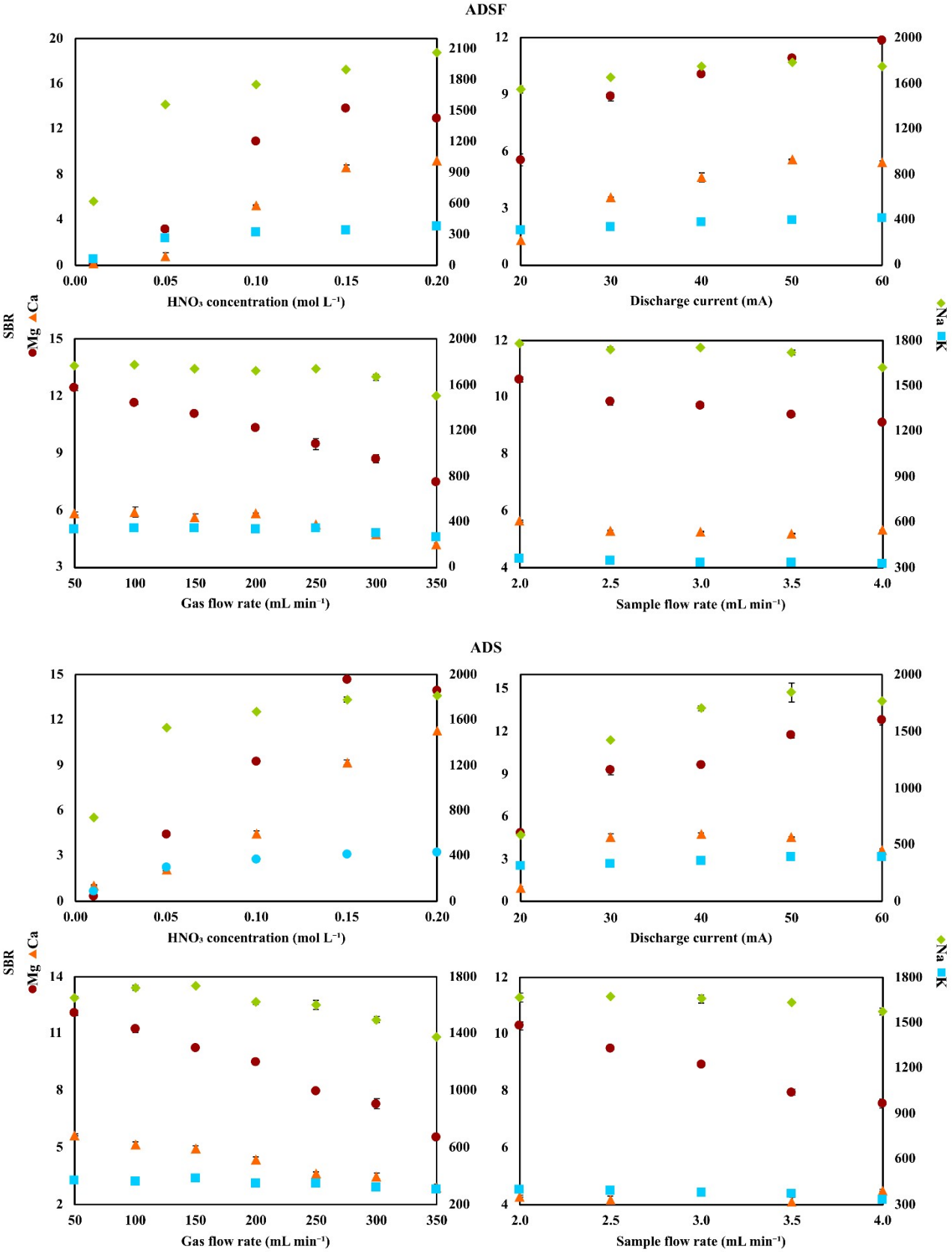

Fig. SI6. The impact of the HNO_3 concentration, the discharge current, the gas flow rate, and the sample flow rate on the SBR values of the analytical lines of the studied elements for the AMSF and AMS samples.

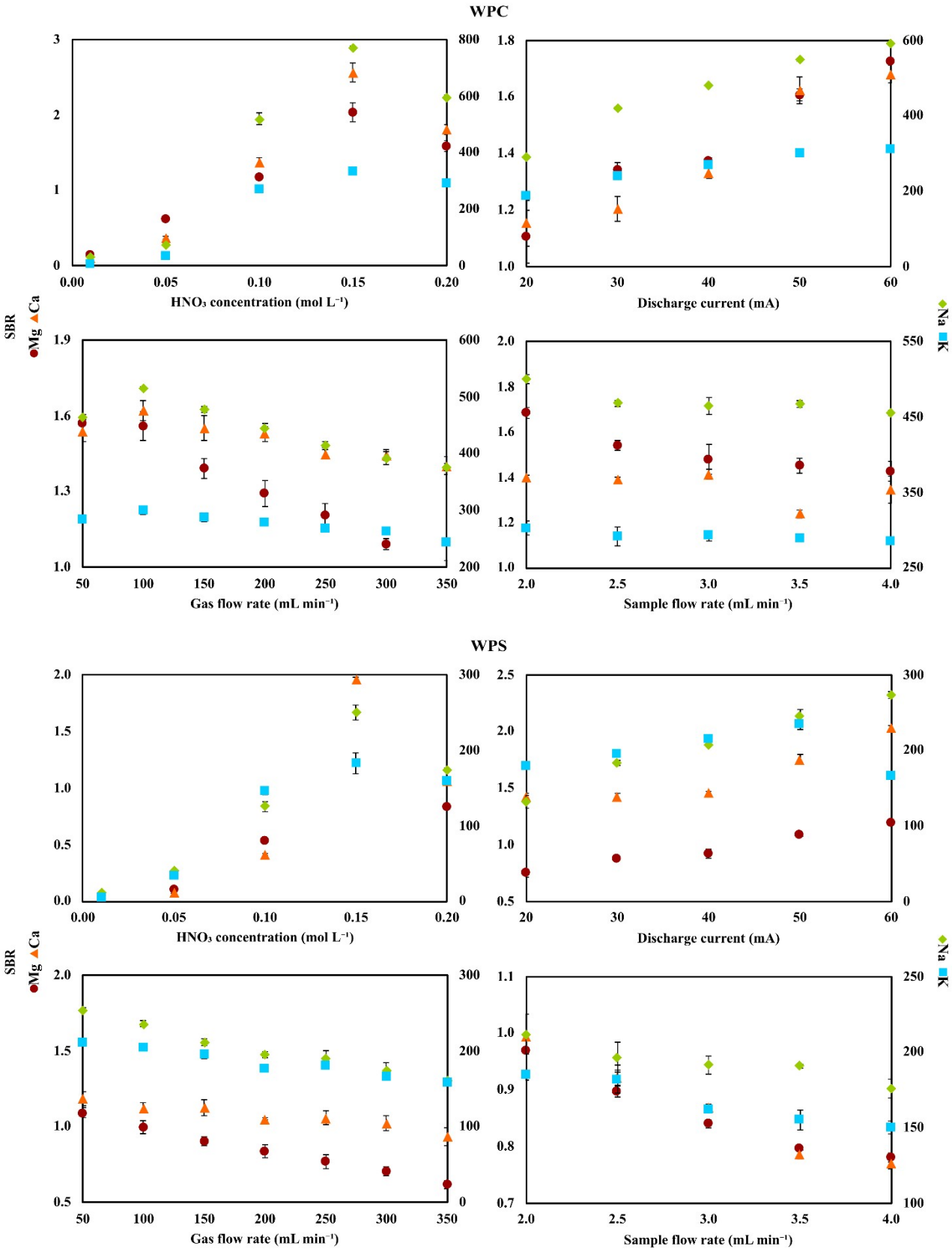

Fig. SI7. The impact of the HNO_3 concentration, the discharge current, the gas flow rate, and the sample flow rate on the SBR values of the analytical lines of the studied elements for the WPC and WPS samples.