Supporting Information

Real-Time Elemental Analysis of Liquids for Process Monitoring Using Laser-Induced Breakdown Spectroscopy with a Liquid Wheel Sampling Approach

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Figures: 4

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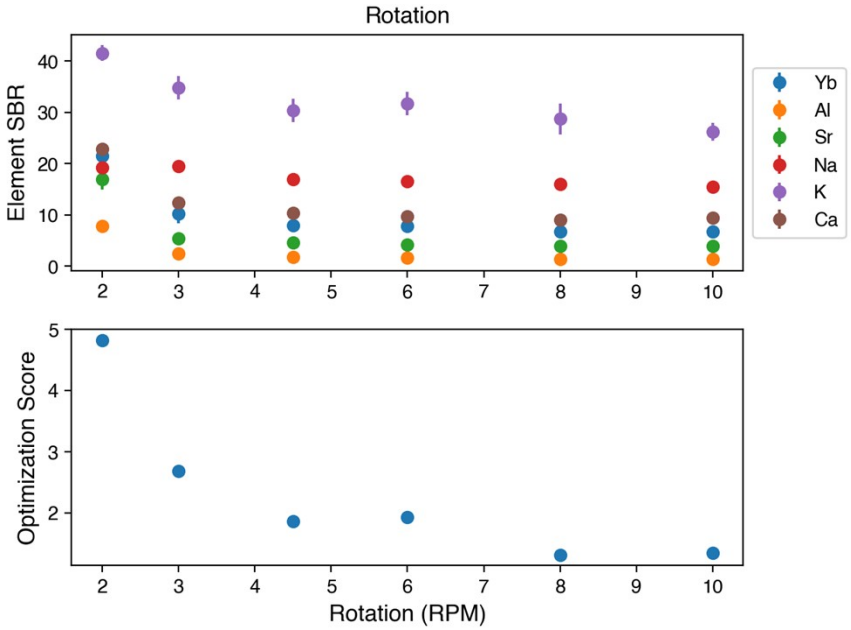

Fig. S1. (Top) SBR and (bottom) optimization score of analyte signals versus wheel rotation speed.

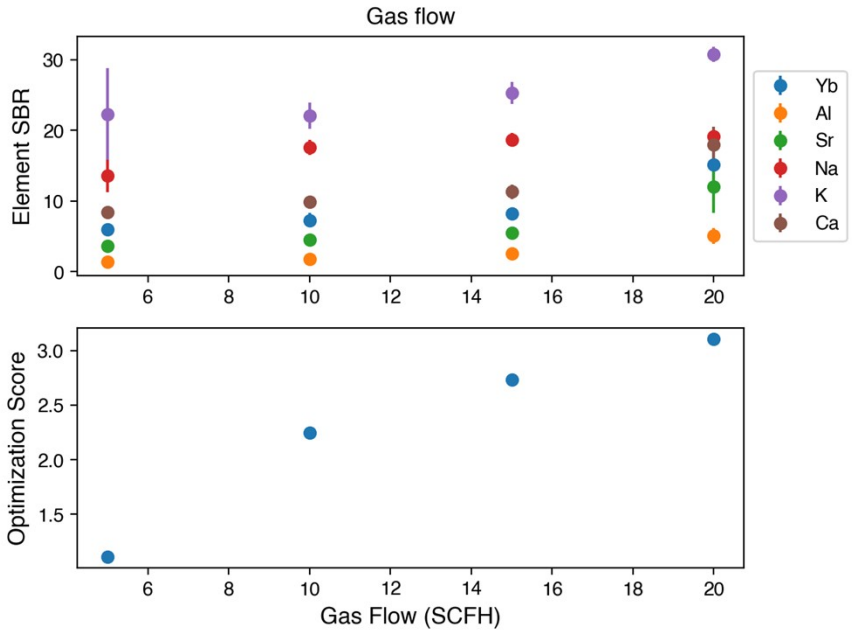

Fig. S2. (Top) SBR and (bottom) optimization score of analyte signals versus sheath gas flow rate.

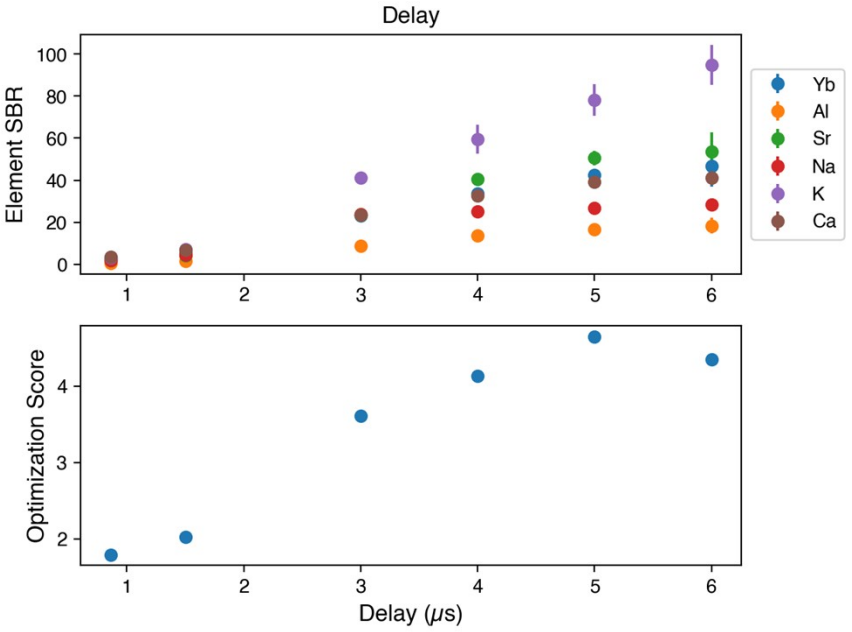

Fig. S3. (Top) SBR and (bottom) optimization score of analyte signals versus delay time.

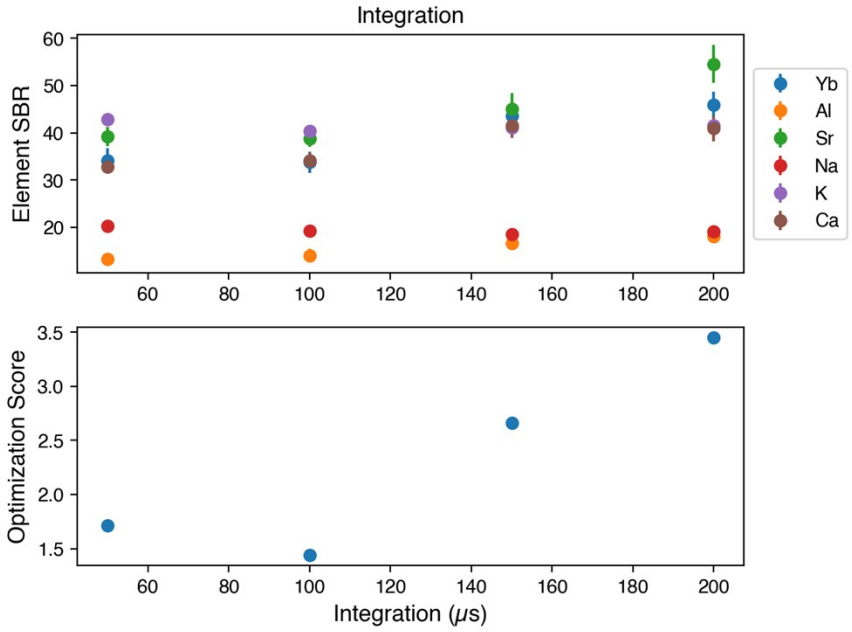

Fig. S4. (Top) SBR and (bottom) optimization score of analyte signals versus integration time.

Table S1. ICP-OES calibration sample analysis.

Analyte	Concentration (μg mL^{-1})	
	ICP-OES mean	Standard deviation
Na	219.8	6.375
Al	428.6	33.86
K	317.0	26.31
Ca	347.6	12.86
Ti	858.2	40.34
Sr	363.9	31.29
Mo	906.7	23.57
Yb	799.1	32.76

Table S2. PLSR model information.

Analyte	Wavelengths (nm)	Number of latent variables
Na	300–700	2
Al	350–400	6
K	300–800	3
Ca	300–400	2
Ti	300–350	7
Sr	300–500	4
Mo	525–575	8
Yb	300–400	6

Table S3. Real-time PLSR model information.

Analyte	Wavelengths (nm)	Number of latent variables
Na	300–700	4
K	300–800	4
Ca	300–400	2
Sr	300–500	4

Note: spectra were normalized to total light.