Supplementary information

A novel LIBS method for quantitative and high-throughput analysis of macro- and micronutrients in plants

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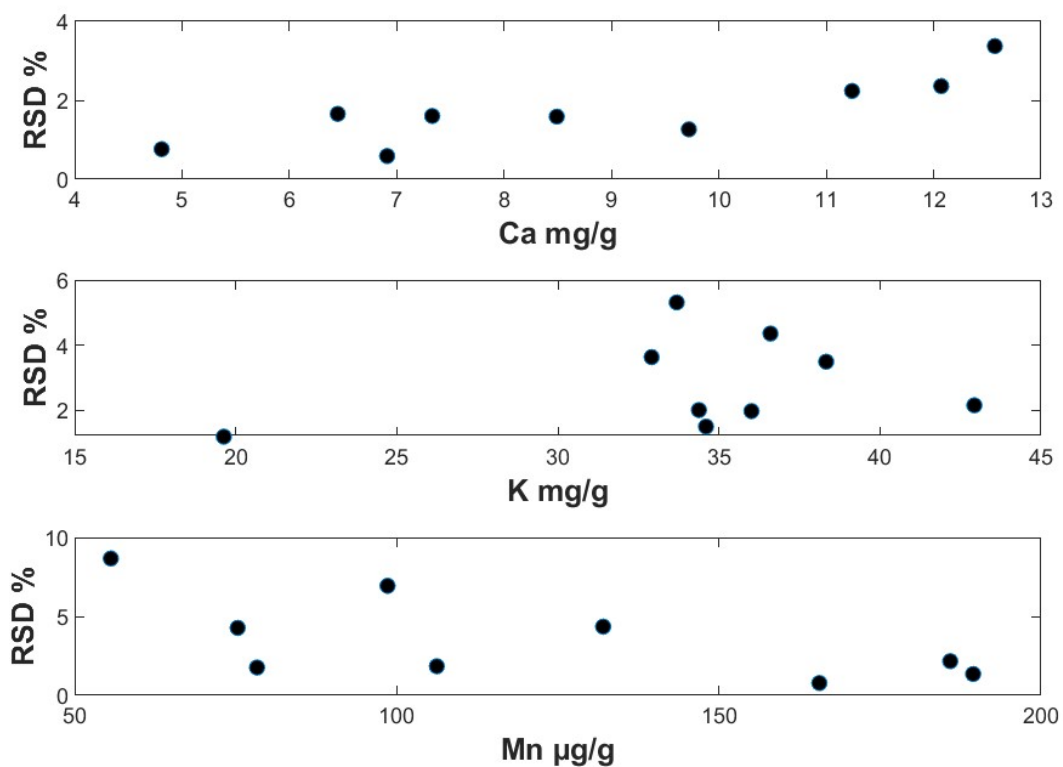
Fig. 1 Baseline subtracted RSD for 9 wheat samples measured in triplicates based on peak height for the Ca 317.4 emission line, the K 404.4 emission line and the Mn 257.6 emission line.

Table 1 Selected emission lines used in the prediction models. Column 1: the nutrient, column 2: the included emission lines, column 3: the ranges that are included in the models and column 4: the pre-processing (PP) method. Mean-centering (MC), multivariate scatter correction (MSC) or standard normal variate (SNV).

Nutrient	Emission lines (nm)								Range included in model (nm)	PP
Ca	184.0	315.9	317.9	370.6	373.7	393.4	396.8	422.7	314.6-320 369-374.2 392-394.5 396.2-397.3 422.1-423.5	MC
K	404.5								403.8-405.2	MC
Mg	279.6	280.2	285.2						278-281.6 284.6-186	MC
P	213.6	214.9							190-240	SNV, MC
S	180.7								180-210	MSC, MC (mixed) MC (faba and wheat)
Cu	324.7	327.4							324.2-325 326.9-327.5	MC
B	206.7	208.9							206-207.2 208.7-209.2	MC
Mn	257.6	259.4	260.6						257-261.5	MC
Fe	238.2	259.9	274.7						237.8-239 258.9-260.3 273.7-276.7	MSC, MC
Zn	202.6	213.8							202-203 212.8-213	MC