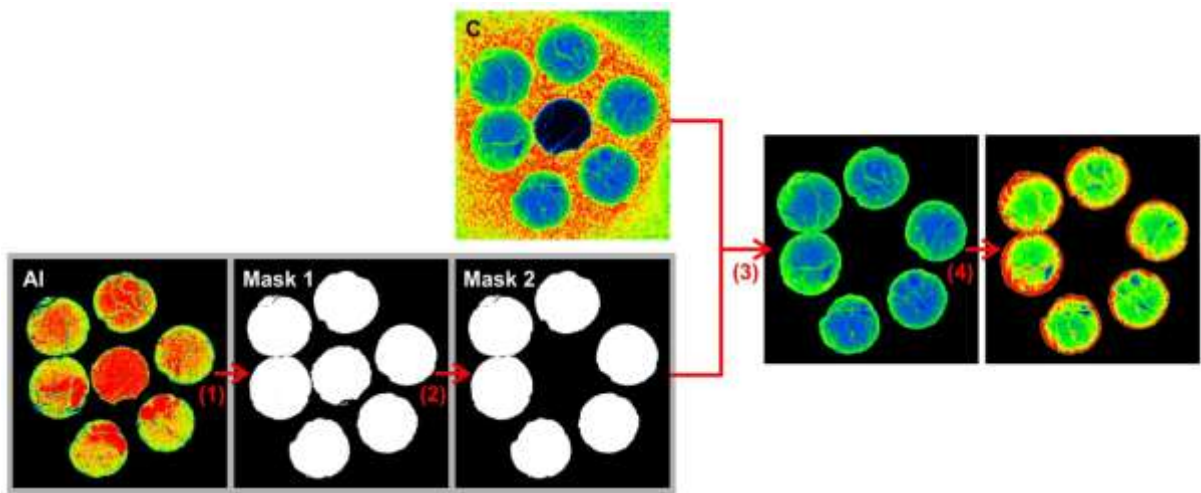


Supplementary Table 1: Parameters of the used Spectrometers.

Parameters	Shamrock 500	Shamrock 300	Maya Pro
Entrance slit (μm)	50	40	10 μm
Grating (lines/mm)	600	1200	2400
Spectral resolution	0.15 nm	0.15 nm	0.1
Spectral range	221-311 nm	297-368 nm	150-255 nm
Delay (ns)	1500	2000	--
Gate width (ns)	1000	5000	7 ms
Gain	500	500	--

Supplementary Table 2: Characteristics of selected emission lines.

Element	Species	Wavelength (nm)
S	(I)	180.73
C	(I)	247.85
V	(II)	291.11
Ni	(I)	352.45



Supplementary Figure 1. Example of workflow for obtaining the quantitative C map from the Al mask: (1) Al map (2) binarization of Al map and removing of the central grain (3) Extraction of the C intensities on pixels where Mask 2 is white (4) Conversion of C intensities to concentrations.