

Manual annotation was performed on the selected particles from the following images spread along the core: TRE\_07, TRE\_19\_TRE\_31, TRE\_43, TRE\_55, TRE\_67, TRE\_79, TRE\_383, TRE\_395 (TRE calibration series), and BIL\_121, BIL\_127, BIL\_139, BIL\_143, BIL\_166, BIL\_01, BIL\_11 (BIL calibration series). Particles identified by at least one operator as a charcoal was labeled as well. The comparison of data generated by the annotation and manual counting for the calibration series showed a similar number of particles, suggesting that charcoal particles were globally detected.

According to that correlation, several colorimetric parameters were compared between charcoal and non-charcoal populations:  $R_{mean}$ ,  $G_{mean}$ ,  $B_{mean}$ ,  $R+G_{mean}$ ,  $R+G-B_{mean}$ ,  $R/G_{mean}$ ,  $R/B_{mean}$ ,  $R_{min}$ ,  $B_{min}$ ,  $R_{max}-R_{min}$ ,  $B_{max}-B_{min}$ . A colorimetric score was defined as  $(R + (R + G - B)) * R/G * R/B$ , and a contrast score as  $G_{min} * B_{min} + \Delta G_{max-min} * \Delta B_{max-min}$ .

Distribution histograms were performed for every parameter, at first for each image, then data were combined for a calibration series, and finally for the whole dataset of calibration images: R/B [0.95-1.50], R/G [0.95-1.20], R [47-84], R+G-B [50-89], colorimetric score [112-280], contrast score [3300- $\infty$ ]

R/B		R/G		R		R+G-B		Colorimetric score		Contrast score
min	max	min	max	min	max	min	max	min	max	min
0.95	1.50	0.95	1.20	47	84	50	89	112	280	3300

Every single image chosen for calibrating the filter was finely analyzed to determine which particle was kept or rejected by the filter. Statistical analysis was performed on particles annotated as charcoal to determine the selectivity of the filter. 60-70% of charcoals particles are detected among the selected particles, and the global number of filtered particles is in the same order than charcoals manually estimated. The percentage of recovery is even closer concerning area estimation, based on a comparison with the estimated area of particles annotated as charcoals.