Product: Titanium dioxide

Chemical composition:

ICP-OES (MPX VARIAN) analysis of the following elements : Ag, Al, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, K, La, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pd, Pt, Rh, Si, Sm, Sr, Ta, Tb, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr.

Only 4 elements were detected at trace level:

Chemical element	Al	Ca	Na	Si
Mass fraction (%)	< 100 ppm	< 100 ppm	< 100 ppm	< 100 ppm

2 other elements were detected at trace level but are not considered relevant because of the mandatory milling step of the powder at SFC laboratories: cobalt (< 100 ppm) and tungsten (225 ppm). This milling method always add cobalt and tungsten to the sample in these proportion on a 0 trace containing sample.

Traces of mercury has been searched more specifically by ICP-MS (Hg is volatile during mineralization of the sample for ICP-OES analysis), the result showed no traces of mercury (< 200 ppb, close to detection threshold).

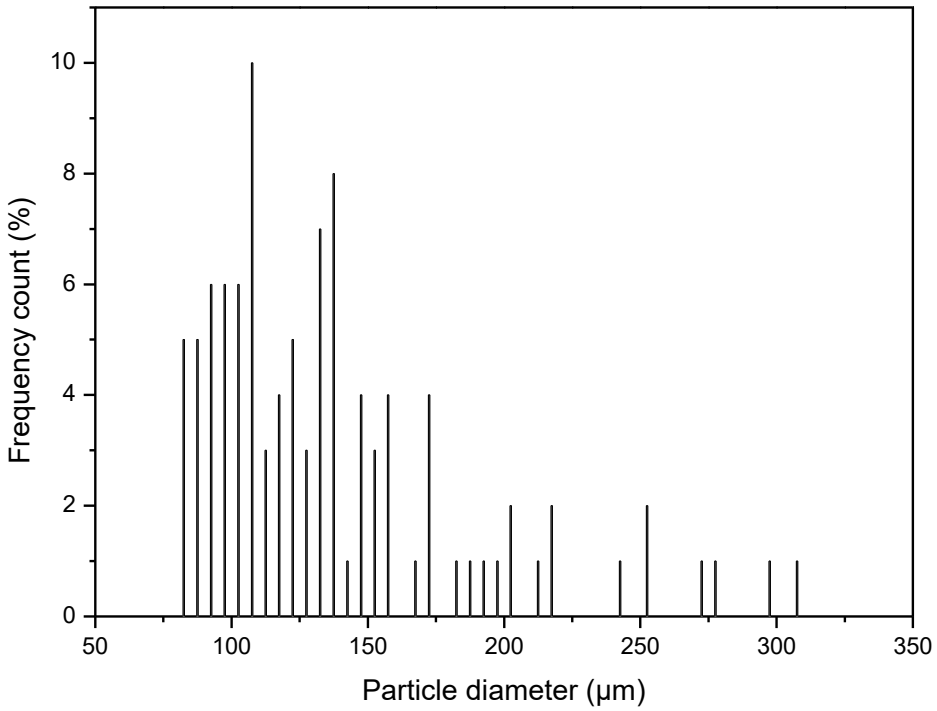
Physical properties:

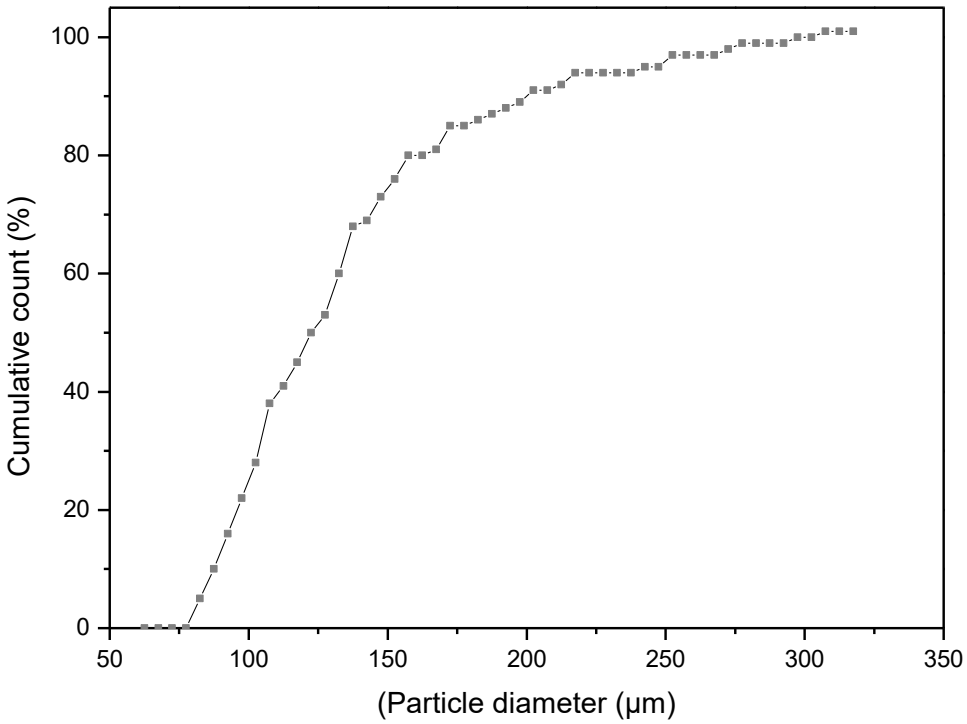
Particle size distribution D10* (µm)	**Particle size distribution D50* (µm)**	**Particle size distribution D90* (µm)**	**Flowability** (s/50 g)**	**Free density** (kg/L)**	**Humidity content*** (%)**
85	125	200	77	1.940	0.09

*Image analysis on SEM microscope capture X50 (figure 1 and 2), number distribution

** Measured by Hall method, ASTM B213 standard (50 g, 20°C).

***Measured with humidity scale at 80°C.


Frequency count (%)
0
2
4
6
8
10
50
100
150
200
250
300
350
Particle diameter (µm)


Cumulative count (%)
0
20
40
60
80
100
50
100
150
200
250
300
350
(Particle diameter (µm)

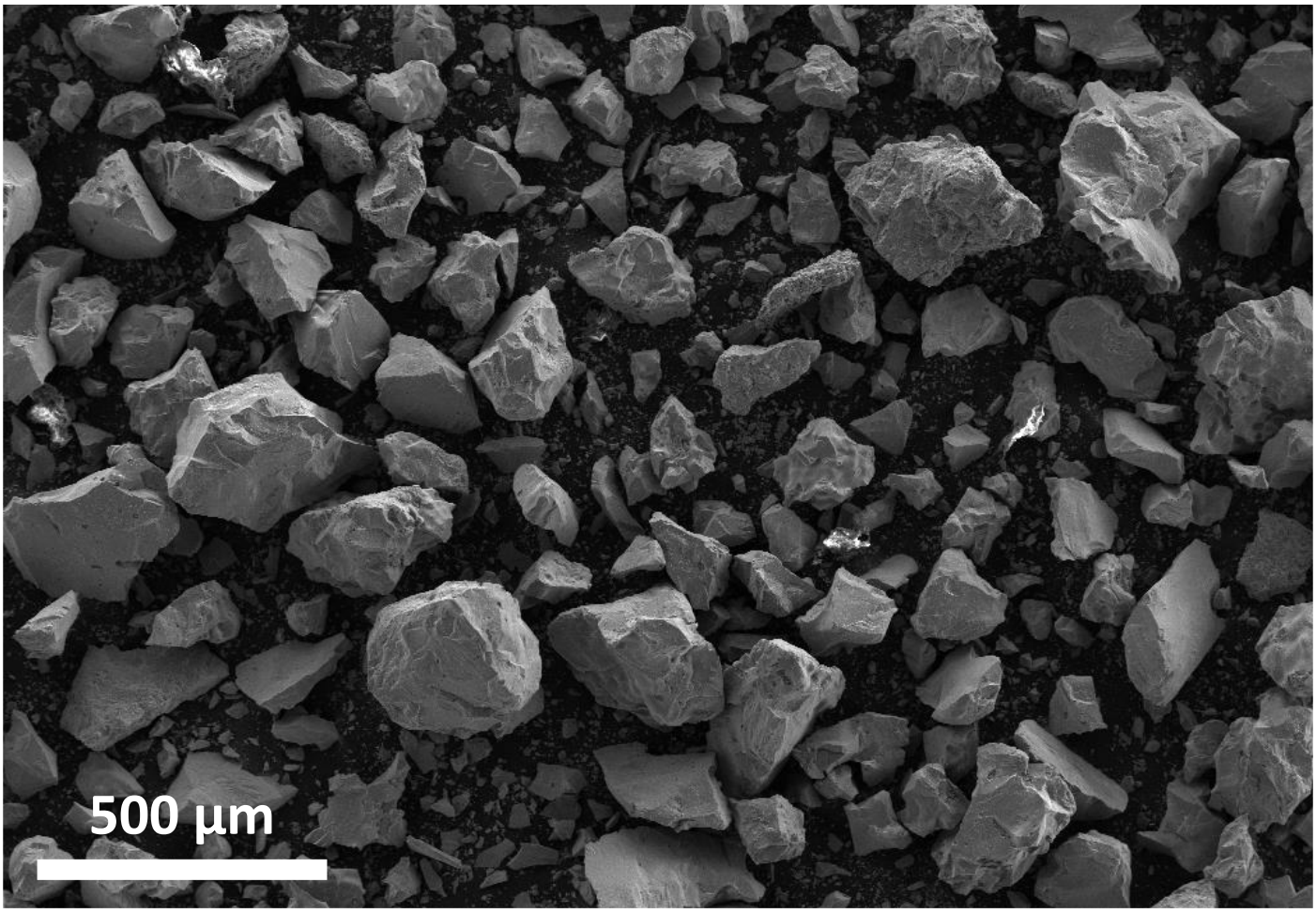


Figure 1. SEM picture of titanium dioxide at 50 x magnification