

Particle Size Analysis Report

ID: 6461 Sample: 20-Average Time: 2025-12-10 17:10:07 Sample Owner:

Physical Characteristic

Brightness	97%	Caco3	99.9%
Bulk Density	0.82g/cm3	Cao	56.6%
Moisture	0.02%	Mgo	0.01%

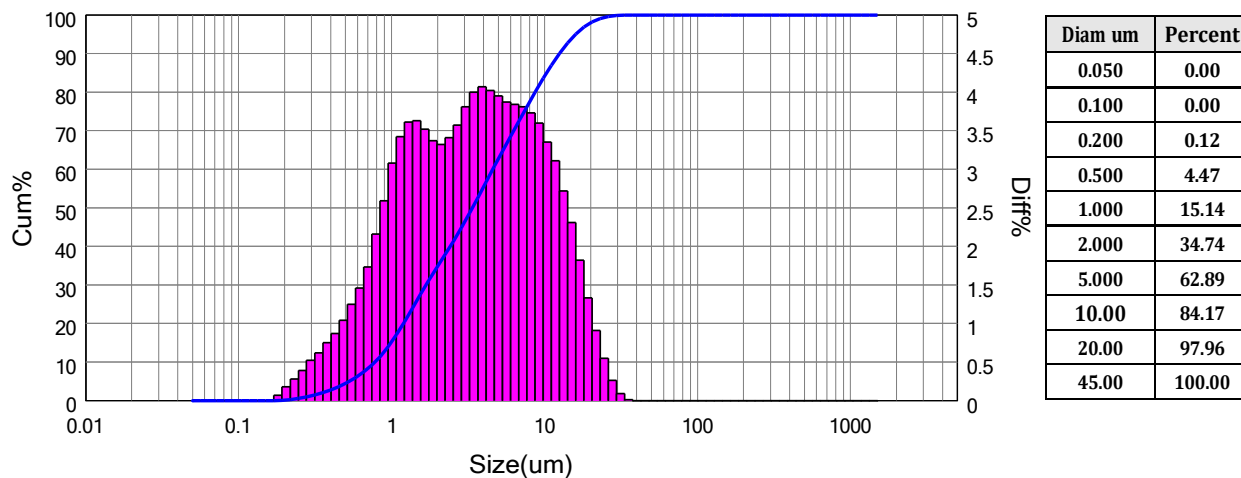
Chemical Analysis

Fe2o3	0.001%
Sio2	0.001%
L.O.I	43.89%

D[4,3]: 5.193 um D[3,2]: 1.814 um SSA: 1225 m²/kg OBS.: 9.11 %

D[2,1]: 0.717 um D[1,0]: 0.415 um SPAN: 3.468 Residual: 1.337 %

D03 = 0.413 um D06 = 0.583 um D10 = 0.781 um D16 = 1.034 um D25 = 1.419 um
D75 = 7.360 um D50 = 3.381 um D90 = 12.50 um D97 = 18.26 um D98 = 20.06 um



Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%
0.050-0.056	0.00	0.00	0.658-0.743	1.73	9.16	8.660-9.791	3.60	83.54	113.9-128.8	0.00	100.00
0.056-0.063	0.00	0.00	0.743-0.841	2.16	11.32	9.791-11.06	3.35	86.89	128.8-145.6	0.00	100.00
0.063-0.072	0.00	0.00	0.841-0.950	2.59	13.91	11.06-12.51	3.11	90.00	145.6-164.7	0.00	100.00
0.072-0.081	0.00	0.00	0.950-1.075	3.08	16.99	12.51-14.14	2.72	92.72	164.7-186.2	0.00	100.00
0.081-0.092	0.00	0.00	1.075-1.215	3.42	20.41	14.14-15.99	2.31	95.03	186.2-210.5	0.00	100.00
0.092-0.104	0.00	0.00	1.215-1.374	3.61	24.02	15.99-18.07	1.82	96.85	210.5-238.0	0.00	100.00
0.104-0.118	0.00	0.00	1.374-1.553	3.63	27.65	18.07-20.44	1.33	98.18	238.0-269.0	0.00	100.00
0.118-0.133	0.00	0.00	1.553-1.756	3.52	31.17	20.44-23.11	0.91	99.09	269.0-304.2	0.00	100.00

Adel Abo Elfadl

Manager

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Stearic Acid Thermal Analysis

ID: 6149

Time: 2026-10-29 09:50

Sample Owner:

Physical Characteristic

Appearance	White Granules
Titer	105°C
Moisture	0.001%

Chemical Analysis

Acid Value	210Mg KOH/g
Iodine Value	0.65g I/100g
Unsap	0.1%

Stearic acid is commonly used as a surface treatment to improve the hydrophobicity and dispersion of calcium carbonate. This analysis aims to determine the percentage of stearic acid coating by applying thermal treatment and measuring mass loss.

- Dry treatment was performed at 105 °C for 1 hours.
- Thermal treatment was performed at 350 °C for 1 hours and half
- Equipment: Muffle furnace.
- Measurement: Initial sample weight (m_0) and final weight (m_1) recorded.

Results

Initial Weight (g)	Final Weight (g)	Δm (g)	Stearic Acid %
50	49.625	0.375	0.75

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