

Politecnico di Torino - Dipartimento Energia

Efficiency Assessment

Test No.: 5015 *Petitioner:* Aerosol Technology Lab
Date: 15/11/2023 *Medium:* n° 1 - PAN15CNC
Measurement no.: 1 *Manufacturer:* USP-Sao Carlos
Area [m²]: 0.001 *Medium type:* Polyacrylonitrile+cellulose nanocrystals
Filter class: *Lot:*
Aerosol: DEHS *Air flow rate through filter:* 0.0001256[m³/s] (0.45[m³/h])
Sampling cycles: 6 *Filter air flow resistance [Pa]:* 537
Sampling cycle time [s]: 45 *Air flow rate entering OPC [cm³/min]:* 1000
Dilution factor: 1 *Correlation ratio:* 971-11/15/2023 1:45:25 PM-Mas
Neutralizer: *OPC:* OPS 3330 ip121
*Conditioned / Discharged*No *Test environment:* 22.2 °C /22% /98400Pa
Remarks: TSI OPS3330, 0.452 m3h, 7.5 l/min
 Adattatore Diameter 4mm / 10cm/s, DeltaP= 537Pa,
 Pressione all'interno del condotto=10Pa

Size class [µm]	Particle concentration [#/dm³]		Efficiency [%]	Deviation [+/-]	Uncertainty [+/-]	Meaningful cycles
	Upstream	Downstream				
0.30 - 0.40 µm	20 349	1 470	93.28	0.43	0.45	6
0.40 - 0.55 µm	14 646	1 020	93.53	0.51	0.54	6
0.55 - 0.70 µm	10 475	689	93.90	0.27	0.28	6
0.70 - 1.00 µm	14 436	828	94.57	0.29	0.30	6
1.00 - 1.30 µm	4 837	214	95.72	0.49	0.51	6
1.30 - 1.60 µm	7 941	319	96.12	0.47	0.50	6
1.60 - 2.20 µm	8 659	213	97.51	0.28	0.30	6
2.20 - 3.00 µm	2 947	31	98.88	0.11	0.12	6
3.00 - 4.00 µm	1 319	2	99.81	0.11	0.11	6
4.00 - 5.50 µm	303	0	100.00	0.00	0.00	6
5.50 - 7.00 µm	22	0	100.00	0.00	0.00	6
7.00 - 10.00 µm	7	0	100.00	0.00	0.00	6

