

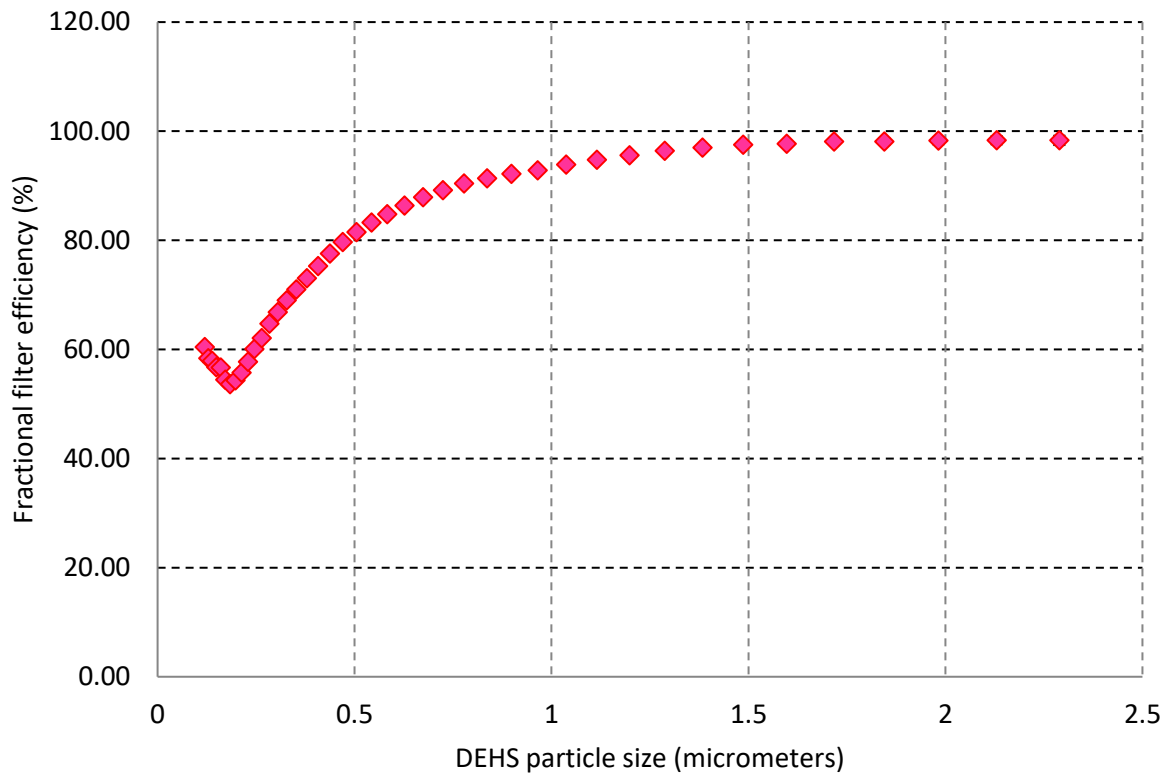
Test protocol	
Test code	PAN_1 JHR EN1822
Type of test:	Flat sheet sample according to EN 1822 (integral values)
Customer / project:	Navigate
Test laboratory:	Technical University of Liberec, CXI, INTEC
Tester:	Jakub Hruza
Date of test:	22 September 2020

Test parameters	Value	Unit
filter area:	100	cm ²
face velocity:	5.3	cm/sec
dust/aerosol:	DEHS	-
discharge:	no	-
downstream test duration	60	sec
total volume flow:	32.00	l/min
particle size range	0,12 – 3,5	µm
number of test samples	2.00	-
temperature	21	°C
relative humidity	54	%
atmospheric pressure	1010	mbar

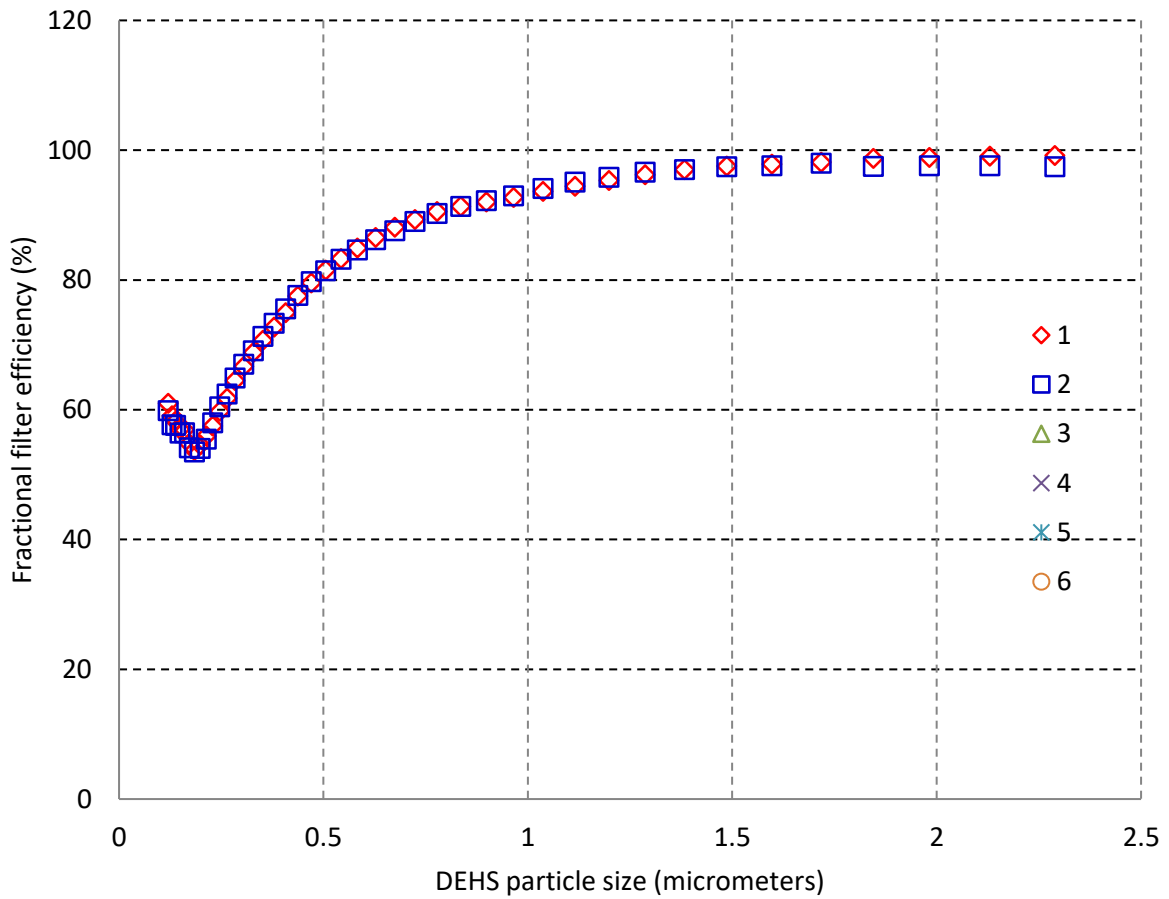
Filter medium	
Manufacturer:	Navigate
Model:	Ultra
Sample description:	

Test results	Mean value	Deviation	Unit
dP_Test start:	31.0	1.00	Pa
dP_Test end:	38.5	1.50	Pa
Filter efficiency for MPPS	53.614	0.1375	%
Mean filter efficiency for particle range 120-500 nm	64.111	0.0314	%
Estimated filtration class	no		

Mean fractional filter efficiency of test sample



Fractional filter efficiency of all test samples



Classification according to EN 1822		Efficiency of MPPS DEHS particles (%)
E10		≥ 85
E11		≥ 95
E12		$\geq 99,5$
H13		$\geq 99,95$
H14		$\geq 99,995$
U15		$\geq 99,9995$
U16		$\geq 99,99995$
U17		$\geq 99,999995$

sample		1	2	3	4	5	6		
X [μm]	E [%]	E [%]	E [%]	E [%]	E [%]	E [%]		prumer	smodch
0.12	60.998477	59.8695						60.43	0.56
0.129	59.056481	57.68355						58.37	0.69
0.138	58.202795	57.57756						57.89	0.31
0.149	56.975448	56.41529						56.70	0.28
0.16	56.870401	56.41922						56.64	0.23
0.172	54.785391	54.11173						54.45	0.34
0.184	53.751157	53.47608						53.61	0.14
0.198	54.551781	54.0349						54.29	0.26
0.213	55.960857	55.44551						55.70	0.26
0.229	57.483964	57.96174						57.72	0.24
0.246	59.728237	60.42926						60.08	0.35
0.264	61.762739	62.40179						62.08	0.32
0.284	64.476991	64.8914						64.68	0.21
0.305	66.639927	67.01941						66.83	0.19
0.328	68.826637	69.0908						68.96	0.13
0.352	70.68971	71.29506						70.99	0.30
0.379	72.743373	73.29277						73.02	0.27
0.407	74.944313	75.53872						75.24	0.30
0.437	77.486498	77.60185						77.54	0.06
0.47	79.549065	79.72112						79.64	0.09
0.505	81.502818	81.39158						81.45	0.06
0.543	83.260222	83.16643						83.21	0.05
0.583	84.928239	84.63534						84.78	0.15
0.627	86.538161	86.18436						86.36	0.18
0.674	88.1124	87.57629						87.84	0.27
0.724	89.291575	88.98682						89.14	0.15
0.778	90.528013	90.26095						90.39	0.13
0.836	91.343146	91.31354						91.33	0.01
0.898	92.023247	92.22955						92.13	0.10
0.965	92.687548	92.96966						92.83	0.14
1.037	93.646689	94.0991						93.87	0.23
1.115	94.433875	95.07382						94.75	0.32
1.198	95.3272	95.83797						95.58	0.26

1.287	96.20048	96.58398	96.39	0.19
1.383	96.978461	96.98058	96.98	0.00
1.486	97.539786	97.43275	97.49	0.05
1.597	97.818	97.5702	97.69	0.12
1.717	98.151325	97.98365	98.07	0.08
1.845	98.712027	97.50853	98.11	0.60
1.982	98.893383	97.59405	98.24	0.65
2.13	99.079112	97.59385	98.34	0.74
2.289	99.170771	97.46253	98.32	0.85
2.46	99.004925	97.1071	98.06	0.95

min 53.75 53.48
mean 64.14 64.08

statistic	1	2	3	4	5	6	mean	smodch
dP test star	30.00	32.00					31.00	1
dp test end	37.00	40.00					38.50	1.5

E (MPPS)	53.751157	53.47608					53.61	0.137538
E (400 nm)	74.944313	75.53872					75.24	0.297202
Em (120-50)	64.14224095	64.07947					64.11	0.031387

