Print View

PMFT 1000

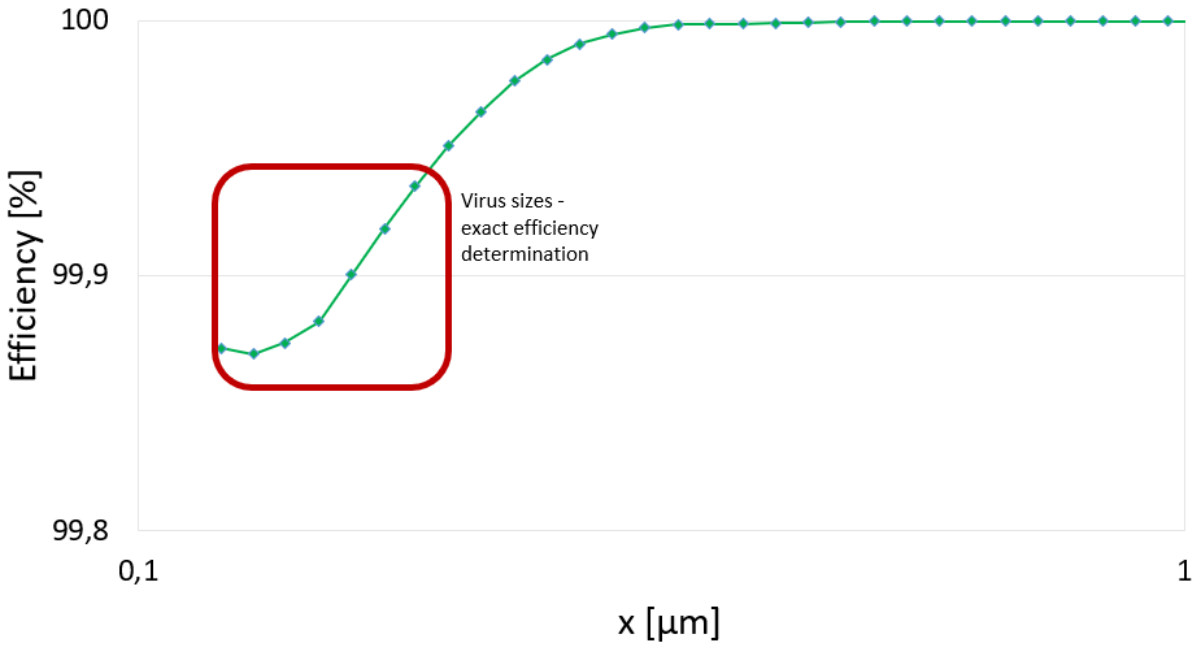
Test of respiratory masks better than the standard. Exact analysis of filter mask efficiency from 100 nm up to 40 µm. SARS-CoV-2 size approx. 120 nm - 160 nm.

Description

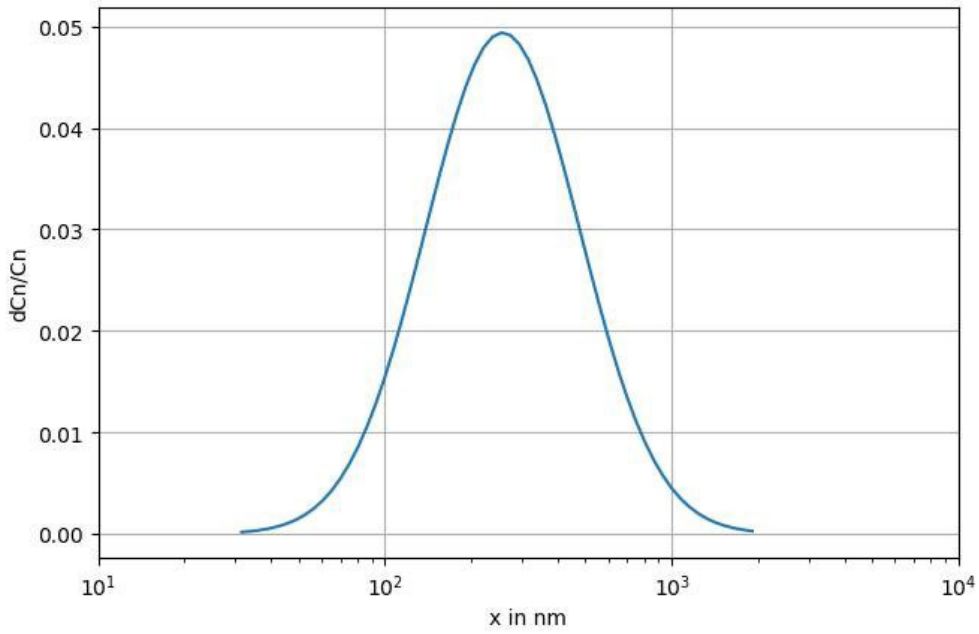
Test of respiratory masks better than the standard with additionally exact analysis of filter mask efficiency for SARS-CoV-2 (size approx. 120 nm up to 160 nm). 8 size channels for efficiency from 100nm and 180 nm.

- Test rig working principle better than EN 143, EN 149 and EN 13274-7
- Equivalent to GB 2626, 42 CFR 84 and ASTM 2299-3 by additional software option
- Test of community masks equivalent to CWA 17553
- Includes 2 Aerosl generators for oil and NaCl
- Testing of fractional efficiency, e.g. efficiency in whole size range of 100 nm up to 40 µm
- Exact analysis of filter and filter mask efficiency for SARS-CoV-2 (size approx. 120 nm up to 160 nm) in the size range between 100nm and 180 nm we have 8 size channels
- Future proof: Works with any kind of aerosol without adjustments
- Further measurement of differential pressure, e.g. as well within different face velocities to simulate measurement of breath resistance
- Face velocity adjustable between 1.5 - 50 cm/s
- Product capable of fast quality assurance AND continuous optimization in RD (display of size distribution)
- Individual face mask adapter for your product
- Attractive 2 years maintenance package for availability of test rig

PMFT 1000 is based on Palas® MFP 1000.

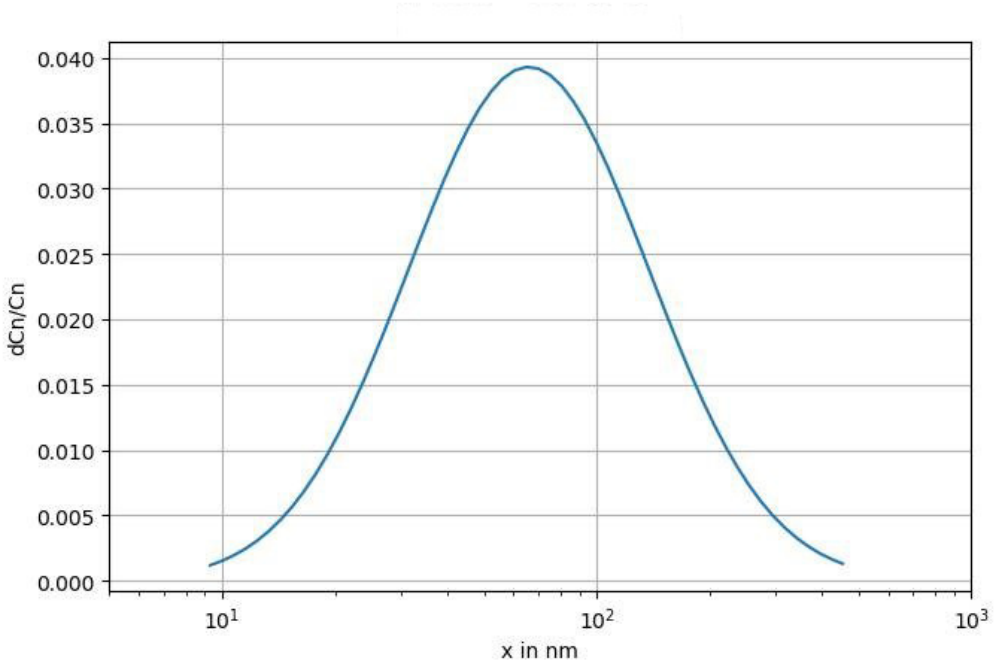


Pictured: Analysis of filter and filter mask efficiency for Corona Virus The size distribution of the test aerosol according to the standard is as follows:
Oil: Geom. standard deviation 1,8 | Median diameter 301 nm



: *DEHS size distribution* NaCl: Geom. standard deviation 2,1 | Median diameter 63nm

PMFT 1000



Pictured: NaCl size distribution

PMFT 1000

Benefits

- Test rig working principle better than GB 2626, EN 143, EN 149 and EN 13274-7
- Equivalent to GB 2626, 42 CFR 84 and ASTM 2299-3 by additional software option
- Includes 2 Aerosol generators for NaCl and oil
- Upgrade KIT for GB 2626, 42CFR84 and ASTM 2299-3 available

- Testing of fractional efficiency, e.g. efficiency in whole size range of 100 nm up to 40 µm
- Exact analysis of filter and filter mask efficiency for Corona Virus (size approx. 120 nm up to 160 nm) in the size range between 100nm and 180 nm we have 8 size channels
- Future proof: Works with any kind of aerosol without adjustments
- Simulation of breathe resistance by measurement of differential pressure at different face velocities

- Face velocity adjustable between 1.5 - 50 cm/s
- Product capable of fast quality assurance AND continuous optimization in RD (display of size distribution)
- Individual face mask adapter for your product
- Attractive 2 years maintenance package for availability of test rig

PMFT 1000

Datasheet

Parameter	*Description*
Measurement range (size)	0,10 – 40 µm
Volume flow	1 – 27 m^3/h (Druckbetrieb)
Power supply	115/230 V, 50/60 Hz
Dimensions	approx. 600 • 1,800 • 900 mm (W • H • D)
Installation conditions	10 –40 °C
Test conditions according to standard	19 – 23 °C
Inflow velocity	5 – 100 cm/s (others on request)
Differential pressure measurement	0 – 1200 Pa
Test area of the medium	100 cm^2
Aerosols	Dusts (e. g. SAE dusts), salts (e. g. NaCl, KCl), liquid aerosols (e. g. DEHS)
Aerosol concentrations	For SAE Fine without additional dilution up to 1,000 mg/m^3 (ISO A2 Fine)
Compressed air supply	6 – 8 bar

PMFT 1000

Applications

- Test of respiratory masks
- Exact analysis of filter mask efficiency for e.g. Corona Virus
- Filter testing for HEPA quality

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PMFT 1000

	EN 149	EN 13274-7	EN 13274-7	GB 2626	GB 2626	42 CFR 84	42 CFR 84
Aerosol	see EN 13274-7	NaCl	PaO	NaCl	PaO/DOP	NaCl	DOP
Mean diameter	see EN 13274-7	0.06 – 0.1 µm	0.29 – 0.45 µm	0.055 – 0.095 µm	0.165 – 0.205 µm	0.055 – 0.095 µm	0.165 – 0.205 µm
Standard deviation	see EN 13274-7	2 – 3	1.6 – 2.2	< 1.86 (by additional software module)	< 1.6 (by additional software module)	< 1.86 (by additional software module)	< 1.6 (by additional software module)
Concentration	see EN 13274-7	4 –12 mg/m³	15 – 25 mg/m³	< 200 mg/m³	(50 mg/m³) < 200 mg/m³	< 200 mg/m³	< 200 mg/m³
Discharge	-	-	-	required	required	required	required
Air flow	see EN 13274-7	95 l/min	95 l/min	85 ± 4 l/min	85 ± 4 l/min	85 ± 4 l/min	85 ± 4.25 l/min
Temperature	see EN 13274-7	22 ± 3 °C	-	25 ± 5 °C	25 ± 5 °C	25 ± 5 °C	25 ± 5 °C
Rel. humidity	see EN 13274-7	< 40 %	-	20 – 40 % (by compressed air)	-	20 – 40 % (by compressed air)	20 – 40 % (by compressed air)
Measurement device	see EN 13274-7	Sodium flame photometer	Light scattering photometer	particle detector	particle detector	Light scattering photometer	Light scattering photometer
Measuring time	see EN 13274-7	30 s	30 s	lowest eff. during loading	lowest eff. during loading	lowest eff. during loading	lowest eff. during loading
Pause time	see EN 13274-7	180 s	180 s	lowest eff. during loading	lowest eff. during loading	lowest eff. during loading	lowest eff. during loading
Exposition	120 mg	120 mg	120 mg	200 ± 5 mg	200 ± 5 mg	200 ± 5 mg	200 ± 5 mg
PMFT remarks	O.K.	O.K.	O.K.	O.K. with upgrade KIT	O.K. with upgrade KIT	O.K. with upgrade KIT	O.K. with upgrade KIT

Table 2: Overview of standards for face mask penetration testing