



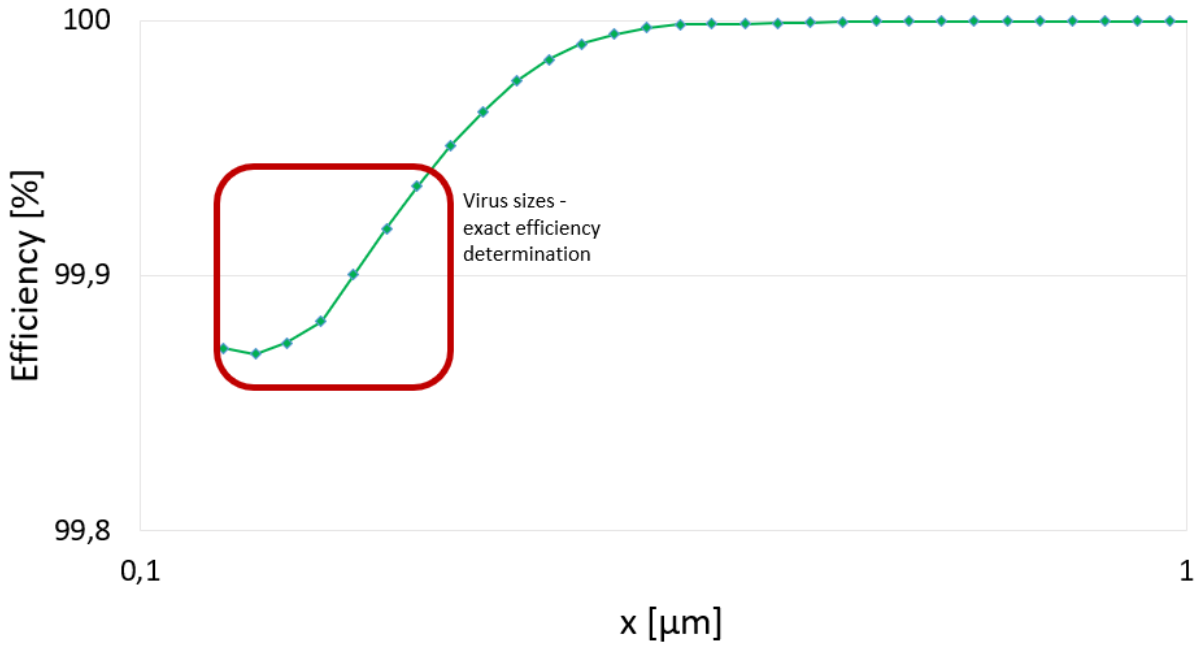
Test of respiratory masks better than the standard. Exact analysis of filter mask efficiency from 145 nm up to 40 µm. SARS-CoV-2 size approx. 120 nm - 160 nm.

Description

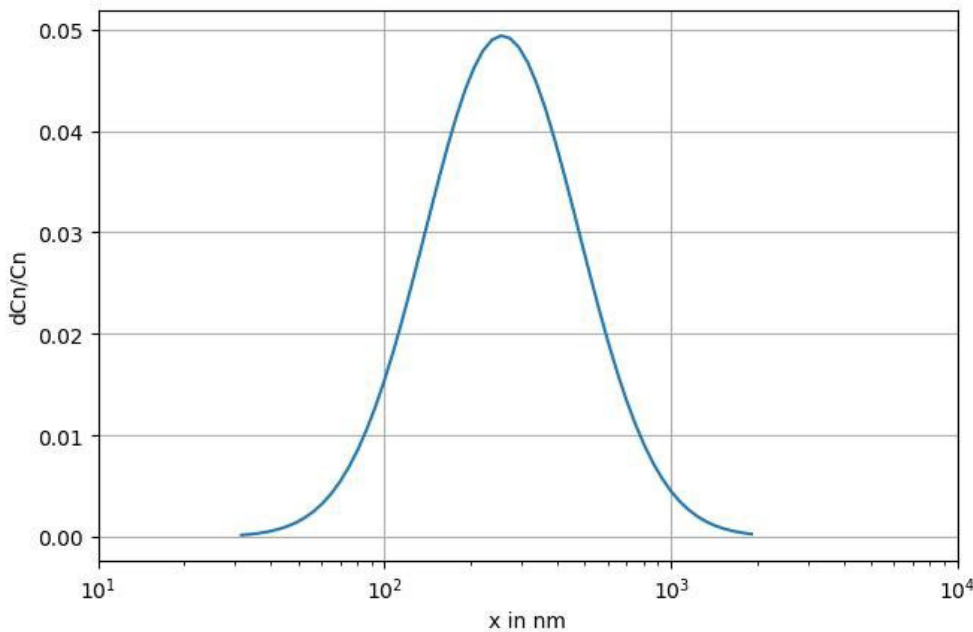
Test of respiratory masks better than the standard with additionally exact analysis of filter mask efficiency for SARS-CoV-2 (size approx. 120 nm up to 160 nm). Display of efficiency from 145 nm.

- 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 Aerosol generators for NaCl and for oil
- Testing of fractional efficiency, e.g. efficiency in whole size range of 145 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). Efficiency also displayed at 145 nm
- 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 test of breathing 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
- Can be operated as Mas Q-Check with optional Mas-Q-Head

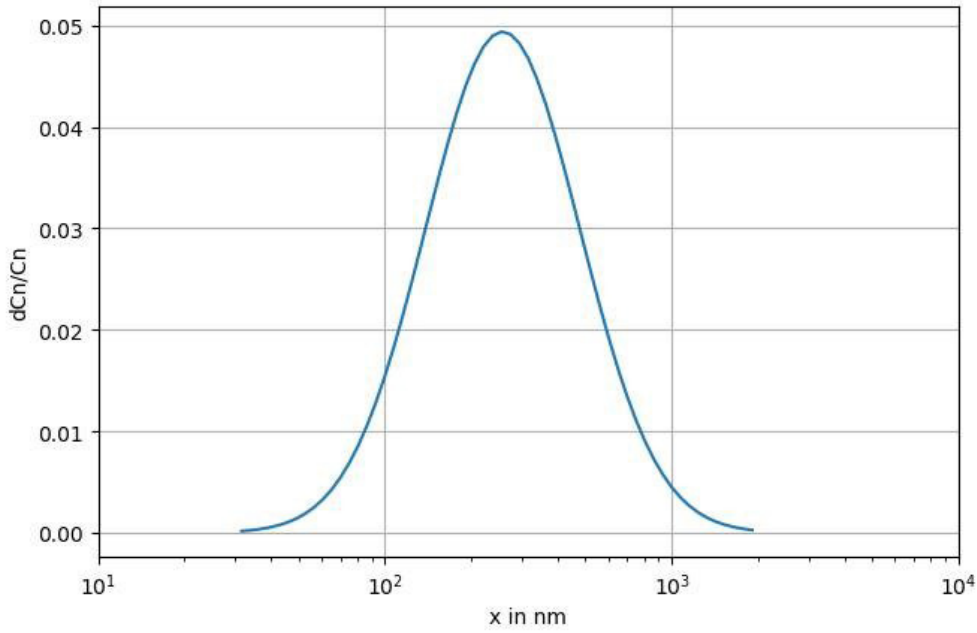
PMFT 1000 M is based on Palas® MFP 1000.



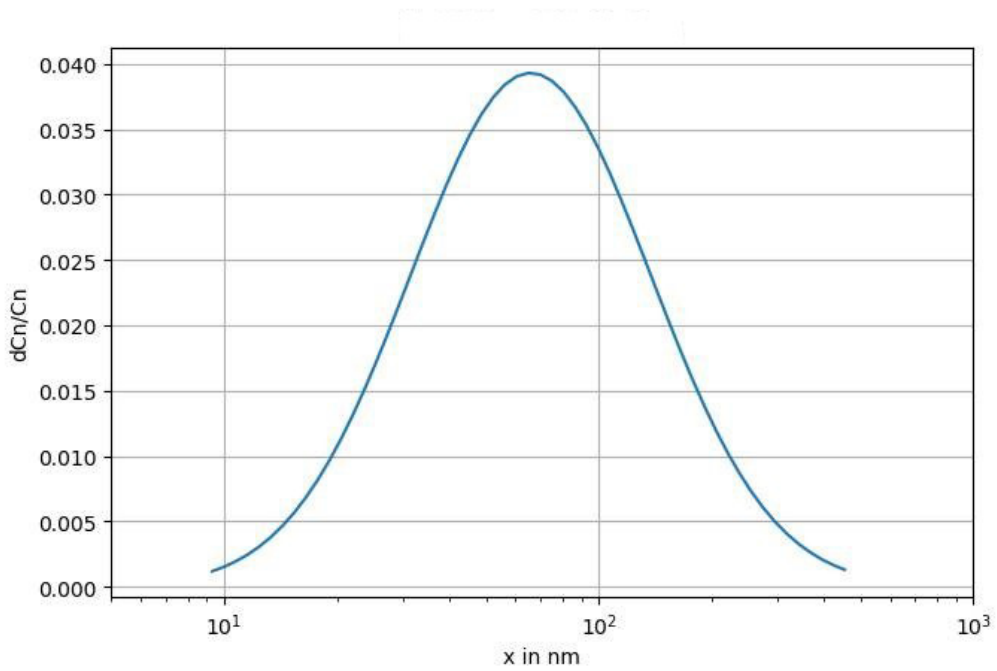
Pictured: Analysis of filter and filter mask efficiency for Corona Virus The size distribution of the test aerosol according to the standard is as follows:
Oil: Geom. standard deviation 1,8 | Median diameter 301 nm



Pictured: DEHS size distribution



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



Pictured: NaCl size distribution

Benefits

- *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*
- *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 145 nm up to 40 μ m*
- *Exact analysis of filter and filter mask efficiency for Corona Virus (size approx. 120 nm up to 160 nm) starting at 145 nm*

- *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*

Datasheet

<i>Parameter</i>	<i>Description</i>
Measurement range (size)	0,145 – 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
Compressed air supply	6 – 8 bar

Applications

- *Test of respiratory masks*
- *Exact analysis of filter mask efficiency for e.g. Corona Virus*
- *Filter testing for HEPA quality*
- *Can be operated as Mas-Q-Check with optional Mas-Q-Head*

Palas GmbH
Partikel- und Lasermesstechnik
Greschbachstrasse 3 b
76229 Karlsruhe
Germany

Managing Partner:
Dr.-Ing. Maximilian Weiß
Commercial Register:
register court: Mannheim
company registration number: HRB 103813
USt-Id: DE143585902



Contact: E-Mail: mail@palas.de Internet: www.palas.de Tel: +49 (0)721 96213-0 Fax: +49 (0)721 96213-33

	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/m^3	15 - 25 mg/m^3	< 200 mg/m^3	(50 mg/m^3) < 200 mg/m^3	< 200 mg/m^3	< 200 mg/m^3
Discharge	-	-	-	required	required	required	required
Air flow	see EN 13274-7	95 l/min	95 l/min	85 \pm 4 l/min	85 \pm 4 l/min	85 \pm 4 l/min	85 \pm 4.25 l/min
Temperature	see EN 13274-7	22 \pm 3 $^{\circ}\text{C}$	-	25 \pm 5 $^{\circ}\text{C}$	25 \pm 5 $^{\circ}\text{C}$	25 \pm 5 $^{\circ}\text{C}$	25 \pm 5 $^{\circ}\text{C}$
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 \pm 5 mg	200 \pm 5 mg	200 \pm 5 mg	200 \pm 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