



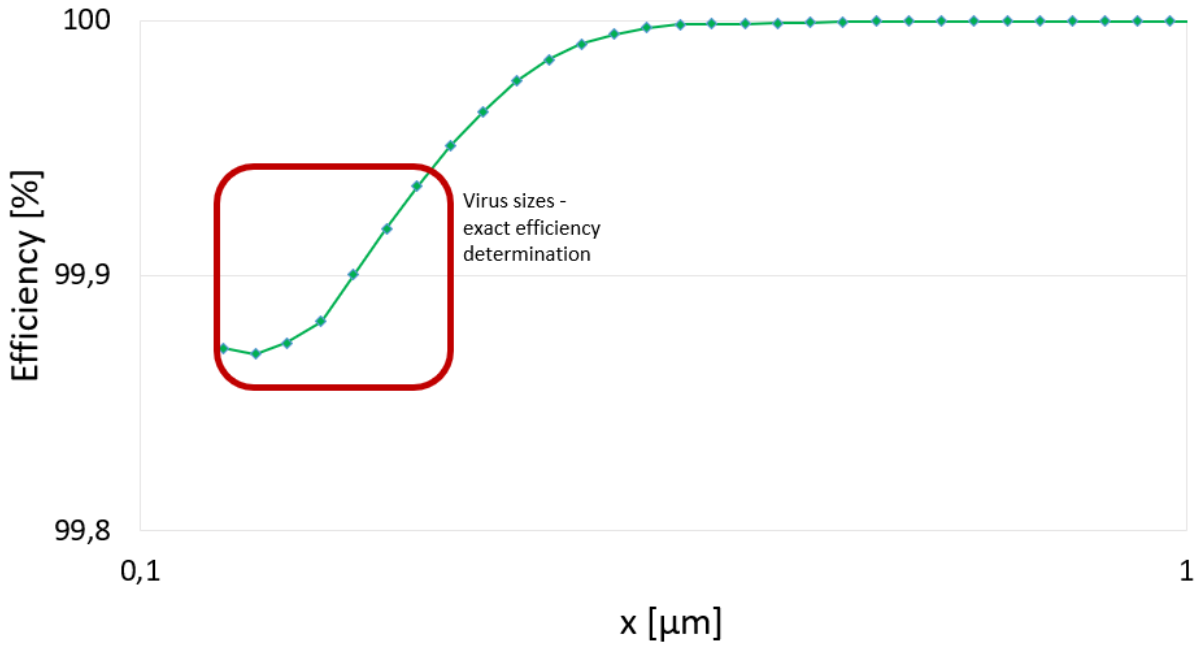
Test of respiratory masks better than the standard. Exact analysis of filter mask efficiency from 100 nm up to 40  $\mu\text{m}$ . SARS-CoV-2 size approx. 120 nm - 160 nm.

## Description

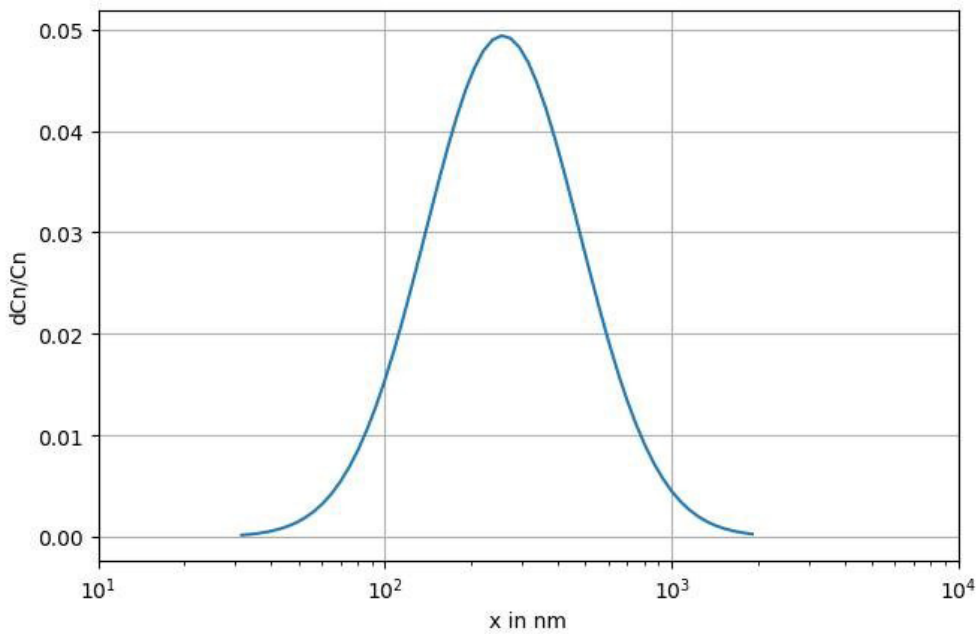
Test of respiratory masks better than the standard with additionally exact analysis of filter mask efficiency for SARS-CoV-2 (size approx. 120 nm up to 160 nm). 8 size channels for efficiency from 100nm and 180 nm.

- Test rig working principle better than EN 143, EN 149 and EN 13274-7
- Equivalent to GB 2626 and 42 CFR 84 by additional software option
- Fullfills additionally the requirements according to GB 2626 (Filter efficiency, CD 2000 discharge unit is required)
- Testing of fractional efficiency, e.g. efficiency in whole size range of 100 nm up to 40  $\mu\text{m}$
- 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
- 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

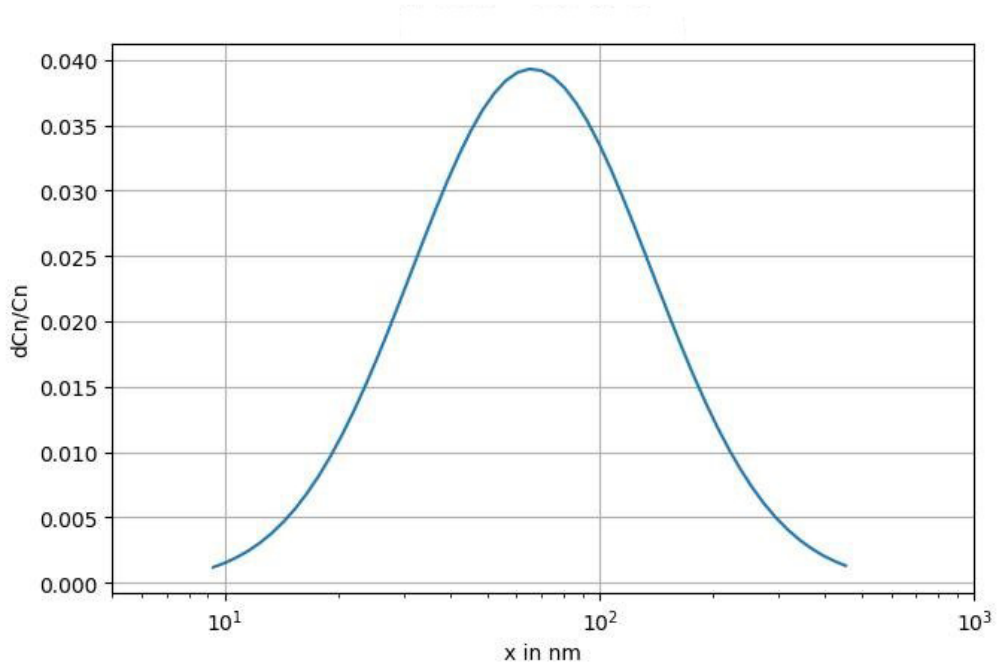
PMFT 1000 is based on Palas® MFP 1000.



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



*Pictured: NaCl size distribution*

## Benefits

- Test rig working principle better than GB 2626, EN 143, EN 149 and EN 13274-7
- Testing of fractional efficiency, e.g. efficiency in whole size range of 100 nm up to 40  $\mu\text{m}$
- 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
- Further measurement of differential pressure, e.g. as well within different face velocities
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## Datasheet

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

## Applications

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

**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](mailto:mail@palas.de) Internet: [www.palas.de](http://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
<b>Aerosol</b>	see EN 13274-7	NaCl	PaO	NaCl	PaO/DOP	NaCl	DOP
<b>Mean diameter</b>	see EN 13274-7	0.06 - 0.1 $\mu\text{m}$	0.29 - 0.45 $\mu\text{m}$	0.055 - 0.095 $\mu\text{m}$	0.165 - 0.205 $\mu\text{m}$	0.055 - 0.095 $\mu\text{m}$	0.165 - 0.205 $\mu\text{m}$
<b>Standard deviation</b>	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)
<b>Concentration</b>	see EN 13274-7	4 - 12 $\text{mg}/\text{m}^3$	15 - 25 $\text{mg}/\text{m}^3$	< 200 $\text{mg}/\text{m}^3$	(50 $\text{mg}/\text{m}^3$ ) < 200 $\text{mg}/\text{m}^3$	< 200 $\text{mg}/\text{m}^3$	< 200 $\text{mg}/\text{m}^3$
<b>Discharge</b>	-	-	-	required	required	required	required
<b>Air flow</b>	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
<b>Temperature</b>	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 $^{\circ}\text{C}$
<b>Rel. humidity</b>	see EN 13274-7	< 40 %	-	20 - 40 % (by compressed air)	-	20 - 40 % (by compressed air)	20 - 40 % (by compressed air)
<b>Measurement device</b>	see EN 13274-7	Sodium flame photometer	Light scattering photometer	particle detector	particle detector	Light scattering photometer	Light scattering photometer
<b>Measuring time</b>	see EN 13274-7	30 s	30 s	lowest eff. during loading	lowest eff. during loading	lowest eff. during loading	lowest eff. during loading
<b>Pause time</b>	see EN 13274-7	180 s	180 s	lowest eff. during loading	lowest eff. during loading	lowest eff. during loading	lowest eff. during loading
<b>Exposition</b>	120 mg	120 mg	120 mg	200 $\pm$ 5 mg	200 $\pm$ 5 mg	200 $\pm$ 5 mg	200 $\pm$ 5 mg
<b>PMFT remarks</b>	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