



LemonMedical GmbH
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Viren- und Bakterienfilter Pulmosafe® / Conformation of virus and bacterial filters Pulmosafe®

Sehr geehrte Damen und Herren,

Das von uns ausschließlich für die Produktion der hocheffizienten Viren- & Bakterienfilter Pulmosafe® verarbeitete Filtervlies wurde von Public Health England und von Palas GmbH Partikel- und Lasermesstechnik, Karlsruhe, auf Durchlässigkeit getestet. Die Testergebnisse haben ergeben, dass das verarbeitete Filtervlies, auch bei hohen Strömungsgeschwindigkeiten, vor COVID-19 Virus schützt. Testprotokolle sind dem Schreiben angehängt.

Dear Ladies and Gentlemen,

Hereby we confirm, that our product named Pulmosafe® and all correlating product variations like 2-Safety-Pack, 3-Safety-Pack, 2-Safety-Pack-S and 3-Safety-Pack-S are using exclusively filter material has been tested for penetration by Public Health England Palas GmbH, Karlsruhe. The test results have shown that the processed filter fleece protects against the COVID-19 virus, even at high flow rates.

Test protocols are attached to the letter.

Hammelburg, 11. Mai 2020



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Alfred Albert
CEO

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Managing Directors Geschäftsführer

Alfred Albert, Michaela Albert
Commercial court Amtsgericht Schweinfurt, HRB 5531
Steuer Nr. 205/131/20045 . VAT ID No: DE263530798

PHE Report No. 16/045

Test Conditions

Date	10 th January 2017	Challenge Micro-organisms	MS-2 Coliphage NCIMB 10108
Operators	Anna Moy	Suspension Fluid	Sterile Distilled Water
Apparatus	Small Rig	Concentration	1.16 x 10 ⁵ pfu/ml
Spray	3 Jet Collision	Relative Humidity (RH)	Ambient
		Temperature	22 ± 3°C
Samplers	All glass Impingers	Sampling Time	1 min at 750 Litres/min
Collecting Fluid	PBMA	Volume	Various

F1 = Typ I PS – Pulmosafe® II Ref. 1031, Lot: 355/16, Exp: 12/2019

Results

Filter Number	Total Challenge (pfu)	Total Collected (pfu)	% Efficiency
Background	-	0	-
F1	3.35 x 10 ³	1.01 x 10 ²	96.9851
Background	-	0	-

*pfu - plaque forming units

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Results

Test Conditions

Date	9 th January 2017	Challenge Micro-organisms	<i>Bacillus atrophaeus</i> NCTC 10073
Operators	Anna Moy	Suspension Fluid	Sterile Distilled Water
Apparatus	Small Rig	Concentration	6.45 x 10 ⁵ cfu/ml
Spray	3 Jet Collision	Relative Humidity (RH)	Ambient
		Temperature	22 ± 3°C
Samplers	All glass Impingers	Sampling Time	5 min at 750 Litres/min
Collecting Fluid	PBMA	Volume	Various

F1 = Typ I PS – Pulmosafe® II Ref. 1031, Lot: 347/16, Exp.: 12-2019

Results

Filter Number	Total Challenge (cfu)	Total Collected (cfu)	% Efficiency
Background	-	1.48 x 10 ³	-
F1	1.72 x 10 ⁵	4.03 x 10 ³	97.6570
Background	-	87	-

*cfu - colony forming units

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Measurement Log

Basic Information

Operator: M.Pfeffinger	Start date: 21.04.2020	End date: 06.05.2020	Order No.: K-10366
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Customer information	
Company	Lemon Medical GmbH
Address	Dr.-Georg-Schäfer-Str. 14 97762 Hammelburg Deutschland
Contact	Michaela Albert m.albert@lemonmedical.com

Test conditions	
Humidity:	10 %
Air pressure	1010 mbar
Air temperature	25 °C

Used measurement devices

Type	Model	Serial number	Additional information
Filter Media Test Rig	PMFT	0145	
Aerosol Spectrometer	Welas 1000	8769	
Aerosol Sensor	Welas 1200	-	range 0.12-3 µm
Aerosol Generator	PLG 1000	5872	NaCl

Type	Model	Serial number	Additional information
Mask Check System	Mas-Q-Check	12097	
Norm Head	European Size M	12097	

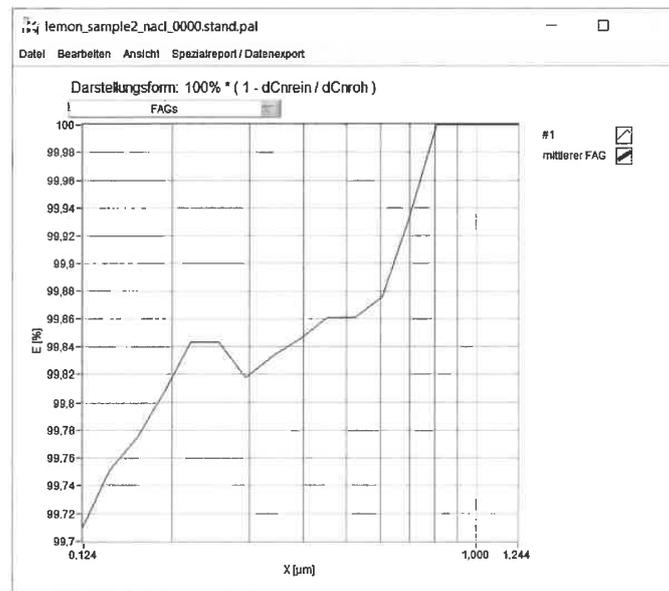


Measurement Log

Results PMFT measurement

ID number:	Lemon_sample2_NaCl_0000	Customer designation:	Sample 2 (NaCl)
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Parameter			Notes
Efficiency by mass	Cm [%]	99.89	
Efficiency by number	Cn [%]	99.78	
Efficiency by number at 0.12 µm Corona protection class	Cn [%]	99.89	
Efficiency by number at 1 µm	Cn [%]	100.00	
Differential pressure	dp [Pa]	156.81	



Results Mas-Q-Check measurement

ID number:		Customer designation:	
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Parameter			Notes
Retention	Cn [%]		



Karlsruhe 06.05.2020,