概念美市場策劃有限公司
NiceConcept Marketing Limited

保康潔 Coversafe™ 抗病毒效能

Virus Type 病毒種類	Efficiency 抗病毒活性率#1
Influenza virus A / Flu (H1N1) 甲型流感(H1N1)	>99% (R=2.60)
Human Rotavirus (Gastroenteritis) 人輪狀病毒（胃腸炎）	>99% (R=2.26)
Herpes virus type 1 (HSV-1) 1 型皰疹病毒（HSV-1）	>99% (R=2.20)
Adenovirus type 3 (Conjunctivitis) 3 型腺病毒（結膜炎）	>99% (R=2.40)
Coronavirus 229E 冠狀病毒 229E	>99.9% (R=3.28)
SARS-CoV-2 嚴重急性呼吸綜合症冠狀病毒 2 型(沙士)	96% (Log=1.42)

#1： 檢測方法為 ISO 21702:2019, JIS Z280:2010

測試機構：FONDEREPHAR , UNIVERSITY OF LIMOGES

證書編號：20-2657/20-2658,

13-1508/15-1928/17-2224/19-2436/20-2598

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FONDEREPHAR
FONdation pour le DEveloppement de la REcherche PHARmaceutique
Système de management de la qualité Certifié ISO 9001

Reference 20-2657/20-2658

CERTIFICATE OF ANALYSIS

Society : PYLOTE
Address : 22 Avenue de la Mouyssaguèse
31280 Dremil-Lafage
FRANCE

To the attention of : LOIC MARCHIN

Customer Reference:	Coversafe Film (Film Gerg. ADD)
Fonderephar Sample Reference:	20-2658-2 / 20-2657 - 2
Date os sample receipt:	May 25th, 2020
Date of sample analysis:	May - June 2020
Date of certificate of analysis:	June 8th, 2020

Test
Evaluation of antimicrobial efficiency based on JIS Z2801 : 2010 for bacteria

Results: The results are given as log reduction R, corresponding to the value of antimicrobial activity

Escherichia coli CIP 53.126 R = 5,75 (after a contact time 24H)

Test
Evaluation of antivirucidal activity according to the methodology based on ISO 21702 : 2019 for virus

Results: The results are given as log reduction R, corresponding to the value of antivirucidal activity

Coronavirus Humain 229E R = 0,98 (after a contact time 1H)
R = 3,28 (after a contact time 24H)

Certified by Catherine FEUILLOLAY and Laila HADDIOUI
Test Managers

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Reference 13-1508 / 15-1928 / 17-2224 / 19-2436 / 20-2598

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Society : PYLOTE
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FRANCE

To the attention of : LOIC MARCHIN

Test Evaluation of antimicrobial efficiency based on JIS Z2801 : 2010 for bacteria

Results: The results are given as log reduction R, corresponding to the value of antimicrobial activity

Customer Reference:	Pylote Technology
Fonderephar Sample Reference:	15-1928/1-2 / 15-1928/1-1
Date os sample receipt:	December 21st, 2015
Date of sample analysis:	December 2015
Date of certificate of analysis:	January 6th, 2016
Escherichia coli BLSE (Fonderephar strain ref. B1023)	R = 3,83 (after a contact time 24H)
Staphylococcus aureus metiR ATCC 33591	R = > 3,01 (after a contact time 24H)

Customer Reference:	Pylote Technology
Fonderephar Sample Reference:	13-1508-1 / 13-1508-2
Date os sample receipt:	February 25th, 2013
Date of sample analysis:	March 2013
Date of certificate of analysis:	March 25th, 2013
Salmonella enterica CIP 60.62T	R = > 5,84 (after a contact time 24H)

Customer Reference:	Pylote Technology
Fonderephar Sample Reference:	19-2436-1 / 19-2436-2
Date os sample receipt:	February 15th, 2019
Date of sample analysis:	February 2019
Date of certificate of analysis:	February 22th, 2019
Pseudomonas aeruginosa CIP 82118	R = 4,07 (after a contact time 24H)

Test
Evaluation of antivirucidal activity according to the methodology based on JIS Z2801 : 2010 for virus

Results: The results are given as log reduction R, corresponding to the value of antivirucidal activity

Customer Reference:	Pylote Technology
Fonderephar Sample Reference:	15-1928/2-2 / 19-1928/2-1
Date os sample receipt:	December 21st, 2015 and December 31st, 2015
Date of sample analysis:	January 2016
Date of certificate of analysis:	January 22th, 2016
Influenzavirus A (HINI) ATCC-VR-1520	R = 2,60 (after a contact time 24H)

Customer Reference:	Pylote Technology
Fonderephar Sample Reference:	20-2598-1 / 20-2598-2
Date os sample receipt:	January 27th, 2020
Date of sample analysis:	January - February 2020
Date of certificate of analysis:	February 5th, 2020
Human Rotavirus ATCC-VR-2272	R = 2,26 (after a contact time 24H)

Customer Reference:	Pylote Technology
Fonderephar Sample Reference:	15-1928/2-2 / 19-1928/2-1
Date os sample receipt:	December 21st, 2015 and December 31st, 2015
Date of sample analysis:	January 2016
Date of certificate of analysis:	January 22th, 2016
Herpes virus type 1 (HSV-A) ATCC-VR-1383	R = 2,20 (after a contact time 24H)

Customer Reference:	Pylote Technology
Fonderephar Sample Reference:	17-2224-1 / 17-2224-2
Date os sample receipt:	December 4th, 2017
Date of sample analysis:	December 2017
Date of certificate of analysis:	December 12th, 2017
Adenovirus type 3 ATCC-VR-847	R = 2,40 (after a contact time 24H)

Certified by Catherine FEUILLOLAY and Laila HADDIOUI
Test Managers
June 23th, 2020

FONDEREPHAR
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UMR Inserm 1092
Anti-infectieux : supports moléculaires des résistances et innovations thérapeutiques

CBRS
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87 025 Limoges Cedex, France
Tél : (33) (0) 519 564 263
Fax : (33) (0) 555 435 851
Mél : marie-cecile.ploy@unilim.fr

Limoges, Jan 5th, 2020

Evaluation of virucidal activity of non-porous surfaces against Human Coronavirus SARS-CoV2 according to the methodology of Standard ISO 21702, May 2019

Client:
PYLOTE SA, 22 avenue de la Mouyssaguese, 31280 Dremil Lafage

Test laboratory:

Plate-forme C-Lim
Laboratoire RESINFIT UMR Inserm 1092, and
Virology Department/ UMR Inserm U1092,
CBRS (F Denis Biology and Research Center)
2 rue F Descottes 87000 Limoges France.

Assay Manager:	**Ingeneer:**
Pr Sophie ALAIN, MD PhD	Mathis Courant

Promotor: Pylote

Period of assay: September to December 2020

I Material tested:

1) standard
Name "Non Treated"
Date of receipt: June 2020 and September 2020
Batch: 1
2) treated
Name "01 CSAFE01 XX"
Date of receipt: June 2020 (1) and September 2020 (2)
Batch: 1

Pr Sophie Alain
Laboratoire de microbiologie, CBRS, CHU de Limoges
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II Virus:

Human SARS-CoV 2 strain BASA (Limoges)
Identification: specific PCR in the RdRp, N and E genes and full-length sequencing.

Passage: 4
Titer (TCID50): 6,9 10E6 infectious units (IU)/mL

Cells:

Vero cells (ATCC) Passages 6-18

Assay:
Inoculum: TCID50 in 400uL
Recovery volume: 10ml by gentle scraping and rinsing in a sterile Petri dish
Time exposure 0h, 60 min, 24h at 22°C +/- 1°C in a humid chamber
Viral growth:
Incubation: 34+/-0,5 °C under 5% CO2 atmosphere
Measurement: foci/plaques counting with an inverted microscope at Day 4 and Day 10,
Virus Titration: TCID50 (Wishak and Detre method) or 10-fold dilution method.

II Virus growth and recovery test in culture medium

Condition tested: culture medium (MEM Eagle with EARLE's salts and L glutamin (Eurobio), plus antibiotics, with 10% fetal calf serum (FCS))
Initial titer: 6,9 10E6 infectious units (IU)/mL

Non treated	Time of contact	viral titer/mL	Log infectious viral units per mL	% recovery
J+4	0h	2,21E+06	6,34	91,9%
J+10	0h	8,83E+06	6,95	>100%

Conclusion: Full viral recovery was obtained with this method

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III Virus inhibition test

Condition tested: SARS-CoV2 in culture medium (MEM Eagle with EARLE's salts and L glutamin, plus antibiotics, with 10% fetal calf serum (FCS))

Non treated	Time of exposure	infectious viral units per mL	log infectious viral units per mL	delta log 0h-T
J+4	0h	2,21E+06	6,34	-
	1h	1,39E+05	5,14	1,20
J+10	0h	8,83E+06	6,95	-
	1h	8,83E+06	6,95	-

Treated 01 CSAFE01 XX	Time of exposure	infectious viral units per mL	log infectious viral units per mL	delta log 0h-T	**delta log (non treated- treated)**
J+4	0h	3,38E+05	5,53		0,82
	1h	3,38E+05	5,53	-	0,38
J+10	0h	1,34E+06	6,13		0,82
	1h	3,38E+05	5,53	0,60	**1,42**

Conclusion: According to the methodology of the ISO 21702 standard (May 2019), in the conditions described above, the contact of the Coversafe Film (01 CSAFE01 XX) with the strain of human Coronavirus SARS-CoV 2 strain BASA induced a reduction of the log viral load of 1.42log after 1hour contact time, persisting at D10 of culture.

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