


Test report n° 20200050/03



Test information	
MATERIAL	COATING
ITEM	<p><b>Customer: SafeGroup – Reference: V20103</b>  <b>– Sample SafeGroup Antimicrobial Ceramic Coating</b></p> 
METHOD	<b>ISO 21702:2019 “Measurement of antiviral activity on plastics and other non porous surfaces”</b>
Date of receipt	23 December 2020
Samples	<ul style="list-style-type: none"> <li>• Treated sample: 50 x 50 mm<sup>2</sup>, 0.71 mm thick;</li> <li>• Untreated sample: 50 x 50 mm<sup>2</sup>, 1 mm thick;</li> <li>• Cover film: polypropylene film 40 x 40 mm<sup>2</sup>, thickness 0.10 mm</li> <li>• All samples were rinsed with sterile distilled water;</li> <li>• Volume of test inoculum: 400 uL.</li> </ul>
Conservation	Room temperature
Test temperature	25°C ± 1°C
Incubation temperature	37°C ± 1°C
Viral strain	<b>SARS-CoV-2_COV2019 ITALY/INMI1</b>
Permissive host cell line	VERO E6
Contact time	2H - 6h - 24h



### Calculation of antiviral activity

Antiviral activity is calculated with the following formula:

$$R = U_t - A_t$$

where

R is the evaluation of antiviral activity

$U_t$  is the mean of log TCID<sub>50</sub>/cm<sup>2</sup> of the 3 untreated samples at time Tx

$A_t$  is the mean of log TCID<sub>50</sub>/cm<sup>2</sup> of the 3 treated samples at time Tx

Log TCID<sub>50</sub> inoculum: 6.50

Cytotoxicity test						
	Media Log TCID <sub>50</sub>	TCID <sub>50</sub> /1 ml	S (TCID <sub>50</sub> / ml)	Test valid if	Results	
Negative control	3.58	10 <sup>3.58</sup>	$S_n = 10^{3.58}$	n/a	n/a	n/a
Untreated sample	3.33	10 <sup>3.33</sup>	$S_u = 10^{3.33}$	$ S_n - S_u  \leq 0.5$	0.17	Valid
Treated sample	3.17	10 <sup>3.17</sup>	$S_t = 10^{3.17}$	$ S_n - S_t  \leq 0.5$	0.42	Valid

### Test results

	Time	Average Log TCID <sub>50</sub>	TCID <sub>50</sub> /1 ml	N (TCID <sub>50</sub> /cm <sup>2</sup> )	$U_t$	R $ U_t - A_t $	Test valid if result is between
Untreated sample	T0	4.75	10 <sup>4.75</sup>	3.51 x 10 <sup>5</sup>	n/a	n/a	2.5 x 10 <sup>5</sup> – 1.2 x 10 <sup>6</sup> (TCID <sub>50</sub> /cm <sup>2</sup> )
	T2	3.67	10 <sup>3.67</sup>	2.90 x 10 <sup>4</sup>	4.46	n/a	n/a
	T6	3.17	10 <sup>3.17</sup>	9.17 x 10 <sup>3</sup>	3.96	n/a	n/a
	T24	2.75	10 <sup>2.75</sup>	3.51 x 10 <sup>3</sup>	3.55		



	Time	Average Log TCID <sub>50</sub>	TCID <sub>50</sub> /l ml	N (TCID <sub>50</sub> /cm <sup>2</sup> )	At	R  Ut-At	[% reduction versus T0]
Treated Sample	T2	3.08	10 <sup>3.08</sup>	7.57 x 10 <sup>3</sup>	3.88	0.58	97.86 %
	T6	3.00	10 <sup>3.00</sup>	6.25 x 10 <sup>3</sup>	3.80	0.16	98.22 %
	T24	2.33	10 <sup>2.33</sup>	1.35 x 10 <sup>3</sup>	3.13	0.42	99.62%

This Test Report refers only to the sample tested; the name and description of the sample are declared by the Customer.  
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 \*Test in service (same Group).

Prato, 19 January 2021

End of test Report

The Responsible,

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