



Chemila, spol. s r.o., Za Dráhou 4386/3, 695 01 Hodonín, tel. +420 518 340 919, chemila@chemila.cz
Chemical and Microbiological Laboratory

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Issue No.: 1

Test report No. S61-2/2019

**DETERMINATION OF VIRUCIDAL (EN 16777:2018)
ACTIVITY OF THE PRODUCT 1226 ON CARRIERS**

Sample ID: S61/2019

Sample name: **1226**

Client: Christeyns France S.A., 31, Rue de la Maladrie, 44124 Vertou, France

Producer: Christeyns France S.A., 31, Rue de la Maladrie, 44124 Vertou, France

Sampling point: Christeyns France S.A., 31, Rue de la Maladrie, 44124 Vertou, France

Page: 1
From pages: 7

Incoming date:
13.2.2019

Delivery date:
31.10.2019

Hodonín, 31.10.2019

Chemila, spol. s r.o. -2-
Za Dráhou 4386/3, 695 01 Hodonín
tel.: 518 340 919
IČ: 25304518, DIČ: CZ25304518

Ing. Jana Šlitrová, Head of Laboratory

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Description: Testing the efficacy of chemical disinfectants and antiseptics

Sample ID: S61/2019
Rep No: 48
Sample name: **1226**
Sampled: by client
Sampling point: Christeys France S.A., Vertou
Client: Christeys France S.A., 31, Rue de la Maladrie, Vertou

Sampling date: 11.2.2019
Sample delivered: 13.2.2019
Testing date: 7.3. – 23.5.2019
Delivered amount: 250 ml
Batch No: 337932
Page: 2

Subject of testing:

Determination of virucidal activity of the product.

Identification of the sample:

Name of the product:	1226
Batch number:	337932
Date of manufacture:	16/04/2018
Expiry date:	17/10/2019
Manufacturer:	Christeys France S.A., 31, Rue de la Maladrie, 44124 Vertou, France
Incoming date:	13.2.2019
Storage conditions:	5 – 30 °C
Active compounds and concentrations:	CAS 7722-84-1 hydrogen peroxide 3.26 % CAS 79-21-0 peracetic acid 0.034 %

Experiment conditions:

	Testing of disinfecting efficiency of chemical disinfecting and antiseptic agents on carriers SOP-M-22-12 (EN 16777:2018)
Period of analysis:	7.3. – 15.3.2019
Test temperature:	18 °C ± 1 °C to 25 °C ± 1 °C
Method of titration:	virus titration on monolayers of cells on microtitre plates.
Appearance of the product:	colourless gel
Product diluent:	distilled water
The test concentration:	100% (concentrated), 40%, 20%
Contact time:	5 min
Interfering substances:	3 g/l BSA and 3 ml/l sheep erythrocytes (dirty conditions)
Reference product:	Glutaraldehyde (50% solution in water) for synthesis, CAS: 111-30-8, Batch No: S7460593, minimum shelf life 31.01.2021, date of delivery: 6.3.2019
Interfering substances:	0.3 g/l BSA (clean conditions)
Test virus:	Adenovirus type 5, strain Adenoid 75, ATCC VR-5 (2 nd passage)
Cell lines:	HeLa cells (5 th passage)
Carriers:	stainless steel discs stated in the standard
The drying time:	25 min
Incubation:	36 °C ± 1 °C, 5 % CO ₂ , 96 h, and additional period of 96 hours.

Test procedure: Nine volumes of test virus suspension are mixed with one volume of interfering substance solution. The test surface is prepared by inoculating 50 µl of the virus suspension plus interfering substance. The surfaces are drying until they are visibly dry. The drying time should not exceed 60 min. The test carriers are used within 60 min, to avoid virus inactivation with time. Immediately after drying the dried inoculum on the test surface is covered with 100 µl of the test solution. For the water control, drying the dried inoculum on the test surface is covered with 100 µl of the hard water or water (RTU). The test surface is maintained at a specified temperature for a defined period of time, the test surface is transferred to a separate container and 0.9 ml of ice-cold medium is added to a separate container, each container is mixed for 60 s to resuspend the virus. Series of ten-fold dilutions of the virus suspension in ice-cold medium are prepared and the dilutions are inoculated on cell culture. Two surfaces are used for each test. After incubation, the titre infectivity is calculated according to Spearman-Kärber method.

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Interpretation:

Results of tests are in Tabs.

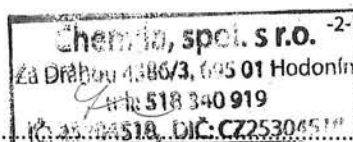
According to EN 16777:2018 the tested product **1226**, batch No: 337932, in concentrations 100% and 40%, diluted in distilled water, and in the contact time 5 min under dirty conditions at temperature $18\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ to $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ on carriers (stainless steel discs) **proved** by the method of virus titration on monolayers of cells on microtitre plates to reduce the number of infectious *Adenovirus* type 5, strain Adenoid 75, ATCC VR-5 particles under defined conditions by at least a 4 lg reduction.

According to EN 16777:2018 the tested product **1226**, batch No: 337932, in concentrations 100% and 40%, diluted in distilled water, and in the contact time 5 min under dirty conditions at temperature $18\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ to $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ on carriers (stainless steel discs) **proved** by the method of virus titration on monolayers of cells on microtitre plates to reduce the number of infectious *Murine norovirus (MNV)* strain S99, RVB-651 particles under defined conditions by at least a 4 lg reduction.

Conclusion:

The product **1226** is capable of reducing the number of infectious *Adenovirus* and *Murine norovirus (MNV)* particles on carriers (stainless steel discs) under defined conditions (EN 16777:2018 – 100%, 40%, 5 min, dirty) to the declared values, and consequently, can be called virucidal on carriers.

31.10.2019, Hodonín



Ing. Barbora Stoklásková, Leader of Study