

**MICROBIOLOGICAL TESTING DEPARTMENT
OF NATIONAL PUBLIC HEALTH SURVEILLANCE LABORATORY**

Zolyno street 36, LT-10210 Vilnius, Lithuania, Tel. +370 5 234 40 03, fax +370 5 210 54 05 E-mail priimamasis.zolyno@nvspl.lt

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**MICROBIOLOGICAL TEST REPORT No. MA 4561 (MA 11290)/2020
14 September 2020**

Customer, address: **MB "Pro for nano", Mokyklos str. 5-5, Vilnius, LT-08413**

[E]

Agreement (mark X) there is no is date 20 _____ No _____

Phone: **869473130** E-mail: **info@profornano.com gediminas.galinis@profornano.com** Pickup Act-Order No: **V 6876**

Date and time of delivering the samples and sample temperature (if required) **2020-07-20, 11.50 h**

Information supplied by the customer:

Samples supplied (title of the sample, method of packing, amount of sample supplied (kg,l), producer, method, by which test sample is produced, batch size, production date, date of realization, time, other information supplied by the customer):

Surface disinfectant "Pro Nano Ag (silver nano)". Clean conditions, 20°C, contact time 5min, 7x100ml, MB "Pro for nano"

Place of the selecting **MB "Pro for nano" Mokyklos str. 5-5, Vilnius, LT-08413**
the samples.

Sampling report No: _____ (object name and address)

Samples selected by: **Gediminas Galinis**

Date and time of sample selecting, sample temperature, identification No. of the document: **2020-07-19, 10.00 h, No doc. of sampling: MA 4561**
(institution, division, position, name)

Samples delivered by: **Gediminas Galinis**
(institution, name)

Testing started on: **2020-07-20**

Test results:

Sample name **Surface disinfectant "Pro Nano Ag (silver nano)". Clean conditions, 20°C, contact time 5min**

Sample registry No.	Testing performed by the method	Searched microorganism	Test results
MA 11290 EN 14476:2013+A2:2015(N)		Virucidal activity test of disinfectants for instruments and surfaces	Achieves a virucidal activity after 5 min.

Supplementary data, remarks: **Detailed test information is provided in the Annex, 3 p.**

Date of performing tests: **2020-09-14**

Test performed by **Head of Virology Testing Subdepartment Svajūnė Murałytė**
(position, name and surname)

Approve: **Head of Clinical testing department Ilona Razmienė**
(position, name and surname, signature)

Explanations:	1. R - Reduction of the count of microorganisms (reduction), expressed by log.
	2. Test results related only to the particular samples tested.
	3. N - not accredited method.
	4. Test report or parts thereof (annexes) can't be reproduced without the consent of the head of division and/or subdivision.
	5. Handing over of the test report [E]-by e-mail

Microbiological test report No. MA 4561 (MA 11290)/2020 Annex

Identification of the testing laboratory:

National Public Health Surveillance laboratory
Virology Testing Subdepartment
Zolyno str. 36
Vilnius, Lithuania

Identification of the Customer:

MB “Pro for nano”
Mokyklos str. 5-5,
Vilnius, Lithuania

Identification of the sample:

- | | |
|--|---------------------------|
| 1. Name of the product | Pro Nano Ag (silver nano) |
| 2. Batch number and expiry date | unknown |
| 3. Manufacturer | MB “Pro for nano” |
| 4. Date of delivery | 2020-07-20 |
| 5. Storage conditions | unknown |
| 6. Product diluent recommended by the manufacturer | unknown |
| 7. Active substance(s) and concentration(s) | unknown |
| 8. Appearance of the product | liquid |

Experimental conditions:

- | | |
|---|--|
| 1. Date(s) of the tests (period of analysis) | 2020-08-10 / 2020-09-14 |
| 2. Diluent used for product test solution | n.a. |
| 3. Product test concentration | undiluted |
| 4. Appearance of product dilutions | n.a. |
| 5. Contact times | 5 min |
| 6. Test temperature(s) | 20 °C |
| 7. Interfering substance | 0,3 g/l bovine albumine solution (BSA) / clean conditions |
| 8. Stability and appearance of the mixture during procedure | no precipitate formation noted |
| 9. Temperature of incubation | 37 °C |
| 10. Method of filtration | unfiltered |
| 11. Identification of the viral strains used | Murine norovirus S99 Berlin,
Adenovirus type 5 ATCC VR-5
Poliovirus type 1 LSc 2ab
Vaccinia virus |
| 12. Procedure to stop action of the product | ice cold medium |
| 13. Cell lines used | RAW 264.7, HeLa, BHK-21 |

Test results, control and evaluation:

1. Titre of test suspension
 - Adenovirus type 5 – 7,0 lg.
 - Murine norovirus S99 Berlin – 7,3 lg.
 - Poliovirus type 1 LSc 2ab – 7,2 lg.
 - Vaccinia virus – 6,0 lg.

2. Maximum detectable virus inactivation
 - Adenovirus type 5 – 4,5 lg.
 - Murine norovirus S99 Berlin – 4,2 lg.
 - Poliovirus type 1 LSc 2ab – 4,0 lg.
 - Vaccinia virusas – 4,2 lg.

1. Virus inactivation of the reference virus inactivation test (formaldehyde) after 60 min.
 - Adenovirus type 5 – 4,3 lg.
 - Murine norovirus S99 Berlin – 4,2 lg.
 - Poliovirus type 1 LSc 2ab – 4,2 lg.
 - Vaccinia virus – 4,5 lg.

Test results, evaluation of virucidal activity:

Test was performed according to LST EN 14476:2013+A2:2019.

Summary table of results of virucidal activity against Adenovirus type 5 under clean conditions for Pro Nano Ag (silver nano) disinfectant									
Product	Interfering substance	Concentration	Level of cytotoxicity	Virus titre lg TCID ₅₀				Virus reduction lg TCID ₅₀ (maximum)	≥4 lg reduction after „x“ min
				0 min	5 min	30 min	60 min		
Pro Nano Ag (silver nano)	0,3 g/l BSA	undiluted	0	-	2,5	-	-	4,5	5 min
Formaldehyde	PBS	0,7 %	1,5	-	-	3,0	2,7	4,3	30 min
Virus Control	0,3 g/l BSA	-	-	7,0	-	-	7,0	-	-

Summary table of results of virucidal activity against Murine norovirus S99 Berlin under clean conditions for Pro Nano Ag (silver nano) disinfectant									
Product	Interfering substance	Concentration	Level of cytotoxicity	Virus titre lg TCID ₅₀				Virus reduction lg TCID ₅₀ (maximum)	≥4 lg reduction after „x“ min
				0 min	5 min	30 min	60 min		
Pro Nano Ag (silver nano)	0,3 g/l BSA	undiluted	0	-	3,2	-	-	4,2	5 min
Formaldehyde	PBS	0,7 %	1,5	-	-	4,7	3,2	4,2	60 min
Virus Control	0,3 g/l BSA	-	-	7,3	-	-	7,3	-	-

Summary table of results of virucidal activity against Poliovirus type 1 LSc 2ab under clean conditions for Pro Nano Ag (silver nano) disinfectant

Product	Interfering substance	Concentration	Level of cytotoxicity	Virus titre lg TCID ₅₀				Virus reduction lg TCID ₅₀ (maximum)	≥4 lg reduction after „x“ min
				0 min	5 min	30 min	60 min		
Pro Nano Ag (silver nano)	0,3 g/l BSA	undiluted	0	-	3,2	-	-	4,0	5 min
Formaldehyde	PBS	0,7 %	1,5	-	-	4,8	3,0	4,2	60 min
Virus Control	0,3 g/l BSA	-	-	7,2	-	-	7,2	-	-

Summary table of results of virucidal activity against Vaccinia virus under clean conditions for Pro Nano Ag (silver nano) disinfectant

Product	Interfering substance	Concentration	Level of cytotoxicity	Virus titre lg TCID ₅₀			Virus reduction lg TCID ₅₀ (maximum)	≥4 lg reduction after „x“ min
				0 min	5 min	15 min		
Pro Nano Ag (silver nano)	0,3 g/l BSA	undiluted	0	-	2,0	-	4,0	5 min
Formaldehyde	PBS	0,7 %	1,5	-	2,8	1,5	4,5	15 min
Virus Control	0,3 g/l BSA	-	-	6,0	-	6,0	-	-

Conclusion

1. According to LST EN 14476:2013+A2:2019 Pro Nano Ag (silver nano) disinfectant ACHIEVES A VIRUCIDAL activity of a 4,0 log reduction as tested undiluted after 5 min at 20°C under clean conditions (0,3 g/l bovine albumin) against Murine norovirus S99 Berlin/RAW 264.7 cells, Adenovirus type 5 / HeLa cells, Poliovirus type 1 LSc 2ab / HeLa cells and Vaccinia virus / BHK-21 cells.

2020-09-14
 (Date, name, last name and signature)

Virusologinių tyrimų
 poskyrio vedėja
 Svajūnė Muralytė

