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REPORT ON THE VIRUCIDICITY ANALYSIS OF PAINT SAMPLES REPORT No. 1/2025 (4 pages).

1. Contractor

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2. Client:

ADR Technology Stanisław Wosiński
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3. Subject of testing:

Paint samples provided by the client:
- Emulsion paint for walls and ceilings (applied on polystyrene tiles with a diameter of 6 cm).
- + ADR SOL WALLS emulsion paint for walls and ceilings (applied to polystyrene tiles with a diameter of 6 cm).

4. Test virus:

Bovine Herpesvirus type 1 (BHV-1), virion diameter approx. 155-175 nm.

To analyse the effectiveness of virus particle inactivation, BHV-1 was used, which, like SARS CoV-2, is an enveloped virus, which determines its resistance to virucidal agents.

5. Test method.
The aim of the study was to assess the effectiveness of virus particle inactivation by the analysed paint samples.
The methodology was based on the guidelines contained in ISO 21702 "*Measurement of antiviral activity on plastics and other non-porous surfaces*".

5.1. Sample layout in the experiment:

- control, clean polystyrene plates with a diameter of 6 cm
- Emulsion paint for walls and ceilings (applied to polystyrene plates with a diameter of 6 cm).
- Emulsion paint for walls and ceilings, after drying, additionally coated with ADR SOL WALLS impregnating agent (applied to polystyrene plates with a diameter of 6 cm).

5.2. Methodology used:
5.2.1. Incubation of paint samples with virus lysate.
- 0.5 ml of viral lysate with **a titre of ^{2x106} pfu/ml** was applied to the painted surfaces of the tiles (6 cm in diameter) and covered with a 0.1 mm thick polypropylene (PP) film with an area of 4x4 cm.
- The plates were placed on wet blotting paper in Petri dishes (10 cm in diameter) to minimise evaporation.
- The samples prepared in this way were incubated on a table at room temperature for 24 hours.

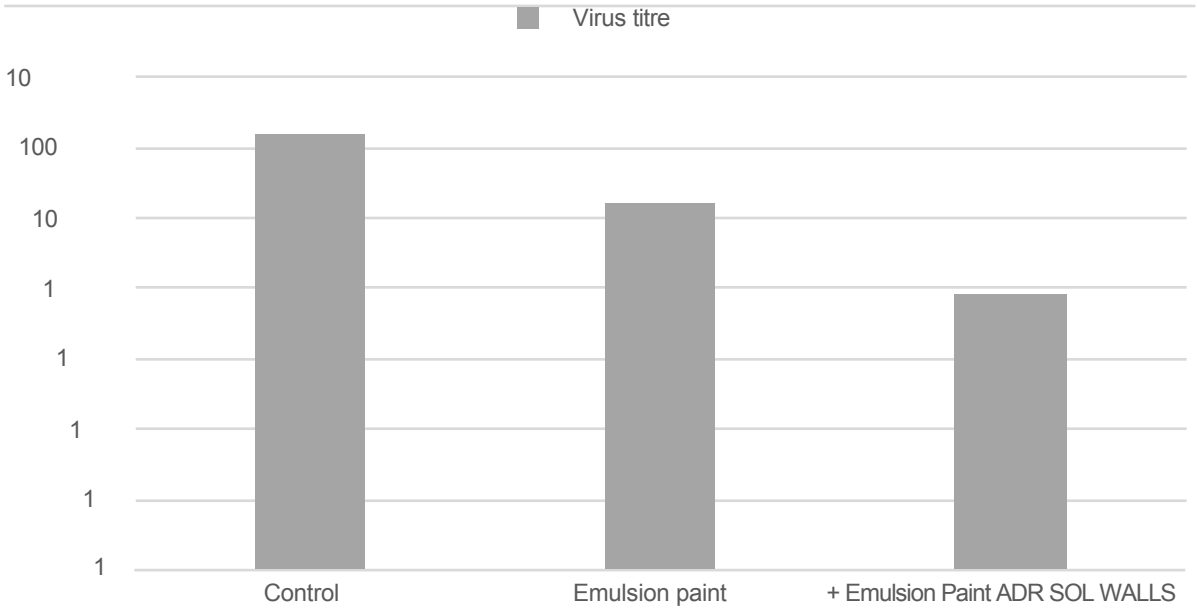
5.2.2. Titration of the virus using the *plaque size assay*.
- Immediately after incubation, the virus lysate was carefully removed from the paint samples and titrated.
- Titration was performed in a single-layer culture of MDBK cells on 12-well plates.
- Serial dilutions were performed in RPMI medium supplemented with 8% FBS (100 µl of virus lysate collected after incubation was transferred to 900 µl of medium).
- After collecting the medium from above the cells, 500 µl of viral lysate in appropriate dilutions was applied to the cells and incubated for 1 hour (37^{o} C/5%CO2).
- After 1 hour of incubation, the virus lysate was collected from the cells. Next, 1.5 ml of a 1% methylcellulose solution in culture medium was added to the cell culture and incubated for 6 days (37°C/5% CO2) to visualise the virus plaques.

6. Results.

Table 1
Number of active viral particles remaining in the lysate after incubation with the test material (PFU/ml). Average of 3 independent biological replicates.

Sample	Repeat 1	Repeat 2	Repeat 3	Average
Control	1.6x106	1.6x10	1.5x106	1.56x106
Emulsion paint	2x105	1x105	2x10	1.66x105
Emulsion Paint + ADR SOL WALLS	6x103	1x104	8x103	8x103

Table-2
Bar chart - logarithmic scale.
Number of active viral particles remaining in the lysate after incubation with the test material. Average of 3 independent biological replicates.



7. Conclusions:

The ability of the tested product to inactivate the test virus is determined based on the decrease in its infectious titre caused by contact with the tested material. The criterion for the virucidal activity of the tested product against a given virus is a decrease in its infectious titre after 24 hours of incubation by at least 2 log (the difference on a logarithmic scale between the infectious titre of the virus in the control sample and the infectious titre of the virus after incubation with the tested material).
Emulsion paint for walls and ceilings caused a decrease in the infectious titre of the virus by 1 log, which cannot be considered virucidal activity.
Emulsion paint for walls and ceilings, after drying and additional treatment with ADR SOL WALLS impregnating agent, caused a decrease in the infectious virus titre by 2.29 log, which should be considered a virucidal effect.

President of the Management Board of
ProChimia Surfaces Sp. z o.o. Piotr Barski