

TEST REPORT

DETERMINATION OF THE VIRUCIDAL ACTIVITY OF THE F1031V2 PRODUCT ACCORDING TO THE EN 14476:2015 STANDARD

Delivered to Ms CHAKCHOUK

For : **FRANKLAB**
3 avenue des Frênes
78180 MONTIGNY LE BRETONNEUX
FRANCE



Date of request: 10/18/2018

Date of request: n°268D25-2018-09

VIRUCIDAL TESTS:

According to the NF EN 14476+A2 (October 2015) standard – chemical antiseptics and disinfectants – virucidal quantitative suspension tests for chemical disinfectants and antiseptics used in human medicine.

Tests using the F1031V2 product, against the *norovirus*.

This test report included 9 pages.

Study completion date: 12/14/2018

Stephanie MOROT - BIZOT
PhD in Microbiology
Study Director

A handwritten signature in black ink, appearing to read 'Stephanie Morot-Bizot'.

SUMMARY

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Rédacteur	Superviseur
Mme Emilie CANTREL, technicienne de laboratoire	Mme Stephanie MOROT-BIZOT, directrice
	

1 PERFORMING LABORATORY

APEX BIOSOLUTIONS
4, rue des Grandes Pièces
Zone EURESPACE
25 770 SERRE LES SAPINS
FRANCE

2 SAMPLE IDENTIFICATION

SAMPLE	BATCH N°
F1031V2	611141

Expiration date: non communicated

Manufacturer : FRANKLAB

Manufacturing date: non communicated

Storage conditions: room temperature

Active substances : ethanol, isopropanol, tertiary amine

Appearance of the product: liquid, colorless

Product diluent recommended by the manufacturer for use: none, ready-to-use product

Date of delivery of the product: 10/24/2018

Date of tests: from 11/02/2018 to 12/05/2018

3 EXPERIMENTAL CONDITIONS

Temperature used during the assays: $20^{\circ}\text{C} \pm 1^{\circ}\text{C}$

Titration units: log TCID₅₀

Exposure time: 30 s, 2 min and 5 min

Diluent used for the product: distilled water

Final concentrations tested: 80%

Viral strains: norovirus murin MNV-1 (IFL), grown on RAW 264.7 cells, at 37°C , under 5% CO₂ atmosphere

Organic soil load: 3 g/L bovine serum albumin + 3 mL/L sheep erythrocytes

Product stability: good

Stop solution: cold shock

Viral titre:

Viral titers are expressed in log TCID₅₀ (calculated by Spearman-Kärber method) :

- For norovirus, titer = $7,125 \log \text{DICT}_{50}$

4 VALIDATION

a) Cytotoxicity

For norovirus, the cell toxicity was observed until to the dilution 10^{-1} .

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b) SENSIBILITY ASSAYS

The viruses were titrated on cell cultures untreated with the product (indicator cell line) and titrated on cell cultures treated with the product.

According to the European standard EN 14476+A2, the F1031V2 product used at the dilution of 10^{-2} does not have an effect on the viruses titration method (the difference between viral titers must be $< 1,0$ log):

NOROVIRUS	Viral titer (log TCID ₅₀)		
PRODUCT DILUTION	Untreated cell cultures	Treated cell cultures	Viral titer (log TCID ₅₀)
F1031V2 10^{-2}	7,125	6,750	0,375

c) VALIDATIONS OF THE COLD SHOCK METHOD (the method is validated if the difference is $\leq 0,5$ log):

PRODUCT CONCENTRATION	Organic soil load	Viral titer (log TCID ₅₀)	Difference with the viral suspension
F1031V2	3 g/L BSA + 3 mL/L SE	TRIAL 1: 7,125	0,000
		TRIAL 2: 7,125	0,000

d) INACTIVATION ASSAYS OF THE VIRUS WITH A CONTROL SOLUTION

The viral titer reduction (difference between the titers of the viral suspension treated with 0,7 % formaldehyde and the viral suspension control) must be between -0,5 and -2,5 log after 30 min of exposure.

Formaldehyde 0,7%	Viral titer (log TCID ₅₀)	Viral titer reduction (log TCID ₅₀)
Viral suspension control	7,125	
inactivation 5 min		0,375
inactivation 15 min	6,750	1,625
inactivation 30 min	5,500	2,125

5 VIRUCIDAL ASSAYS

The concentrations of the product demonstrated a virucidal activity on the virus tested if the viral titer reduction is $\geq 4,0$ log.

TRIAL 1 - The viral suspension was titrated at 7,125 log TCID₅₀.

PRODUCT	Concentration	Time of exposure	Temperature	Viral titer (log TCID ₅₀)	Viral titer reduction
F1031V2	80%	30 s	20°C	4,000	3,125
		2 min		3,500	3,625
		5 min		3,000	4,125

TRIAL 2 - The viral suspension was titrated at 7,125 log TCID₅₀.

PRODUCT	Concentration	Time of exposure	Temperature	Viral titer (log TCID ₅₀)	Viral titer reduction
F1031V2	80%	30 s	20°C	3,750	3,375
		2 min		3,375	3,750
		5 min		2,875	4,250

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6 VALIDATION OF THE METHODOLOGY

The assays were validated as required by the European standard EN 14476+A2:

- The viral titers of the suspension tests were sufficient in order to observe a reduction of 4 log after time exposure with the product: 7,125 log TCID₅₀ for norovirus
- The virus was inactivated with the control solution of 0,7 % formaldehyde after 30 min of exposure :
 - the reduction observed was of 2,125 log for the norovirus.
- The F1031V2 product does not have a cytotoxic effect on the RAW 264.7 cells.
- The F1031V2 product does not affect the infectious capacity of the viruses:
 - For norovirus, the differences in viral titers between the virus inoculated on RAW 264.7 cells and the virus inoculated on the RAW 264.7 cells treated with the product was $\leq 1,0$ log (0,375 log).

7 CONCLUSION

The assays performed with the F1031V2 product, batch #611141:

- **Demonstrated a virucidal activity on the norovirus from the concentration 80%,** as required by the European standard EN 14476+A2, following a **5 min** exposure period, at 20°C, in dirty conditions.

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8 TECHNICAL APPENDIX 1

Cell line: RAW 264.7 cells (ATCC TIB-71)

Viral strain: norovirus murin, S99 strain (batch n° 4/200409/220409- Friedrich Loeffler Institut)

Buffers and media:

- PBS buffer: sodium chloride, Panreac, ref. 141659.1211, batch n° 0000204679; sodium phosphate dibasic, Sigma Aldrich, ref. S5136, batch n° BCBC7067V; sodium phosphate monobasic, Sigma Aldrich, ref. S5011, batch n° 1019K01021V
- MEM media, Sigma Aldrich, ref. 0268, batch n° 040M8301
- DMEM media, Sigma Aldrich, ref. D5796, batch n° RNBB9336
- Fetal calf sera, Sigma Aldrich, F7524, batch n° 098K3397

Reagents:

- Albumine bovine sera, Sigma Aldrich, ref. 05479, batch n° STBB7838V
- Sheep erythrocytes, Oxoïd, réf. SR 0051E, batch n° 4234000

Inactivation solution:

- formaldehyde, Sigma Aldrich, ref. F-1635, batch n° BCBB3510

9 TECHNICAL APPENDIX 2

Table A1 – Norovirus titer, by Spaerman-Kärber method.

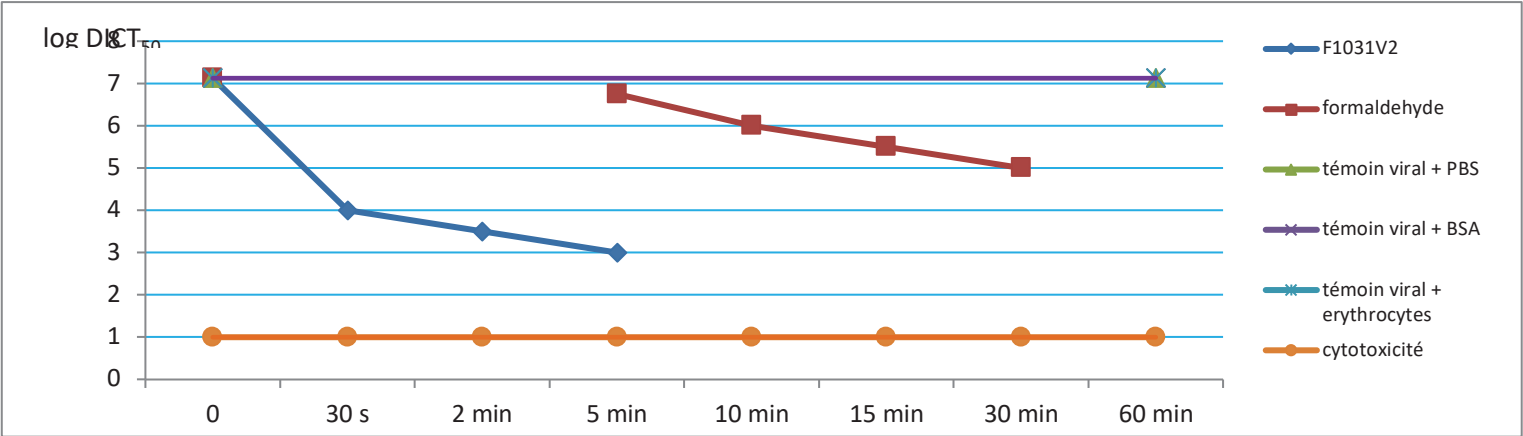
Log TCID₅₀ = 7,125

Dilution (- log)	Results	% positive results
-3	44444444	100
-4	44444444	100
-5	44444444	100
-6	44444444	100
-7	11111000	62,5
-8	00000000	0
-9	00000000	0
-10	00000000	0
Sum of % of positive results		462,5

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Chart 1 – Trials on norovirus:

TRIAL 1



TRIAL 2

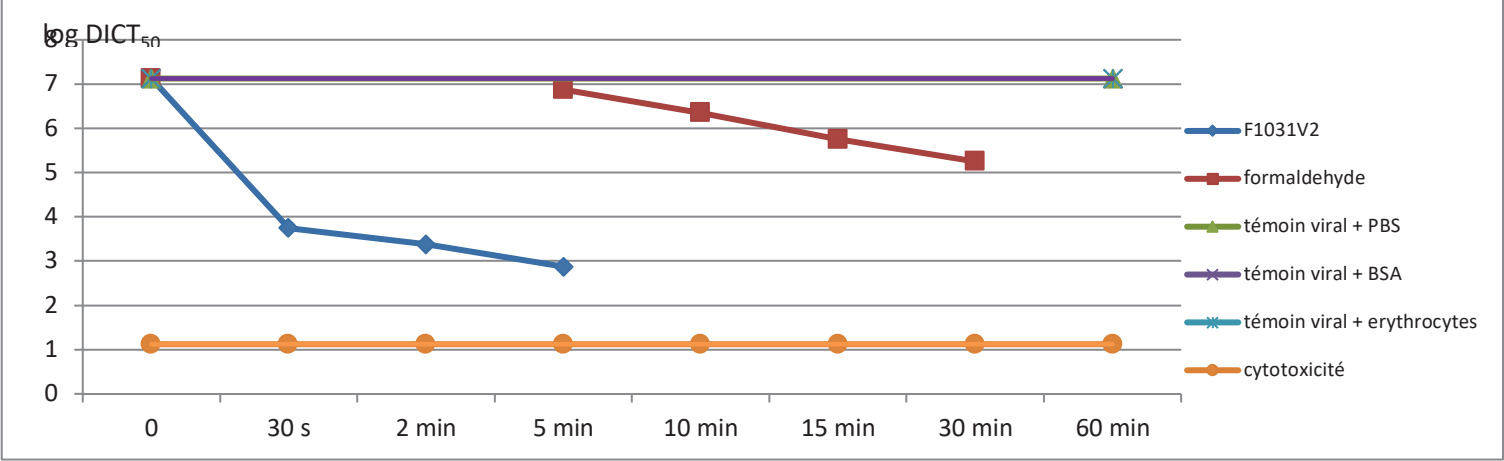


Table A2- Sensitivity of the cells to the norovirus:

PRODUCT	DILUTION	ORGANIC SOIL LOAD		Dilutions							
				-2	-3	-4	-5	-6	-7	-8	-9
F1031V2	10 ⁻²	3 g/L BSA + 3 mL/L SE	Untreated cells	4444	4444	4444	4444	4444	1111	0000	0000
				4444	4444	4444	4444	4444	1000	0000	0000
			Treated cells	4444	4444	4444	4444	4444	1100	1000	0000
				4444	4444	4444	4444	4444	0000	0000	0000

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Table A3 — Results on norovirus

PRODUCT	Concentration	Organic soil load	Cytotoxicity level	Lg DICT ₅₀							Reduction
				0	30 s	2 min	5 min	15 min	30 min	60 min	
F1031V2 TRIAL 1	100,00%	3 g/l BSA + 3 ml/l SE	1	7,125	4	3,5	3	N.T.	N.T.	N.T.	5 min R = 4,125
F1031V2 TRIAL 2	100,00%	3 g/l BSA + 3 ml/l SE	1,125	7,125	3,75	3,375	2,875	N.T.	N.T.	N.T.	5 min R = 4,25
Formaldehyde TRIAL 1	0,70%	PBS	2,5	7,125	N.T.	N.T.	6,75	5,5	5	N.T.	
Formaldehyde TRIAL 2	0,70%	PBS	2,5	7,125	N.T.	N.T.	6,875	5,75	5,25	N.T.	
VIRAL CONTROL OF INFECTIVITY TRIAL 1	N.A.	PBS	N.A.	7,125	N.T.	N.T.	N.T.	N.T.	N.T.	7,125	
VIRAL CONTROL OF INFECTIVITY TRIAL 1	N.A.	3 g/l BSA	N.A	7,125	N.T.	N.T.	N.T.	N.T.	N.T.	7,125	
VIRAL CONTROL OF INFECTIVITY TRIAL 1	N.A.	3 g/l BSA + 3 ml/l SE	N.A	7,125	N.T.	N.T.	N.T.	N.T.	N.T.	7,125	
VIRAL CONTROL OF INFECTIVITY TRIAL 2	N.A.	PBS	N.A	7,125	N.T.	N.T.	N.T.	N.T.	N.T.	7,125	
VIRAL CONTROL OF INFECTIVITY TRIAL 2	N.A.	3 g/l BSA	N.A	7,125	N.T.	N.T.	N.T.	N.T.	N.T.	7,125	
VIRAL CONTROL OF INFECTIVITY TRIAL 2	N.A.	3 g/l BSA + 3 ml/l SE	N.A	7,125	N.T.	N.T.	N.T.	N.T.	N.T.	7,125	
CELL SENSITIVITY TO THE VIRUS	10 ⁻²	N.A.	Untreated cells	7,125							
		N.A.	Treated cells	6,75							

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Table A4 — Raw results

TRIAL 1	Concentration	Organic soil load	Exposure time	Dilutions								
				-1	-2	-3	-4	-5	-6	-7	-8	-9
F1031V2	80,00%	3 g/l BSA + 3 ml SE	30 s	4444 4444	4444 4444	4444 4444	4444 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			2 min	4444 4444	4444 4444	4444 4444	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			5 min	4444 4444	4444 4444	4444 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			VIRAL CONTROL	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1110 1100	0000 0000	0000 0000
F1031V2 cytotoxicity	80,00%	3 g/l BSA + 3 ml SE	N.A.	4444 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
Formaldehyde	0,70%	PBS	5	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1100 0000	0000 0000	0000 0000
			15	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	0000 0000	0000 0000	0000 0000	0000 0000
			30	4444 4444	4444 4444	4444 4444	1111 1111	1111 0000	0000 0000	0000 0000	0000 0000	0000 0000
Formaldehyde (cytotoxicity)	0,70%	PBS	N.A.	4444 4444	4444 4444	0000 0000	0000 0000	N.T. N.T.	N.T. N.T.	N.T. N.T.	N.T. N.T.	N.T. N.T.
viral control of infectivity	N.A.	PBS	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
viral control of infectivity	N.A.	3 g/l BSA	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
viral control of infectivity	N.A.	3 g/l BSA + 3 ml SE	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000

TRIAL 2	Concentration	Organic soil load	Exposure time	Dilutions								
				-1	-2	-3	-4	-5	-6	-7	-8	-9
F1031V2	80,00%	3 g/l BSA + 3 ml SE	30 s	4444 4444	4444 4444	4444 4444	4400 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			2 min	4444 4444	4444 4444	4444 4440	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			5 min	4444 4444	4444 4444	4440 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			VIRAL CONTROL	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
F1031V2 cytotoxicity	80,00%	3 g/l BSA + 3 ml SE	N.A.	4444 4000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
Formaldehyde	0,70%	PBS	5	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1110 0000	0000 0000	0000 0000
			15	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1100 0000	0000 0000	0000 0000	0000 0000
			30	4444 4444	4444 4444	4444 4444	4444 4444	1111 1100	0000 0000	0000 0000	0000 0000	0000 0000
Formaldehyde (cytotoxicity)	0,70%	PBS	N.A.	4444 4444	4444 4444	0000 0000	0000 0000	N.T. N.T.	N.T. N.T.	N.T. N.T.	N.T. N.T.	N.T. N.T.
viral control of infectivity	N.A.	PBS	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
viral control of infectivity	N.A.	3 g/l BSA	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
viral control of infectivity	N.A.	3 g/l BSA + 3 ml SE	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1000	0000 0000	0000 0000

Rédacteur	Superviseur
Mme Emilie CANTREL, technicienne de laboratoire	Mme Stephanie MOROT-BIZOT, directrice
	

TEST REPORT

DETERMINATION OF THE VIRUCIDAL ACTIVITY OF THE F1031V2 PRODUCT ACCORDING TO THE EN 14476:2015 STANDARD

Delivered to Ms CHAKCHOUK

For : **FRANKLAB**
3 avenue des Frênes
78180 MONTIGNY LE BRETONNEUX
FRANCE



Date of request: 10/18/2018

Date of request: n°268D25-2018-08

VIRUCIDAL TESTS:

According to the NF EN 14476+A2 (October 2015) standard – chemical antiseptics and disinfectants – virucidal quantitative suspension tests for chemical disinfectants and antiseptics used in human medicine.

Tests using the F1031V2 product, against the *adenovirus*.

This test report included 9 pages.

Study completion date: 12/11/2018

Stephanie MOROT - BIZOT
PhD in Microbiology
Study Director

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SUMMARY

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Rédacteur	Superviseur
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1 PERFORMING LABORATORY

APEX BIOSOLUTIONS
4, rue des Grandes Pièces
Zone EURESPACE
25 770 SERRE LES SAPINS
FRANCE

2 SAMPLE IDENTIFICATION

SAMPLE	BATCH N°
F1031V2	611141

Expiration date: non communicated

Manufacturer : FRANKLAB

Manufacturing date: non communicated

Storage conditions: room temperature

Active substances : ethanol, isopropanol, tertiary amine

Appearance of the product: liquid, colorless

Product diluent recommended by the manufacturer for use: none, ready-to-use product

Date of delivery of the product: 10/24/2018

Date of tests: from 11/02/2018 to 12/05/2018

3 EXPERIMENTAL CONDITIONS

Temperature used during the assays: 20°C ± 1°C

Titration units: log TCID₅₀

Exposure time: 5 min, 10 min and 30 min

Diluent used for the product: distilled water

Final concentrations tested: 80%

Viral strains: adenovirus type 5, adenoid 75 strain, grown on HEp-2 cells, at 37°C, under 5% CO₂ atmosphere

Organic soil load: 3 g/L bovine serum albumin + 3 mL/L sheep erythrocytes

Product stability: good

Stop solution: cold shock

Viral titre:

Viral titers are expressed in log TCID₅₀ (calculated by Spearman-Kärber method) :

- For adenovirus, titer = 6,875 log DICT₅₀

4 VALIDATION

a) Cytotoxicity

For adenovirus, the cell toxicity was observed until to the dilution 10⁻¹.

Rédacteur	Superviseur
Mme Emilie CANTREL, technicienne de laboratoire	Mme Stephanie MOROT-BIZOT, directrice
	

b) SENSIBILITY ASSAYS

The viruses were titrated on cell cultures untreated with the product (indicator cell line) and titrated on cell cultures treated with the product.

According to the European standard EN 14476+A2, the F1031V2 product used at the dilution of 10^{-2} does not have an effect on the viruses titration method (the difference between viral titers must be $< 1,0$ log):

ADENOVIRUS	Viral titer (log TCID ₅₀)		
PRODUCT DILUTION	Untreated cell cultures	Treated cell cultures	Viral titer (log TCID ₅₀)
F1031V2 10^{-2}	6,875	6,625	0,250

c) VALIDATIONS OF THE COLD SHOCK METHOD (the method is validated if the difference is $\leq 0,5$ log):

PRODUCT CONCENTRATION	Organic soil load	Viral titer (log TCID ₅₀)	Difference with the viral suspension
F1031V2	3 g/L BSA + 3 mL/L SE	TRIAL 1: 6,875	0,000
		TRIAL 2: 7,000	0,125

d) INACTIVATION ASSAYS OF THE VIRUS WITH A CONTROL SOLUTION

The viral titer reduction (difference between the titers of the viral suspension treated with 0,7 % formaldehyde and the viral suspension control) must be between -0,5 and -2,5 log after 30 min of exposure.

Formaldehyde 0,7%	Viral titer (log TCID ₅₀)	Viral titer reduction (log TCID ₅₀)
Viral suspension control	6,875	
inactivation 5 min		0,375
inactivation 15 min	6,500	1,375
inactivation 30 min	5,500	1,625

5 VIRUCIDAL ASSAYS

The concentrations of the product demonstrated a virucidal activity on the virus tested if the viral titer reduction is $\geq 4,0$ log.

TRIAL 1 - The viral suspension was titrated at 6,875 log TCID₅₀.

PRODUCT	Concentration	Time of exposure	Temperature	Viral titer (log TCID ₅₀)	Viral titer reduction
F1031V2	80%	5 min	20°C	4,000	2,875
		10 min		2,875	4,000
		30 min		2,500	4,375

TRIAL 2 - The viral suspension was titrated at 7,000 log TCID₅₀.

PRODUCT	Concentration	Time of exposure	Temperature	Viral titer (log TCID ₅₀)	Viral titer reduction
F1031V2	80%	5 min	20°C	3,375	3,625
		10 min		2,875	4,125
		30 min		2,500	4,500

Rédacteur	Superviseur
Mme Emilie CANTREL, technicienne de laboratoire	Mme Stephanie MOROT-BIZOT, directrice
	

6 VALIDATION OF THE METHODOLOGY

The assays were validated as required by the European standard EN 14476+A2:

- The viral titers of the suspension tests were sufficient in order to observe a reduction of 4 log after time exposure with the product: 6,875 log TCID₅₀ for adenovirus
- The virus was inactivated with the control solution of 0,7 % formaldehyde after 30 min of exposure :
 - the reduction observed was of 1,625 log for the adenovirus.
- The F1031V2 product does not have a cytotoxic effect on the HEp-2 cells.
- The F1031V2 product does not affect the infectious capacity of the viruses:
 - For adenovirus, the differences in viral titers between the virus inoculated on HEp-2 cells and the virus inoculated on the HEp-2 cells treated with the product was $\leq 1,0$ log (0,250 log).

7 CONCLUSION

The assays performed with the F1031V2 product, batch #611141:

- **Demonstrated a virucidal activity on the adenovirus from the concentration 80%,** as required by the European standard EN 14476+A2, following a **10 min** exposure period, at 20°C, in dirty conditions.

Rédacteur	Superviseur
Mme Emilie CANTREL, technicienne de laboratoire	Mme Stephanie MOROT-BIZOT, directrice
	

8 TECHNICAL APPENDIX 1

Cell line: HEp-2 cells (RD-Biotech réf. 84011, batch n°110315-118)

Viral strain: adenovirus type 5, adenoïd 75 strain (ATCC réf. VR-5, batch n°3679877)

Buffers and media:

- PBS buffer: sodium chloride, Panreac, ref. 141659.1211, batch n° 0000204679; sodium phosphate dibasic, Sigma Aldrich, ref. S5136, batch n° BCBC7067V; sodium phosphate monobasic, Sigma Aldrich, ref. S5011, batch n° 1019K01021V
- MEM media, Sigma Aldrich, ref. 0268, batch n° 040M8301
- DMEM media, Sigma Aldrich, ref. D5796, batch n° RNBB9336
- Fetal calf sera, Sigma Aldrich, F7524, batch n° 098K3397

Reagents:

- Albumine bovine sera, Dominique DUTSCHER, ref. 871001, batch D1304039
- Sheep erythrocytes, Oxoïd, réf. SR 0051E, batch n° 4234000
-

Inactivation solution:

- formaldehyde, Sigma Aldrich, ref. F-1635, batch n° BCBB3510

9 TECHNICAL APPENDIX 2

Table A1 – Adenovirus titer, by Spaerman-Kärber method.

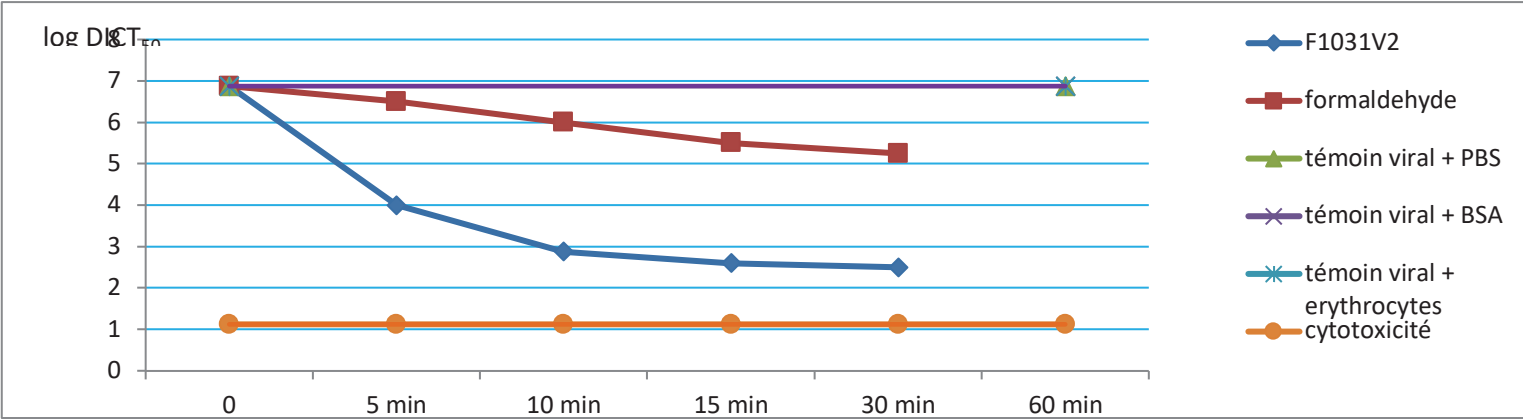
Log TCID₅₀ = 6,875

Dilution (- log)	Results	% positive results
-3	44444444	100
-4	44444444	100
-5	44444444	100
-6	44444444	100
-7	44400000	37,5
-8	00000000	0
-9	00000000	0
-10	00000000	0
Sum of % of positive results		437,5

Rédacteur	Superviseur
Mme Emilie CANTREL, technicienne de laboratoire	Mme Stephanie MOROT-BIZOT, directrice
	

Chart 1 – Trials on adenovirus:

TRIAL 1



TRIAL 2

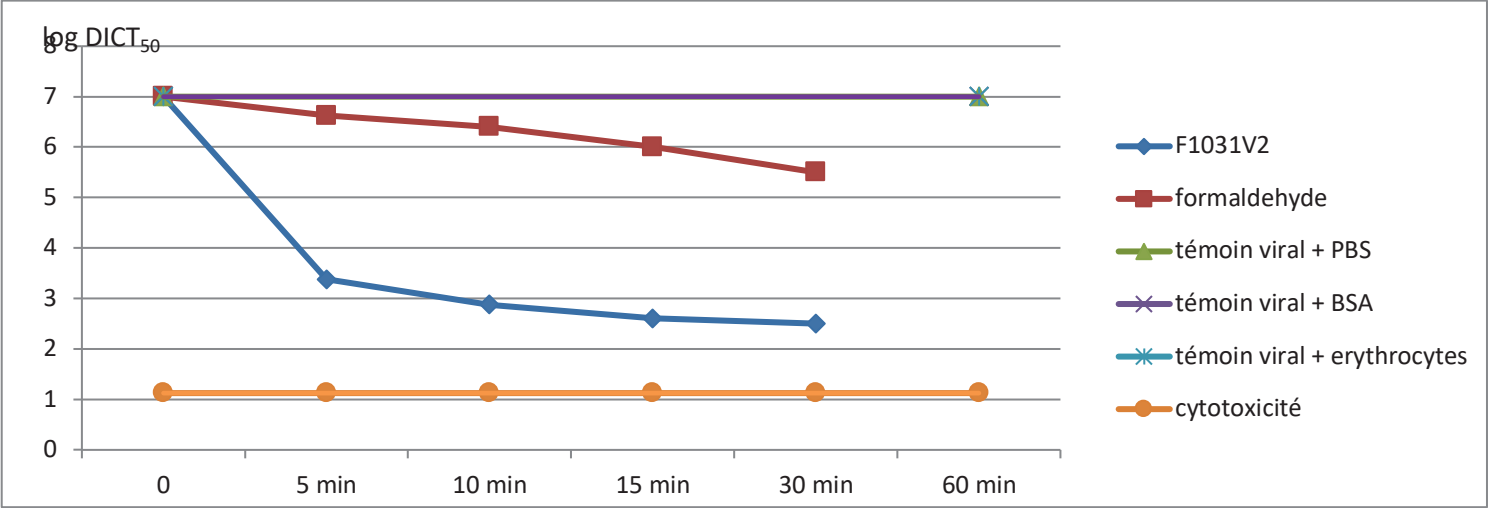


Table A2- Sensitivity of the cells to the adenovirus:

PRODUCT	DILUTION	ORGANIC SOIL LOAD		Dilutions								
				-2	-3	-4	-5	-6	-7	-8	-9	
F1031V2	10 ⁻²	3 g/L BSA + 3 mL/L SE	Untreated cells	4444	4444	4444	4444	1111	1110	0000	0000	
				4444	4444	4444	4444	1111	0000	0000	0000	
			Treated cells	4444	4444	4444	4444	1111	1000	1000	0000	
				4444	4444	4444	4444	1111	0000	0000	0000	

Rédacteur	Superviseur
Mme Emilie CANTREL, technicienne de laboratoire	Mme Stephanie MOROT-BIZOT, directrice
	

Table A3 — Results on adenovirus

PRODUCT	Concentration	Organic soil load	Cytotoxicity level	Lg DICT ₅₀						Reduction
				0	5 min	10 min	15 min	30 min	60 min	
F1031V2 TRIAL 1	80,00%	3 g/l BSA + 3 ml/l SE	1,125	6,875	4,000	2,875	N.T.	2,500	N.T.	10 min R = 4,000
F1031V2 TRIAL 2	80,00%	3 g/l BSA + 3 ml/l SE	1,000	7,000	3,375	2,875	N.T.	2,500	N.T.	10 min R = 4,125
Formaldehyde TRIAL 1	0,70%	PBS	2,375	6,875	6,500	N.T.	5,500	5,250	N.T.	
Formaldehyde TRIAL 2	0,70%	PBS	2,000	7,000	6,625	N.T.	6,000	5,50	N.T.	
VIRAL CONTROL OF INFECTIVITY TRIAL 1	N.A.	PBS	N.A.	6,875	N.T.	N.T.	N.T.	N.T.	6,875	
VIRAL CONTROL OF INFECTIVITY TRIAL 1	N.A.	3 g/l BSA	N.A	6,875	N.T.	N.T.	N.T.	N.T.	6,875	
VIRAL CONTROL OF INFECTIVITY TRIAL 1	N.A.	3 g/l BSA + 3 ml/L SE	N.A	6,875	N.T.	N.T.	N.T.	N.T.	6,875	
VIRAL CONTROL OF INFECTIVITY TRIAL 2	N.A.	PBS	N.A	7,000	N.T.	N.T.	N.T.	N.T.	7,000	
VIRAL CONTROL OF INFECTIVITY TRIAL 2	N.A.	3 g/L BSA	N.A	7,000	N.T.	N.T.	N.T.	N.T.	7,000	
VIRAL CONTROL OF INFECTIVITY TRIAL 2	N.A.	3 g/L BSA + 3 ml/L SE	N.A	7,000	N.T.	N.T.	N.T.	N.T.	7,000	
CELL SENSITIVITY TO THE VIRUS	10 ⁻²	N.A.	Untreated cells	6,875						
		N.A.	Treated cells	6,625						

Rédacteur	Superviseur
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Table A4 — Raw results

TRIAL 1	Concentration	Organic soil load	Exposure time	Dilutions								
				-1	-2	-3	-4	-5	-6	-7	-8	-9
F1031V2	80,00%	3 g/l BSA + 3 ml SE	5 min	4444 4444	4444 4444	4444 4444	4444 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			10 min	4444 4444	4444 4444	4440 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			30 min	4444 4444	4444 4444	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			VIRAL CONTROL	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1110 0000	0000 0000	0000 0000
F1031V2 cytotoxicity	80,00%	3 g/l BSA + 3 ml SE	N.A.	4444 4000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
Formaldehyde	0,70%	PBS	5	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 1111	0000 0000	0000 0000	0000 0000
			15	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	0000 0000	0000 0000	0000 0000	0000 0000
			30	4444 4444	4444 4444	4444 4444	1111 1111	1111 1100	0000 0000	0000 0000	0000 0000	0000 0000
Formaldehyde (cytotoxicity)	0,70%	PBS	N.A.	4444 4444	4444 4440	0000 0000	0000 0000	N.T.	N.T.	N.T.	N.T.	N.T.
viral control of infectivity	N.A.	PBS	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1110 0000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1110 0000	0000 0000	0000 0000
viral control of infectivity	N.A.	3 g/l BSA	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1110 0000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1110 0000	0000 0000	0000 0000
viral control of infectivity	N.A.	3 g/l BSA + 3 ml SE	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1110 0000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1110 0000	0000 0000	0000 0000

TRIAL 2	Concentration	Organic soil load	Exposure time	Dilutions								
				-1	-2	-3	-4	-5	-6	-7	-8	-9
F1031V2	80,00%	3 g/l BSA + 3 ml SE	5 min	4444 4444	4444 4444	4444 4440	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			10 min	4444 4444	4444 4444	4440 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			30 min	4444 4444	4444 4444	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
			VIRAL CONTROL	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 0000	0000 0000	0000 0000
F1031V2 cytotoxicity	80,00%	3 g/l BSA + 3 ml SE	N.A.	4444 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000
Formaldehyde	0,70%	PBS	5	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 1111	1000 0000	0000 0000	0000 0000
			15	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 0000	0000 0000	0000 0000	0000 0000
			30	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	0000 0000	0000 0000	0000 0000	0000 0000
Formaldehyde (cytotoxicity)	0,70%	PBS	N.A.	4444 4444	4444 0000	0000 0000	0000 0000	N.T.	N.T.	N.T.	N.T.	N.T.
viral control of infectivity	N.A.	PBS	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 0000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	0000 0000	0000 0000	0000 0000
viral control of infectivity	N.A.	3 g/l BSA	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 0000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 0000	0000 0000	0000 0000
viral control of infectivity	N.A.	3 g/l BSA + 3 ml SE	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 0000	0000 0000	0000 0000
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	1111 1111	1111 0000	0000 0000	0000 0000

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