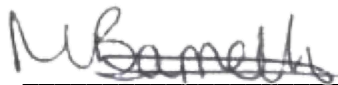


**Study Title:**  
**Quantitative suspension test for evaluation of virucidal activity  
in the medical area (Phase 2 Step1)**

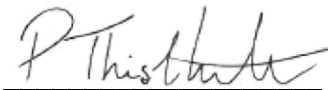
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Report date: 31/03/2021  
Issue number: 1



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The test results on this report refer only to the items tested as supplied by the customer. This report shall not be reproduced except in full and with written approval of Microbiological Solutions Ltd. All reports are archived for a minimum of 2 years. The sample will be retained for 1 month unless otherwise requested in writing.

**Scope**

The standard method BS EN 14476 describes a test method and the minimum requirements for virucidal activity of a chemical disinfectant and antiseptic products that form a homogenous physically stable preparation when diluted with hard water – or in the case of ready to use products that are not diluted when applied, - with water. Products can only be tested at a concentration of 80% (97% with a modified method for special cases) as some dilution is always produced by adding the test organisms and interfering substances. This European Standard applies to products that are used in the medical area in the fields of hygienic handrub, hygienic handwash, instrument disinfection by immersion, surface disinfection by wiping, spraying, flooding or other means and textile disinfection.

This European standard applies to areas and situations where disinfection is medically indicated. Such indication occurs in patient care, for example: In hospitals, in community medical facilities and in dental institutions or in clinics of schools, of kindergartens and of nursing homes, and may occur in the workplace and in the home. It may also include services such as laundries and kitchens supplying products directly for patients.

**Outline of Test Method (Obligatory Test Conditions)**

A sample of the test product is diluted in synthetic hard water in products diluted at point of use or water in the case of ready to use products is added to a test suspension of viruses in a solution of interfering substance. The mixture is maintained at one of the temperatures and contact times specified in the standard. At the end of this contact time, an aliquot is taken; the virucidal action in this portion is immediately suppressed by a validated method (dilutions of the sample in ice-cold cell maintenance medium). The dilutions are transferred into cell culture units either using monolayer or cell suspension. Infectivity tests are done either by plaque test or quantal tests. After incubation, the titres of infectivity are calculated according to Spearman and Käber or by plaque counting. Reduction of virus infectivity is calculated from differences of lg virus titres before (virus control) and after treatment with the product. The standard minimum spectrum of test organisms is Poliovirus, Adenovirus and Murine Norovirus.

**Acceptance Criteria**

The product when tested as above shall demonstrate at least a 4 log<sub>10</sub> reduction against the test virus. The test is deemed valid where all control requirements are met.

Test information		Deviation
Name of Product	Greenolyte 500	/
Batch Number & Expiry Date	Mfg: 1/12/2020 Batch: 0112-01 Holdbarhet: 15mnd, 4 mnd. Etter apning	
Date of Delivery	10/12/2020	
Period of Analysis	01/03/2021	
Manufacturer / Supplier	Greenex	
Storage Conditions	Ambient	
Appearance of the Product	Clear liquid	
Neutralisation Method	Dilution	
Product Diluent	Distilled water	
Test Concentrations	500ppm, 200ppm, 100ppm	
Experimental Conditions	Clean	
Interfering Substance	Clean 0.3g/l Bovine Albumin	
Test Temperature	20°C ± 1°C	
Temperature of Incubation	37°C ±1°C	
Identification of the Viral Strains:	Poliovirus type 1, LSc 2ab Adenovirus type 5, strain Adenoid 75, ATCC VR-5 Murine norovirus, strain S99 Berlin	
Contact Times	45 seconds ± 5s and 90 seconds ± 5s	
Stability and Appearance During Test	No Change Observed (Homogenous)	

**Deviations from Standard Method**

There were no deviations from the standard method


**Test Result Summary**


The test product received has achieved a 4-log reduction against Adenovirus and Murine norovirus, when tested under the condition stipulated in this report.


"The product kills 99.99% of Norovirus, adenovirus, Rhinovirus and all enveloped viruses in 90 seconds at 200ppm "


"The product kills 99.99% of Norovirus, adenovirus, Rhinovirus and all enveloped viruses in 45 seconds at 500ppm"


Summary Adenovirus

Controls					
					
Conditions	Concentration	Contact time	log TCID50	log reduction	Control validation
Virus control (water)	N/A	45 seconds	7.29	N/A	Validated
Cytotoxicity (product)	500ppm	N/A	2.50	N/A	Validated
Product suppression control	500ppm	500ppm	7.38	-0.08	Validated
Reference virus inactivation (formaldehyde)	1.4%	30 minutes	4.08	3.21	Validated
Reference virus inactivation (formaldehyde)	1.4%	60 minutes	3.04	4.25	Validated
Cytotoxicity (formaldehyde)	1.4%	N/A	2.50	N/A	Validated


Controls					
					
Conditions	Concentration	Contact time	log TCID50	log reduction	Control validation
Virus control (water)	N/A	90 seconds	7.17	N/A	Validated


Interference controls					
					
Condition	Concentration	Contact time	log TCID50	Log difference	Control validation
Interference control (untreated)	N/A	N/A	7.96	N/A	N/A
Interference control (treated)	500ppm	N/A	8.08	-0.13	Validated


Test Results					
					
Condition	Concentration	Contact time	log TCID50	log reduction	Pass/Fail
Test product	500ppm	45 seconds	2.50	>4	Pass
Test product	200ppm	45 seconds	3.00	>4	Pass
Test product	100ppm	45 seconds	4.08	3.21	Fail


Test Results					
					
Condition	Concentration	Contact time	log TCID50	log reduction	Pass/Fail
Test product	500ppm	90 seconds	2.50	>4	Pass
Test product	200ppm	90 seconds	2.75	>4	Pass
Test product	100ppm	90 seconds	3.50	3.67	Fail


Summary Norovirus

Controls					
					
Conditions	Concentration	Contact time	log TCID50	log reduction	Control validation
Virus control (water)	N/A	45 seconds	7.38	N/A	Validated
Cytotoxicity (product)	500ppm	N/A	2.50	N/A	Validated
Product supression control	500ppm	500ppm	7.38	0.00	Validated
Reference virus inactivation (formaldehyde)	1.4%	30 minutes	5.13	2.25	Validated
Reference virus inactivation (formaldehyde)	1.4%	60 minutes	4.63	2.75	Validated
Cytotoxicity (formaldehyde)	1.4%	N/A	2.50	N/A	Validated


Controls					
					
Conditions	Concentration	Contact time	log TCID50	log reduction	Control validation
Virus control (water)	N/A	90 seconds	7.29	N/A	Validated


Interference controls					
					
Condition	Concentration	Contact time	log TCID50	Log difference	Control validation
Interference control (untreated)	N/A	N/A	8.00	N/A	N/A
Interference control (treated)	500ppm	N/A	7.96	0.04	Validated


Test Results					
					
Condition	Concentration	Contact time	log TCID50	log reduction	Pass/Fail
Test product	500ppm	45 seconds	3.00	>4	Pass
Test product	200ppm	45 seconds	3.50	3.88	Fail
Test product	100ppm	45 seconds	3.63	3.75	Fail


Test Results					
					
Condition	Concentration	Contact time	log TCID50	log reduction	Pass/Fail
Test product	500ppm	90 seconds	2.50	>4	Pass
Test product	200ppm	90 seconds	2.50	>4	Pass
Test product	100ppm	90 seconds	2.50	>4	Pass


Summary Poliovirus

Controls					
					
Conditions	Concentration	Contact time	log TCID50	log reduction	Control validation
Virus control (water)	N/A	45 seconds	7.08	N/A	Validated
Cytotoxicity (product)	500ppm	N/A	2.50	N/A	Validated
Product supression control	500ppm	500ppm	7.25	-0.17	Validated
Reference virus inactivation (formaldehyde)	1.4%	5 minutes	5.17	1.92	Validated
Reference virus inactivation (formaldehyde)	1.4%	15 minutes	4.79	2.29	Validated
Cytotoxicity (formaldehyde)	1.4%	N/A	2.50	N/A	Validated

Controls					
					
Conditions	Concentration	Contact time	log TCID50	log reduction	Control validation
Virus control (water)	N/A	90 seconds	6.88	N/A	Validated

Interference controls					
					
Condition	Concentration	Contact time	log TCID50	Log difference	Control validation
Interference control (untreated)	N/A	N/A	8.13	N/A	N/A
Interference control (treated)	500ppm	N/A	8.04	0.08	Validated

Test Results					
					
Condition	Concentration	Contact time	log TCID50	log reduction	Pass/Fail
Test product	500ppm	45 seconds	4.75	2.33	Fail
Test product	200ppm	45 seconds	5.00	2.08	Fail
Test product	100ppm	45 seconds	5.71	1.38	Fail

Test Results					
					
Condition	Concentration	Contact time	log TCID50	log reduction	Pass/Fail
Test product	500ppm	90 seconds	4.00	2.88	Fail
Test product	200ppm	90 seconds	4.46	2.42	Fail
Test product	100ppm	90 seconds	5.00	1.88	Fail

Raw data

Virus control (water)				Contact time			90 seconds		% CPE	p(1-p)
Dilution	Counts									
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	4	1	0	
-7	1	2	1	3	1	1	0.375	0.234375		
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Vacciniavirus</i> ATTC VR-1508	
d	1
sum px	1.38
n	8
SD50	-6.88
SE	0.18
xp	-6

Test product		Product concentration			500ppm		Contact time		90 seconds	
Dilution	Counts							% CPE	p(1-p)	
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	2	2	2	2	2	2	2	0.5	0.25	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Vacciniavirus</i> ATTC VR-1508	
d	1
sum px	1.50
n	8
SD50	-4.00
SE	0.19
xp	-3

Test product		Product concentration			200ppm		Contact time		90 seconds	
Dilution	Counts							% CPE	p(1-p)	
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	2	3	3	4	4	4	0.83333333	0.138889		
-5	1	1	1	0	0	0	0.125	0.109375		
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Vacciniavirus</i> ATTC VR-1508	
d	1
sum px	1.96
n	8
SD50	-4.46
SE	0.19
xp	-3

Test product		Product concentration			100ppm		Contact time		90 seconds	
Dilution	Counts							% CPE	p(1-p)	
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	2	2	2	2	2	2	2	0.5	0.25	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Vacciniavirus</i> ATTC VR-1508	
d	1
sum px	1.50
n	8
SD50	-5.00
SE	0.19
xp	-4

Raw data

Virus control (water)				Contact time			45 seconds		% CPE	p(1-p)
Dilution	Counts									
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	4	1	0	
-7	2	2	2	2	2	2	2	0.5	0.25	
-8	1	1	0	0	0	0	0	0.08333333	0.076389	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Vacciniavirus</i>	
ATTC VR-1508	
d	1
sum px	1.58
n	8
SD50	-7.08
SE	0.22
xp	-6

Cytotoxicity (product)				Product concentration			500ppm		% CPE	p(1-p)
Dilution	Counts									
-2	4	4	4	4	4	4	4	1	0	
-3	0	0	0	0	0	0	0	0	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Vacciniavirus</i>	
ATTC VR-1508	
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2

Product supression control				Product concentration			500ppm		% CPE	p(1-p)
Dilution	Counts									
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	4	1	0	
-7	3	4	4	2	2	2	1	0.6666667	0.222222	
-8	1	1	0	0	0	0	0	0.08333333	0.076389	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Vacciniavirus</i>	
ATTC VR-1508	
d	1
sum px	1.75
n	8
SD50	-7.25
SE	0.21
xp	-6

Interference control (untreated)				Product concentration			Neat		% CPE	p(1-p)
Dilution	Counts									
-1	4	4	4	4	4	4	4	1	0	
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	4	1	0	
-7	4	4	4	4	4	4	4	1	0	
-8	3	3	2	2	4	1	0.625	0.234375		
-9	0	0	0	0	0	0	0	0	0	
-10	0	0	0	0	0	0	0	0	0	

Organism <i>Vacciniavirus</i>	
ATTC VR-1508	
d	1
sum px	1.625
n	10
SD50	-8.125
SE	0.1614
xp	-7



Raw data

Interference control (treated)				Product concentration				500ppm	
Dilution	Counts						% CPE	p(1-p)	
-1	4	4	4	4	4	4	1	0	
-2	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	1	0	
-7	4	4	4	4	4	4	1	0	
-8	3	2	2	2	2	2	0.54166667	0.248264	
-9	0	0	0	0	0	0	0	0	
-10	0	0	0	0	0	0	0	0	

Organism	Vacciniavirus ATTC VR-1508
d	1
sum px	1.5417
n	10
SD50	-8.042
SE	0.1661
xp	-7

Reference virus inactivation (formaldehyde)				Contact time				5 minutes	
Dilution	Counts						% CPE	p(1-p)	
-2	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	1	0	
-5	2	4	4	1	1	2	0.58333333	0.243056	
-6	1	1	0	0	0	0	0.08333333	0.076389	
-7	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	

Organism	Vacciniavirus ATTC VR-1508
d	1
sum px	1.67
n	8
SD50	-5.17
SE	0.21
xp	-4

Reference virus inactivation (formaldehyde)				Contact time				15 minutes	
Dilution	Counts						% CPE	p(1-p)	
-2	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	1	0	
-5	1	1	2	2	1	0	0.29166667	0.206597	
-6	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	

Organism	Vacciniavirus ATTC VR-1508
d	1
sum px	1.29
n	8
SD50	-4.79
SE	0.17
xp	-4

Cytotoxicity (formaldehyde)									
Dilution	Counts						% CPE	p(1-p)	
-2	4	4	4	4	4	4	1	0	
-3	0	0	0	0	0	0	0	0	
-4	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	

Organism	Vacciniavirus ATTC VR-1508
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2

Raw data

Test product		Product concentration				500ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	1	1	1	1	1	1	1	0.25	0.1875	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	<i>Vacciniavirus</i>
	ATTC VR-1508
d	1
sum px	1.25
n	8
SD50	-4.75
SE	0.16
xp	-4

Test product		Product concentration				200ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	2	2	2	2	2	2	2	0.5	0.25	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	<i>Vacciniavirus</i>
	ATTC VR-1508
d	1
sum px	1.50
n	8
SD50	-5.00
SE	0.19
xp	-4

Test product		Product concentration				100ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	1	1	1	1	1	1	0	0.20833333	0.164931	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	<i>Vacciniavirus</i>
	ATTC VR-1508
d	1
sum px	1.21
n	8
SD50	-5.71
SE	0.15
xp	-5

Raw data

Virus control (water)				Contact time		45 seconds		% CPE	p(1-p)
Dilution	Counts								
-2	4	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	4	1	0
-4	4	4	4	4	4	4	4	1	0
-5	4	4	4	4	4	4	4	1	0
-6	4	4	4	4	4	4	4	1	0
-7	2	3	4	4	2	2	0.70833333	0.206597	
-8	1	1	0	0	0	0	0.08333333	0.076389	
-9	0	0	0	0	0	0	0	0	0

Organism	
Adenovirus type 5	
Adenoid 75, ATCC VR-5	
d	1
sum px	1.79
n	8
SD50	-7.29
SE	0.20
xp	-6

Cytotoxicity (product)				Product concentration		500ppm		% CPE	p(1-p)
Dilution	Counts								
-2	4	4	4	4	4	4	4	1	0
-3	0	0	0	0	0	0	0	0	0
-4	0	0	0	0	0	0	0	0	0
-5	0	0	0	0	0	0	0	0	0
-6	0	0	0	0	0	0	0	0	0
-7	0	0	0	0	0	0	0	0	0
-8	0	0	0	0	0	0	0	0	0
-9	0	0	0	0	0	0	0	0	0

Organism	
Adenovirus type 5	
Adenoid 75, ATCC VR-5	
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2

Product supression control				Product concentration		500ppm		% CPE	p(1-p)
Dilution	Counts								
-2	4	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	4	1	0
-4	4	4	4	4	4	4	4	1	0
-5	4	4	4	4	4	4	4	1	0
-6	4	4	4	4	4	4	4	1	0
-7	3	3	3	3	3	3	0.75	0.1875	
-8	1	1	1	0	0	0	0.125	0.109375	
-9	0	0	0	0	0	0	0	0	0

Organism	
Adenovirus type 5	
Adenoid 75, ATCC VR-5	
d	1
sum px	1.88
n	8
SD50	-7.38
SE	0.21
xp	-6

Interference control (untreated)				Product concentration		Neat		% CPE	p(1-p)
Dilution	Counts								
-1	4	4	4	4	4	4	4	1	0
-2	4	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	4	1	0
-4	4	4	4	4	4	4	4	1	0
-5	4	4	4	4	4	4	4	1	0
-6	4	4	4	4	4	4	4	1	0
-7	4	4	4	4	4	4	4	1	0
-8	2	2	3	2	1	1	0.45833333	0.248264	
-9	0	0	0	0	0	0	0	0	0
-10	0	0	0	0	0	0	0	0	0

Organism	
Adenovirus type 5	
Adenoid 75, ATCC VR-5	
d	1
sum px	1.4583
n	10
SD50	-7.958
SE	0.1661
xp	-7

Raw data

Interference control (treated)				Product concentration			500ppm	
Dilution	Counts						% CPE	p(1-p)
-1	4	4	4	4	4	4	1	0
-2	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	1	0
-4	4	4	4	4	4	4	1	0
-5	4	4	4	4	4	4	1	0
-6	4	4	4	4	4	4	1	0
-7	4	4	4	4	4	4	1	0
-8	2	2	2	2	2	2	0.5	0.25
-9	1	1	0	0	0	0	0.08333333	0.076389
-10	0	0	0	0	0	0	0	0

Organism	<i>Adenovirus type 5</i> Adenoid 75, ATCC VR-5
d	1
sum px	1.5833
n	10
SD50	-8.083
SE	0.1904
xp	-7

Reference virus inactivation (formaldehyde)				Contact time			30 minutes	
Dilution	Counts						% CPE	p(1-p)
-2	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	1	0
-4	3	3	3	3	3	3	0.75	0.1875
-5	1	1	0	0	0	0	0.08333333	0.076389
-6	0	0	0	0	0	0	0	0
-7	0	0	0	0	0	0	0	0
-8	0	0	0	0	0	0	0	0
-9	0	0	0	0	0	0	0	0

Organism	<i>Adenovirus type 5</i> Adenoid 75, ATCC VR-5
d	1
sum px	1.83
n	8
SD50	-4.33
SE	0.19
xp	-3

Reference virus inactivation (formaldehyde)				Contact time			60 minutes	
Dilution	Counts						% CPE	p(1-p)
-2	4	4	4	4	4	4	1	0
-3	3	1	2	2	2	1	0.45833333	0.248264
-4	1	1	0	0	0	0	0.08333333	0.076389
-5	0	0	0	0	0	0	0	0
-6	0	0	0	0	0	0	0	0
-7	0	0	0	0	0	0	0	0
-8	0	0	0	0	0	0	0	0
-9	0	0	0	0	0	0	0	0

Organism	<i>Adenovirus type 5</i> Adenoid 75, ATCC VR-5
d	1
sum px	1.54
n	8
SD50	-3.04
SE	0.22
xp	-2

Cytotoxicity (formaldehyde)								
Dilution	Counts						% CPE	p(1-p)
-2	4	4	4	4	4	4	1	0
-3	0	0	0	0	0	0	0	0
-4	0	0	0	0	0	0	0	0
-5	0	0	0	0	0	0	0	0
-6	0	0	0	0	0	0	0	0
-7	0	0	0	0	0	0	0	0
-8	0	0	0	0	0	0	0	0
-9	0	0	0	0	0	0	0	0

Organism	<i>Adenovirus type 5</i> Adenoid 75, ATCC VR-5
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2

Raw data

Test product		Product concentration				500ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	0	0	0	0	0	0	0	0	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	<i>Adenovirus type 5</i> Adenoid 75, ATCC VR-5
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2

Test product		Product concentration				200ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	2	2	2	2	2	2	2	0.5	0.25	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	<i>Adenovirus type 5</i> Adenoid 75, ATCC VR-5
d	1
sum px	1.50
n	8
SD50	-3.00
SE	0.19
xp	-2

Test product		Product concentration				100ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	1	1	2	2	0.58333333	0.243056		
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	<i>Adenovirus type 5</i> Adenoid 75, ATCC VR-5
d	1
sum px	1.58
n	8
SD50	-4.08
SE	0.19
xp	-3

Raw data

Virus control (water)				Contact time			90 seconds		% CPE	p(1-p)
Dilution	Counts									
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	4	1	0	
-7	2	3	3	3	2	1	0.58333333	0.243056		
-8	1	1	0	0	0	0	0.08333333	0.076389		
-9	0	0	0	0	0	0	0	0	0	

Organism	Adenovirus type 5 Adenoid 75, ATCC VR-5	
d	1	
sum px	1.67	
n	8	
SD50	-7.17	
SE	0.21	
xp	-6	

Test product		Product concentration			500ppm		Contact time		90 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	0	0	0	0	0	0	0	0	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	Adenovirus type 5 Adenoid 75, ATCC VR-5	
d	1	
sum px	1.00	
n	8	
SD50	-2.50	
SE	0.00	
xp	-2	

Test product		Product concentration			200ppm		Contact time		90 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	1	1	1	1	1	1	1	0.25	0.1875	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	Adenovirus type 5 Adenoid 75, ATCC VR-5	
d	1	
sum px	1.25	
n	8	
SD50	-2.75	
SE	0.16	
xp	-2	

Test product		Product concentration			100ppm		Contact time		90 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism	Adenovirus type 5 Adenoid 75, ATCC VR-5	
d	1	
sum px	1.00	
n	8	
SD50	-3.50	
SE	0.00	
xp	-3	

Raw data

Virus control (water)				Contact time			45 seconds		% CPE	p(1-p)
Dilution	Counts									
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	4	1	0	
-7	3	3	3	3	3	3	3	0.75	0.1875	
-8	1	1	1	0	0	0	0	0.125	0.109375	
-9	0	0	0	0	0	0	0	0	0	

Organism		<i>Murine norovirus</i> S99 Berlin	
d		1	
sum px		1.88	
n		8	
SD50		-7.38	
SE		0.21	
xp		-6	

Cytotoxicity (product)				Product concentration			500ppm		% CPE	p(1-p)
Dilution	Counts									
-2	4	4	4	4	4	4	4	1	0	
-3	0	0	0	0	0	0	0	0	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism		<i>Murine norovirus</i> S99 Berlin	
d		1	
sum px		1.00	
n		8	
SD50		-2.50	
SE		0.00	
xp		-2	

Product supression control				Product concentration			500ppm		% CPE	p(1-p)
Dilution	Counts									
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	4	1	0	
-7	2	4	4	4	4	2	2	0.75	0.1875	
-8	1	1	1	0	0	0	0	0.125	0.109375	
-9	0	0	0	0	0	0	0	0	0	

Organism		<i>Murine norovirus</i> S99 Berlin	
d		1	
sum px		1.88	
n		8	
SD50		-7.38	
SE		0.21	
xp		-6	

Interference control (untreated)				Product concentration			Neat		% CPE	p(1-p)
Dilution	Counts									
-1	4	4	4	4	4	4	4	1	0	
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	4	4	4	4	4	4	4	1	0	
-5	4	4	4	4	4	4	4	1	0	
-6	4	4	4	4	4	4	4	1	0	
-7	4	4	4	4	4	4	4	1	0	
-8	2	2	2	2	2	2	2	0.5	0.25	
-9	0	0	0	0	0	0	0	0	0	
-10	0	0	0	0	0	0	0	0	0	

Organism		<i>Murine norovirus</i> S99 Berlin	
d		1	
sum px		1.5	
n		10	
SD50		-8	
SE		0.1667	
xp		-7	

Raw data

Interference control (treated)				Product concentration			500ppm	
Dilution	Counts						% CPE	p(1-p)
-1	4	4	4	4	4	4	1	0
-2	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	1	0
-4	4	4	4	4	4	4	1	0
-5	4	4	4	4	4	4	1	0
-6	4	4	4	4	4	4	1	0
-7	4	4	4	4	4	4	1	0
-8	2	1	2	2	2	2	0.45833333	0.248264
-9	0	0	0	0	0	0	0	0
-10	0	0	0	0	0	0	0	0

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.4583
n	10
SD50	-7.958
SE	0.1661
xp	-7

Reference virus inactivation (formaldehyde)				Contact time			30 minutes	
Dilution	Counts						% CPE	p(1-p)
-2	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	1	0
-4	4	4	4	4	4	4	1	0
-5	2	2	2	2	2	2	0.5	0.25
-6	1	1	1	0	0	0	0.125	0.109375
-7	0	0	0	0	0	0	0	0
-8	0	0	0	0	0	0	0	0
-9	0	0	0	0	0	0	0	0

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.63
n	8
SD50	-5.13
SE	0.23
xp	-4

Reference virus inactivation (formaldehyde)				Contact time			60 minutes	
Dilution	Counts						% CPE	p(1-p)
-2	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	1	0
-4	4	4	4	4	4	4	1	0
-5	1	1	1	0	0	0	0.125	0.109375
-6	0	0	0	0	0	0	0	0
-7	0	0	0	0	0	0	0	0
-8	0	0	0	0	0	0	0	0
-9	0	0	0	0	0	0	0	0

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.13
n	8
SD50	-4.63
SE	0.13
xp	-4

Cytotoxicity (formaldehyde)								
Dilution	Counts						% CPE	p(1-p)
-2	4	4	4	4	4	4	1	0
-3	0	0	0	0	0	0	0	0
-4	0	0	0	0	0	0	0	0
-5	0	0	0	0	0	0	0	0
-6	0	0	0	0	0	0	0	0
-7	0	0	0	0	0	0	0	0
-8	0	0	0	0	0	0	0	0
-9	0	0	0	0	0	0	0	0

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2



Raw data

Test product		Product concentration				500ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	2	2	2	2	2	2	2	0.5	0.25	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.50
n	8
SD50	-3.00
SE	0.19
xp	-2

Test product		Product concentration				200ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.00
n	8
SD50	-3.50
SE	0.00
xp	-3

Test product		Product concentration				100ppm	Contact time		45 seconds	
Dilution	Counts						% CPE	p(1-p)		
-2	4	4	4	4	4	4	4	1	0	
-3	4	4	4	4	4	4	4	1	0	
-4	1	1	1	0	0	0	0.125	0.109375		
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.13
n	8
SD50	-3.63
SE	0.13
xp	-3

Raw data

Virus control (water)				Contact time			90 seconds	
Dilution	Counts						% CPE	p(1-p)
-2	4	4	4	4	4	4	1	0
-3	4	4	4	4	4	4	1	0
-4	4	4	4	4	4	4	1	0
-5	4	4	4	4	4	4	1	0
-6	4	4	4	4	4	4	1	0
-7	2	2	3	3	3	3	0.66666667	0.222222
-8	1	1	1	0	0	0	0.125	0.109375
-9	0	0	0	0	0	0	0	0

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.79
n	8
SD50	-7.29
SE	0.22
xp	-6

Test product		Product concentration			500ppm		Contact time		90 seconds	
Dilution	Counts							% CPE	p(1-p)	
-2	4	4	4	4	4	4	4	1	0	
-3	0	0	0	0	0	0	0	0	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2

Test product		Product concentration			200ppm		Contact time		90 seconds	
Dilution	Counts							% CPE	p(1-p)	
-2	4	4	4	4	4	4	4	1	0	
-3	0	0	0	0	0	0	0	0	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2

Test product		Product concentration			100ppm		Contact time		90 seconds	
Dilution	Counts							% CPE	p(1-p)	
-2	4	4	4	4	4	4	4	1	0	
-3	0	0	0	0	0	0	0	0	0	
-4	0	0	0	0	0	0	0	0	0	
-5	0	0	0	0	0	0	0	0	0	
-6	0	0	0	0	0	0	0	0	0	
-7	0	0	0	0	0	0	0	0	0	
-8	0	0	0	0	0	0	0	0	0	
-9	0	0	0	0	0	0	0	0	0	

Organism <i>Murine norovirus</i> S99 Berlin	
d	1
sum px	1.00
n	8
SD50	-2.50
SE	0.00
xp	-2

