

Test Report: EN 13610:2002 Chemical disinfectants– Quantitative suspension test for the evaluation of virucidal activity against bacteriophages of chemical disinfectants used in food and industrial areas- Test method and requirements (Phase 2/Step 1)

Test Laboratory

BluTest Laboratories Ltd

5 Robroyston Oval, Nova Business Park, Glasgow G33 1AP

Identification of sample

Name of the product
Batch number
Client
Client address

F10SC Disinfectant
220309
Health & Hygiene (Pty) Ltd
PO Box 906, Florida Hills 1716

Project code
Date of delivery
Storage conditions
Active substances

BT-HAH-02
02 July 2020
Ambient
QAC and PHMB 5.8%

Test Method and Neutralisation

Method
Neutraliser
Formulation

Chemical neutralisation
Universal neutraliser:
Lecithin 3g/l, Polysorbate 80 30g/l, sodium thiosulphate 5g/l, L-histidine 1g/l, sodium chloride 8.5g/l, tryptone 1.0g/l, sterilized by autoclave.

Experimental Conditions

Period of analysis
Product diluent used
Product test concentrations
Appearance product dilutions
Appearance in test mixture
Contact time
Test temperature
Interfering substance
Temperature of incubation

01 December 2020 to 02 December 2020
Sterile synthetic hard water
1:100 v/v; 1:500 v/v; 1:1500 v/v
No changes noted
No changes noted
t = 30 mins ± 10 s
20°C ± 1°C
1.0% acidic whey solution
30°C ± 1°C

Identification of strains

Lactococcus lactis subsp. *lactis* P001 DSM 4262
Lactococcus lactis subsp. *lactis* P008 DSM 10567

EN13610:2002 Results

Results for the efficacy of F10SC Disinfectant from Health & Hygiene (Pty) Ltd

Test organisms	Validation test				Bacteriophage Test Suspension (N)	Test procedure at concentration (V/V)		
	Bacteriophage Suspension (Nv)	Experimental Conditions (A)	Neutraliser Toxicity Control (B)	Dilution-Neutralisation Control (C)		1:1500	1:500	1:100
<i>Lactococcus lactis</i> subsp. <i>lactis</i> P001	10 ⁻¹ : >200 ; >200 10 ⁻² : 47 ; 55	10 ⁰ : >200 ; >200 10 ⁻¹ : 40 ; 53	10 ⁰ : 83 ; 103 10 ⁻¹ : 11 ; 8	10 ⁰ : 60 ; 46 10 ⁻¹ : 5 ; 6	10 ⁻⁶ : 191 ; 182 10 ⁻⁷ : 13 ; 19 N: 1.87E+09	10 ⁰ : 65 ; 55 10 ⁻¹ : 3 ; 5 Na: 3.00E+04	0 ; 0 0 ; 0 <7.50E+03	0 ; 0 0 ; 0 <7.50E+03
DSM 4262	Nv: 5.10E+04	A: 4.65E+03	B: 9.32E+02	C: 5.32E+02	Q: 11.66	R: <10(4)	>10(4)	>10(4)
Validation	2.00E+04 ≤ Nv ≤ 1.00E+05 ? yes	A ≥ 0.05 x Nv ? yes	B ≥ 0.01 x Nv ? yes	C ≥ 0.5 x B ? yes	7.90 ≤ log N ⁻¹ ≤ 8.45 ? yes	Test is valid		
<i>Lactococcus lactis</i> subsp. <i>lactis</i> P008	10 ⁻¹ : 266 ; 284 10 ⁻² : 33 ; 34	10 ⁰ : 183 ; 211 10 ⁻¹ : 21 ; 24	10 ⁰ : 51 ; 42 10 ⁻¹ : 3 ; 8	10 ⁰ : 56 ; 52 10 ⁻¹ : 6 ; 2	10 ⁻⁶ : 113 ; 112 10 ⁻⁷ : 13 ; 16 N: 1.13E+09	10 ⁰ : >300 ; >300 10 ⁻¹ : 73 ; 46 Na: 2.98E+05	0 ; 0 0 ; 0 <7.50E+03	0 ; 0 0 ; 0 <7.50E+03
DSM 10567	Nv: 2.80E+04	A: 2.00E+03	B: 4.73E+02	C: 5.27E+02	Q: 7.76	R: <10(4)	>10(4)	>10(4)
Validation	2.00E+04 ≤ Nv ≤ 1.00E+05 ? yes	A ≥ 0.05 x Nv ? yes	B ≥ 0.01 x Nv ? yes	C ≥ 0.5 x B ? yes	7.90 ≤ log N ⁻¹ ≤ 8.45 ? yes	Test is valid		

Please note: the upper limit for counting bacteriophage P001 plates is 200 pfu. Enter as >200.

Please note: The upper limit for counting bacteriophage P008 plates is 300 pfu. Enter as >300.

Definitions: Vc = viable count; N = number of pfu/ml in the bacteriophage test suspension; Q = quotient of control of weighted mean counts; Nv = number of pfu/ml in the bacteriophage validation suspension; A = number of pfu/ml in the experimental conditions validation; B = number of pfu/ml in the neutraliser toxicity validation; C = number of pfu/ml in the dilution-neutralisation validation; Na = number of pfu/ml in test mixture after contact time; R = reduction in phage activity (Log10)

Conclusion

According to EN 13610:2002, **F10SC POSSESSES VIRUCIDAL** activity at a concentration of **1:500 V/V** of as tested after **30 MINUTES** at **20°C** in the presence of **1.0% acidic whey solution** against *Lactococcus lactis* subsp. *lactis* P001 DSM 4262 and *Lactococcus lactis* subsp. *lactis* P008 DSM 10567.

Signed



Dr Chris Woodall, Director
BluTest Laboratories Ltd
Glasgow, UK
Date: 03 DECEMBER 2020

DISCLAIMER

The results in this test report only pertain to the sample supplied.

BluTest (BT) has performed the testing detailed in this report using reasonable skill and care and has used reasonable endeavours to carry out the testing in accordance with an EN 13610 protocol. All forecasts, recommendations and results contained in this report are submitted in good faith. However, other than as expressly set out in this report, no warranty is given (i) in relation to the testing or the use(s) to which any results or deliverables produced in the course of the testing are or may be put by the Client or their fitness or suitability for any particular purpose or under any special conditions notwithstanding that any such purpose or conditions may have been made known to BT or (ii) that the intended results or deliverables from the testing can be achieved or (iii) that the Client can freely make use of the results or the deliverables without infringing any third party intellectual property rights and the Client will be deemed to have satisfied itself in this regard. BT shall have no liability (which is hereby excluded to the fullest extent permissible by law) in respect of any loss, liability or damage, including without limitation any indirect and/or consequential loss such as loss of profit or loss of business, market or goodwill, that the Client may suffer directly or indirectly as a result of or in connection with: (i) the performance of the testing; (ii) the use of any materials, samples or other information provided by the Client for use in the testing; and (iii) the Client's reliance upon or use of any results or deliverables provided as part of the testing.