

Scientific Services

**Consultant Microbiologists
Animal feed Chemists**

**Willow Farm,
Stewton,
Louth,
Lincolnshire,
LN11 8SD
Mob: 07770 872461
Tel/Messages: 01507 328552
Email: kevinm.self@tiscali.co.uk**

K121139-40

18th May 2020

LABORATORY REPORT

SOURCE: Total Liquid Solutions

ITEMS: Impreg 9 (RTU), 7/5/20

TESTS: BSEN1276:2019, Chemical Disinfectants & Antiseptics –
Quantitative Suspension Test for the evaluation of bactericidal
activity of chemical disinfectants and antiseptics used in food,
industrial, domestic and institutional areas – test method and
requirements (Phase 2, Step 1)
Manufacturer: Total Liquid Solutions
Concentration: Neat (80% in test due to test procedure)
Temperature: 20°C
Contact time: 1 minute
Interfering substance: Bovine Albumin 3.0g/l (dirty)
Storage conditions: Room temperature, out of direct sunlight
Active Substances: Not given
Product appearance: Clear colourless liquid
Test Date: 14th May 2020

Recovery: Dilution neutralisation, using:-
Tryptone Soya Broth containing Tween 80 100ml/l,
Lecithin 30g/l, Sodium thiosulphate 5g/l, L-histidine
1g/l, L-cystine 1g/l

Test organisms:	Staphylococcus aureus	ATCC 6538
	Escherichia coli K12	NCTC 10538
	Pseudomonas aeruginosa	ATCC 15442
	Enterococcus hirae	ATCC 10541

Incubation temperature: 37°C +/- 1°C

SUMMARY & CONCLUSIONS:

K121139-40

Summary of Results

Organism	Control	Impreg 9 (RTU)	Log Reduction
Staphylococcus aureus ATCC 6538	2.42x10 E7	<10 (<140)	>6.38 (>5.23)
Escherichia coli K12 NCTC 10538	2.57x10 E7	<10 (<140)	>6.41 (>5.26)
Enterococcus hirae ATCC 10541	2.34x10 E7	<10 (<140)	>6.37 (>5.22)
Pseudomonas aeruginosa ATCC 15442	2.92x10 E7	>3.30x10 E4	<2.95

All test results below 140 (1.4×10^2) are required to be reported as <140

Validation tests comply with acceptance criteria in that the Experimental Conditions Control (A), Neutraliser Toxicity Control (B) and Dilution Neutralisation Control (C) \geq 0.5xValidation Suspension (Nvo).

All controls and validations are within the basic limits.

The sample complies with the criteria of BSEN1276:2019 (log 5 reduction in 1 minute – hand spec) against Staphylococcus aureus, Escherichia coli K12 and Enterococcus hirae, however fails to comply against Pseudomonas aeruginosa, under the test conditions stated.

KMSelf

K.M.Self, M.B.I.C.Sc.,M.R.S.P.H.,A.M.S.B.

Detailed Results K121139-40 Impreg 9

Staphylococcus aureus ATCC 6538

Test Suspension (N + No)

N	V _{C1}	V _{C2}		
10 ⁻⁶	238	248	Weighted Mean = 2.42x10 E8	log = 8.38
10 ⁻⁷	21	26	No = N/10 = 2.42x10 E7	log = 7.38

Test (Na)

V _{C1}	V _{C2}	mean		
<1	<1	<1	Na = mean x 10 = <10 (<140)	log = <1 (<2.15)

Log Reduction

>6.38 (>5.23)

Validation & Controls

Validation Suspension (Nvo)

V _{C1}	V _{C2}	mean
60	64	62

Experimental Conditions Control (A)

V _{C1}	V _{C2}	mean
56	62	59

Neutraliser Toxicity Control (B)

V _{C1}	V _{C2}	mean
60	54	57

Dilution Neutralisation Control (C)

V _{C1}	V _{C2}	mean
54	60	57

Detailed Results K121139-40 Impreg 9

Pseudomonas aeruginosa ATCC 15442

Test Suspension (N + No)

N	Vc1	Vc2		
10 ⁻⁶	286	298	Weighted Mean = 2.92x10 E8	log = 8.47
10 ⁻⁷	27	32	No = N/10 = 2.92x10 E7	log = 7.47

Test (Na)

	Vc1	Vc2	mean		
10 ⁻²	>330	>330	>330	Na = mean = >3.30x10 E4	log = >4.52

Log Reduction

<2.95

Validation & Controls

Validation Suspension (Nvo)

Vc1	Vc2	mean
75	72	73.5

Experimental Conditions Control (A)

Vc1	Vc2	mean
72	76	74

Neutraliser Toxicity Control (B)

Vc1	Vc2	mean
70	74	72

Dilution Neutralisation Control (C)

Vc1	Vc2	mean
72	66	69

Detailed Results K121139-40 Impreg 9

Escherichia coli K12 NCTC 10538

Test Suspension (N + No)

N	V _{C1}	V _{C2}		
10 ⁻⁶	246	268	Weighted Mean = 2.57x10 E8 No = N/10 = 2.57x10 E7	log = 8.41
10 ⁻⁷	27	25		log = 7.41

Test (Na)

V _{C1}	V _{C2}	mean		
<1	<1	<1	Na = mean x 10 = <10 (<140)	log = <1 (<2.15)

Log Reduction

>6.41 (>5.26)

Validation & Controls

Validation Suspension (Nvo)

V _{C1}	V _{C2}	mean
66	64	65

Experimental Conditions Control (A)

V _{C1}	V _{C2}	mean
61	67	64

Neutraliser Toxicity Control (B)

V _{C1}	V _{C2}	mean
60	66	63

Dilution Neutralisation Control (C)

V _{C1}	V _{C2}	mean
54	61	57.5

Detailed Results K121139-40 Impreg 9

Enterococcus hirae ATCC 10541

Test Suspension (N + No)

N	Vc1	Vc2		
10 ⁻⁶	240	226	Weighted Mean = 2.34x10 E8	log = 8.37
10 ⁻⁷	22	26	No = N/10 = 2.34x10 E7	log = 7.37

Test (Na)

Vc1	Vc2	mean		
<1	<1	<1	Na = mean x 10 = <10 (<140)	log = <1 (<2.15)

Log Reduction

>6.37 (>5.22)

Validation & Controls

Validation Suspension (Nvo)

Vc1	Vc2	mean
56	61	58.5

Experimental Conditions Control (A)

Vc1	Vc2	mean
54	60	57

Neutraliser Toxicity Control (B)

Vc1	Vc2	mean
51	58	54.5

Dilution Neutralisation Control (C)

Vc1	Vc2	mean
54	56	55