Technical Service

THOR

Reference No. M20/226
Assessment of 'Hand Sanitizer' for 'Sanitiser test'

Client:

Duralex Paints Pty Ltd
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Testing Laboratory:

Thor Specialties Pty. Ltd.
Technical Services Laboratory
67 Newton Road
Wetherill Park
New South Wales 2164

Contact: Dirk Sisson

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OBJECTIVES:

The assessment of 'Hand Sanitizer' sample for antimicrobial activity at full strength.

CONCLUSIONS:

The results show that when tested undiluted at contact time of 30 seconds using the method described, the sample exhibited >99.99% antimicrobial activity against *S. aureus* and *E. coli*.

CERTIFICATE OF ANALYSIS

Analysis performed for:

Duralex Paints Pty Ltd

Testing Laboratory:

Thor Specialties Pty. Ltd.
Technical Services Laboratory
67 Newton Road
Wetherill Park
New South Wales 2164

SAMPLE DESCRIPTION:

The sample detailed in the results table was received 16 April 2020 and tested 17 April 2020.

EXAMINATIONS CONDUCTED:

In-house Method: TM-14: Sanitiser test (based on BS 6471: 1984- Determination of the antimicrobial value of QAC disinfectant formulations)

RESULTS OF ANALYSIS:

Table No.1 Results for Antimicrobial tests

SAMPLE	Contact time	Test Organism	Control Inoculum (cfu/mL)	Surviving organisms, (cfu/mL)	% Kill rate
Diluent Control		*St.aureus*	2.3×10^7	2.2×10^7	4.35
		E. coli	2.4×10^7	2.4×10^7	0.00
Hand sanitiser	30 sec	*St. aureus*		<10	>99.9999
	30 sec	*E. coli*		<10	>99.9999

Table No.2 Product validation

		Dilution Validated for test	cfu/mL (average of duplicate plates)	% Recovery
Peptone Saline	*St. aureus*		54	
	E. coli		59	
Inactivator without test product	*St. aureus*		52	96
	E. coli		58	98
Hand sanitiser	*St. aureus*	1:10	53	98
	E. coli	1:10	56	95

The results of the validation test indicate a dilution of 1:10 was valid.

REPORT REVIEW:

The work detailed in this report has been conducted according to the standard test methods listed. All results have been checked and reviewed by approved laboratory personnel. The data contained in this report is based on our current test methods, knowledge and experience and relate only to the samples tested.

PREPARED BY: Date 27 April 2020

Anj Prince
Technical Coordinator

CHECKED BY: Date 28 April 2020

Noel del Rosario
Applications Technical Manager

In-house Method Summary: TM-14

TEST CULTURES

Escherichia coli ATCC 11229
Staphylococcus aureus ATCC 6538

INACTIVATOR

Nutrient broth containing 6% Polysorbate Tween® 80 and 0.6% lecithin (Diluent 6)

CONTACT TIME

30 seconds

INOCULUM PREPARATION

The cultures for inoculum were prepared by daily subculturing into fresh nutrient broth No. 2 on two consecutive days. 2mL of each broth culture was mixed with 8mL synthetic hard water. Each mixture was used as inoculum for the test.

TEST PROCEDURE

The samples for evaluation were tested undiluted. 1mL of the inoculum was added to 9mL of the undiluted product under test as well as a diluent control. The mixtures were vortexed and allowed a specified contact time after which 1mL of the culture/product mixture was transferred into 9mL inactivator broth, further dilutions in inactivator or diluent were made if required. Duplicate 1mL pour plates with Nutrient agar were then prepared and incubated inverted at 32.5 ± 2.5°C for 48h. Following incubation, the resultant colonies (surviving organisms) were counted and compared to the controls to determine the kill rate for the product under test.