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

**Client:**

Duralex Paints Pty Ltd  
3/5 Muriel Ave  
Rydalmere  
NSW 2116

**Testing Laboratory:**

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

Contact: Vivien Kluger

Telephone: 02 9638 0568

Email: chemist@duralexpaints.com.au

Contact: Dirk Sisson

Telephone: 02 9725 1177

Email: dirks@thorchem.com.au

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*.

Please note that any conclusions and recommendations, either made or implied, are based on information drawn from examination of the samples identified in this report only. These results may be influenced by, for example, contamination level variations in raw materials, any stored component solutions and manufacturing equipment, or changes in formulation, manufacturing procedure or raw material suppliers. The data contained in the following report is based on our current test methods and our current knowledge and experience and relate only to the samples tested.

In view of the many factors that may affect processing and application of products, the data does not relieve manufacturers from carrying out their own tests; neither does the data imply or guarantee of certain properties, nor the suitability of the product for specific purposes nor agreed contractual quality of the product.

**Thor Specialties Pty Limited. A.B.N. 66 001 558 032**

✉ 67 Newton Road, Wetherill Park NSW 2164, Australia

✉ 66/574 Plummer St., Port Melbourne VIC 3207, Australia

✉ 15 Kalmia Street, Ellerslie, Auckland 5, New Zealand

☎ +61 2 9725 1177

☎ +61 3 9078 7905

☎ +64 9 579 5037

☎ +61 2 9725 5677

☎ +61 3 9646 6748

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		<i>St.aureus</i>	2.3 x 10 <sup>7</sup>	2.2 x 10 <sup>7</sup>	4.35
		<i>E. coli</i>	2.4 x 10 <sup>7</sup>	2.4 x 10 <sup>7</sup>	0.00
Hand sanitiser	30 sec	<i>St. aureus</i>		<10	>99.9999
	30 sec	<i>E. coli</i>		<10	>99.9999

Table No.2 Product validation

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

A handwritten signature in black ink, appearing to read "Anj Prince".

Anj Prince  
Technical Coordinator

Date

27 April 2020

CHECKED BY:

A handwritten signature in black ink, appearing to read "Noel del Rosario".

Noel del Rosario  
Applications Technical Manager

Date

28 April 2020

**In-house Method Summary: TM-14**TEST CULTURES*Escherichia coli* ATCC 11229*Staphylococcus aureus* ATCC 6538INACTIVATOR

Nutrient broth containing 6% Polysorbate Tween<sup>®</sup> 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  $32.5 \pm 2.5^{\circ}\text{C}$  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.