

**Report Reference:** RBR Active - 0001  
**Client:** RBR Active  
**Date:** 14/05/2019  
**Material Tested:** Polypropylene with SteriTouch ST10210  
**Test Laboratory:** Anti-Microbial Test Division, Kyoto Biseibutsu Kenkyusyo  
Yamashina-ku, Kyoto 607-8482, Japan

Evaluation of the antimicrobial performance of samples containing antimicrobial additives. All testing is conducted by an independent laboratory using the ISO 22196 / JIS Z 2801:2000 test method.

### Introduction

This report details the analysis carried out on the test samples, including an overview of the test method, the test results, an interpretation of those results and copies of the associated laboratory certificates.

### Test samples

Where possible, all test materials are taken from samples of the actual product. Samples typically measure 50mm x 50mm, as specified by the JIS Z 2801:2000 method, although where this is impractical it is permissible to use smaller samples with the method being modified accordingly.

Sample Ref.	Description
Control	Untreated polyethylene film
53341-A	Polypropylene with SteriTouch ST10210
53341-B	Polypropylene with SteriTouch ST10210
53341-C	Polypropylene with SteriTouch ST10210

### Test method

The samples were tested according to the JIS Z 2801:2000 method, briefly summarised as follows;

Each test sample is inoculated with a suspension of the test organism (for example, MRSA). The inoculum is held in contact with the test sample using a sterile polyethylene film. All test samples are inoculated in triplicate, with an additional three replicates of the control.

The bacterial population on three control replicates is evaluated immediately following inoculation. This is assumed to be the initial population on all test samples (i.e. the population at zero hours).

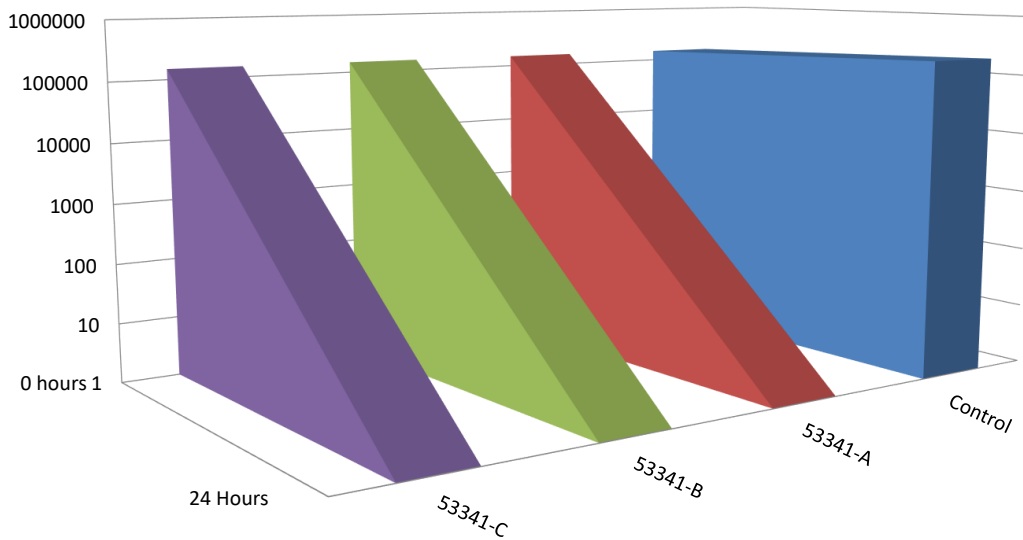
The remaining samples are incubated for the test period (24 Hours) at 35°C, at which time the bacterial population is evaluated.

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## MRSA (Methicillin Resistant Staphylococcus aureus)

Tested at 35°C

Sample		Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
		0 hours	24 Hours		
Control	Untreated polyethylene film	150000	210000	N/A	
53341-A	Polypropylene with SteriTouCh ST10210	150000	<10	>99.995% Reduction	EXCELLENT
53341-B	Polypropylene with SteriTouCh ST10210	150000	<10	>99.995% Reduction	EXCELLENT
53341-C	Polypropylene with SteriTouCh ST10210	150000	<10	>99.995% Reduction	EXCELLENT

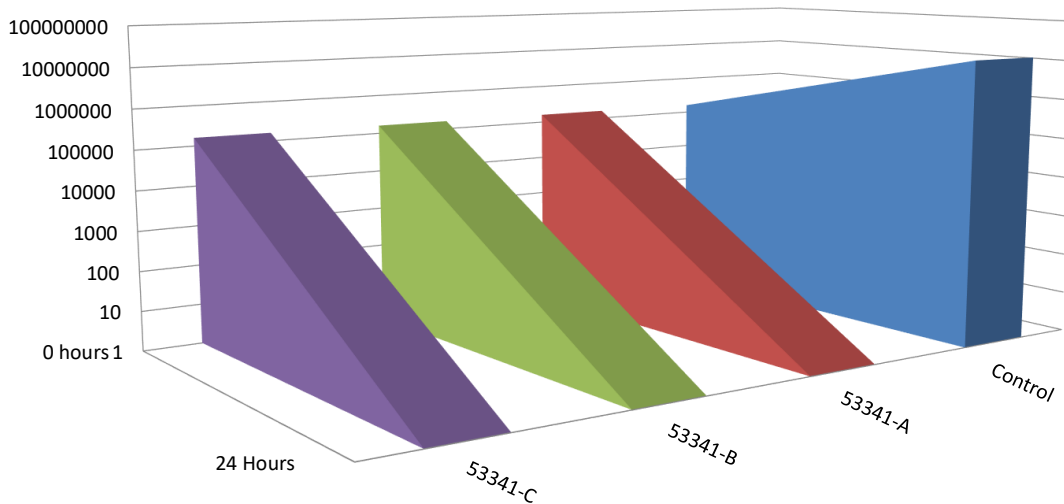


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## *Escherichia coli*

Tested at 35°C

Sample		Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
		0 hours	24 Hours		
Control	Untreated polyethylene film	160000	14000000	N/A	
53341-A	Polypropylene with SteriTouch ST10210	160000	<10	>99.99992% Reduction	EXCELLENT
53341-B	Polypropylene with SteriTouch ST10210	160000	<10	>99.99992% Reduction	EXCELLENT
53341-C	Polypropylene with SteriTouch ST10210	160000	<10	>99.99992% Reduction	EXCELLENT



# Certificate of Examination Report

Requested by: SteriTouch Ltd.

Date of Report : 17-May-19  
Received : 25-Apr-19

  
**KYOTO BISEIBUTSU KENKYUSHO**  
16-2 KUBOCHOU KAMIKASAN YAMASHINA-KU  
KYOTO 607-8464 JAPAN  
(PHONE) 075-593-3320  
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Examiner: *Tomoko Uekawa*

1.Submitted Sample : 53341

2.Object : Examination of antimicrobial Power for Submitted Sample

3.Test Procedure : An antimicrobial power was determined by "Test for antimicrobial activity and efficacy" of JIS Z 2801. The bacterial suspension was then to make an initial count of  $10^5$  CFU/mL with a 1/500 Nutrient Broth. The bacterial suspension (0.4mL) was onto a sample and film cover on the bacterial suspension. The samples were incubated at  $35^{\circ}\text{C}$ . After 24hours, the number of live bacteria was counted.

4.Test bacteria : *Escherichia coli* NBRC-3972  
Methicillin resistant *Staphylococcus aureus* IID-1677

5.Medium : Nutrient Broth (EIKEN)  
Standard Method Agar (EIKEN)

6.Examination Result :

Test bacteria	Change in Bacterial Count Over Time				
	0hr(initial count)	24hrs-A	24hrs-B	24hrs-C	average
<i>E.coli</i>	$1.6 \times 10^5$	<10	<10	<10	<10
<i>MRSA</i>	$1.5 \times 10^5$	<10	<10	<10	<10

Examination Result (control)

Test bacteria	Change in Bacterial Count Over Time				
	0hr(initial count)	24hrs-A	24hrs-B	24hrs-C	average
<i>E.coli</i>	$1.6 \times 10^5$	$1.3 \times 10^7$	$1.4 \times 10^7$	$1.6 \times 10^7$	$1.4 \times 10^7$
<i>MRSA</i>	$1.5 \times 10^5$	$1.7 \times 10^5$	$2.1 \times 10^5$	$2.6 \times 10^5$	$2.1 \times 10^5$

<10:non detect

unit: CFU/Sample