

## TEST REPORT: 7191245403-CHM20-01-RC

Date: 02 OCT 2020

Tel: [REDACTED] Fax: [REDACTED]

Client's Ref: -

Email: [REDACTED]

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PSB Singapore

### **SUBJECT**

Microbiological Analysis of Curtain

Add value.  
Inspire trust.

### **CLIENT**

Endurocide Pte Ltd  
15 Yishun Industrial Street 1  
#03-15 Win 5  
Singapore 768091

Attn : Alfred Koh

### **SAMPLE SUBMISSION DATE / TEST DATE**

22 Sep 2020 / 28 Sep 2020

### **DESCRIPTION OF SAMPLE**

1 sample of 'Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain' was submitted, labelled as follows:

Location of Installation: [REDACTED] PACU Bed 20  
Date of Installation: 20 September 2019  
Date of Sample Collection: 22 September 2020 for 12-month test  
Sample Collected from: [REDACTED]

### **METHOD OF TEST**

A 10cm X 10cm piece was cut from the curtain for testing. The test piece was added into 100 ml of diluent and agitated using a stomacher. The solution was then tested for Total Aerobic Plate Count in accordance with:

FDA Bacteriological Analytical Manual Online

Chapter 3, "Aerobic Plate Count" (January 2001)



TÜV SÜD PSB

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1 Science Park Drive, #02-01  
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02 OCT 2020



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**RESULTS**

Sample	Total Aerobic Plate Count, CFU/ test piece
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain	Not Detected*

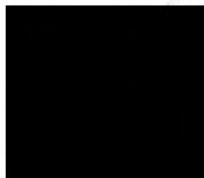
**Notes :**

CFU : Colony Forming Unit

\* : Limit of detection is 100 CFU/ test piece

**Remarks :**

The above test results relate to the sample(s) as received.



HIGHER TECHNICAL EXECUTIVE



MICROBIOLOGIST  
MICROBIOLOGY  
CHEMICAL & MATERIALS

**TEST REPORT: 7191245403-CHM20-01-RC**  
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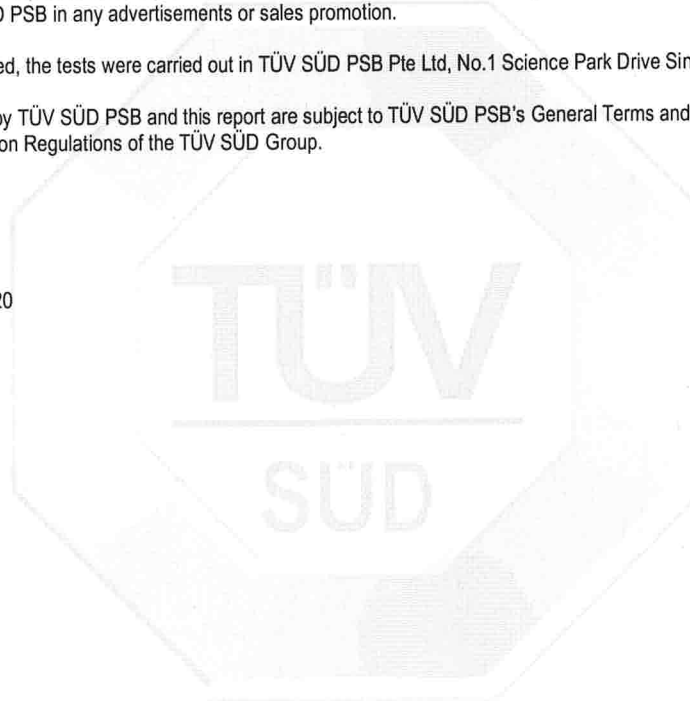


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Effective 01 September 2020



## TEST REPORT: 7191245403-CHM20-02-RC

Date: 22 OCT 2020

Tel: [REDACTED] Fax: [REDACTED]

Client's Ref: EN/PO/20-0950

Email: [REDACTED]

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### SUBJECT

Antibacterial Activity Testing

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### CLIENT

Endurocide Pte Ltd  
15 Yishun Industrial Street 1  
#03-15 Win 5  
Singapore 768091

Attn : Alfred Koh

### SAMPLE SUBMISSION DATE / TEST DATE

22 Sep 2020 / 06 Oct 2020

### DESCRIPTION OF SAMPLE

One sample of 'Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain' was submitted, labelled as follows:

Location of Installation:	[REDACTED] PACU Bed 20 (MRSA Bed)
Date of Installation:	20 September 2019
Date of Sample Collection:	22 September 2020 for 12-month test
Sample Collected from:	[REDACTED]



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22 OCT 2020



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**METHOD OF TEST**

AATCC Test Method 100-2019

"Test Method for Antibacterial Finishes on Textile Materials: Assessment of"

The test microorganisms used were :

*Staphylococcus aureus* (ATCC 6538)

*Klebsiella pneumoniae* (ATCC 4352)

Methicillin Resistant *Staphylococcus aureus* (NCTC 12493)

Size of Swatches: 3.8 cm x 3.8 cm

Number of swatches used to obtain  $1.0 \pm 0.1$  g for test: 7 pieces

Neutralization Media: Dey Engley Neutralizing Broth

Media Used: Tryptone Soy Agar

Dilution Media: Phosphate Buffered Saline

Contact time: 24 hours

Sterilization Method for Test specimen: No sterilization



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22 OCT 2020



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**RESULTS**Test Microorganism : *Staphylococcus aureus* (ATCC 6538)

Contact time	Count of test microorganism recovered from the inoculated sample, CFU	
	0 hour	24 hour
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain – Control	250 000	26 000 000
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain – Treated	-	Less than 100
Percentage Reduction for Treated Test Specimen	-	More than 99.9996

Test Microorganism : *Klebsiella pneumoniae* (ATCC 4352)

Contact time	Count of test microorganism recovered from the inoculated sample, CFU	
	0 hour	24 hour
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain – Control	230 000	9 100 000
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain – Treated	-	Less than 100
Percentage Reduction for Treated Test Specimen	-	More than 99.9989

Test Microorganism : Methicillin Resistant *Staphylococcus aureus* (NCTC 12493)

Contact time	Count of test microorganism recovered from the inoculated sample, CFU	
	0 hour	24 hour
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain – Control	250 000	13 000 000
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain – Treated	-	Less than 100
Percentage Reduction for Treated Test Specimen	-	More than 99.9992

Percentage Reduction =  $100(B-A) / B$  where,

A = number of bacteria recovered from the inoculated treated test specimen swatches after 24-h contact period and,

B = number of bacteria recovered from the uninoculated treated test specimen swatches after 24-h contact period

**TEST REPORT: 7191245403-CHM20-02-RC**  
22 OCT 2020



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Remarks :

The above test results relate to the sample(s) as received.



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PRODUCT MANAGER  
MICROBIOLOGY  
CHEMICAL & MATERIALS



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22 OCT 2020



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July 2011





## TEST REPORT: 7191245403-CHM20-03-RC

Date: 23 OCT 2020

Tel: [REDACTED] Fax: [REDACTED]

Client's Ref: EN/PO/20-0950

Email: [REDACTED]



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### SUBJECT

Antibacterial Activity Testing

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### CLIENT

Endurocide Pte Ltd  
15 Yishun Industrial Street 1  
#03-15 Win 5  
Singapore 768091

Attn : Alfred Koh

### SAMPLE SUBMISSION DATE / TEST DATE

22 Sep 2020 / 14 Oct 2020

### DESCRIPTION OF SAMPLE

One sample of 'Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain' was submitted, labelled as follows:

Location of Installation: [REDACTED] PACU Bed 20 (MRSA Bed)  
Date of Installation: 20 September 2019  
Date of Sample Collection: 22 September 2020 for 12-month test  
Sample Collected from: [REDACTED]

### METHOD OF TEST

AATCC Test Method 147-2004  
"Test Method for Antibacterial Activity Assessment of Textile Materials: Parallel Streak Method"

The test microorganisms used were :

*Staphylococcus aureus* (ATCC 6538)  
*Klebsiella pneumoniae* (ATCC 4352)  
Methicillin Resistant *Staphylococcus aureus* (NCTC 12493)

Size of Treated and Untreated Samples: 25 mm x 50 mm  
Media Used: Nutrient Agar  
Contact time: 24 hours



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**TEST REPORT: 7191245403-CHM20-03-RC**

23 OCT 2020



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**RESULTS**Test Microorganism : *Staphylococcus aureus* (ATCC 6538)

Sample	Observation after 24 hours contact time	
	Observation of zone of inhibition	Observation of growth under the specimen
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain (Untreated Sample)	No zone of inhibition observed	Growth observed beneath sample
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain (Treated Sample)	Presence of zone of inhibition Inhibition zone: 6.0mm	No growth observed beneath sample

Test Microorganism : *Klebsiella pneumoniae* (ATCC 4352)

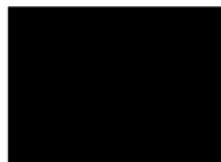
Sample	Observation after 24 hours contact time	
	Observation of zone of inhibition	Observation of growth under the specimen
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain (Untreated Sample)	No zone of inhibition observed	Growth observed beneath sample
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain (Treated Sample)	Presence of zone of inhibition Inhibition zone: 3.7mm	No growth observed beneath sample

Test Microorganism : Methicillin Resistant *Staphylococcus aureus* (NCTC 12493)

Sample	Observation after 24 hours contact time	
	Observation of zone of inhibition	Observation of growth under the specimen
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain (Untreated Sample)	No zone of inhibition observed	Growth observed beneath sample
Endurocide Sporicidal & Antimicrobial Hospital Disposable Curtain (Treated Sample)	Presence of zone of inhibition Inhibition zone: 4.5mm	No growth observed beneath sample

**Remarks :**

The above test results relate to the sample(s) as received.

HIGHER TECHNICAL  
EXECUTIVEPRODUCT MANAGER  
MICROBIOLOGY  
CHEMICAL CENTRE

**APPENDIX I**

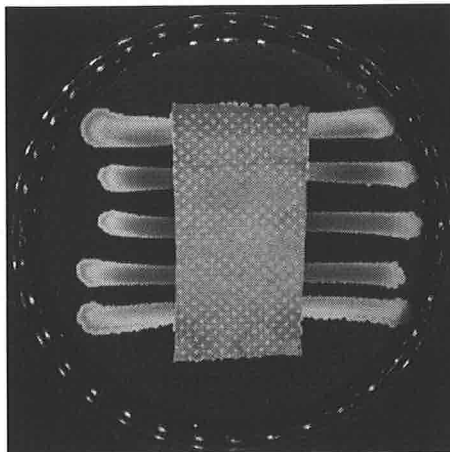


Figure 1: Photograph of plate for untreated sample after 24 hrs contact time with Test Microorganism:  
*Staphylococcus aureus* (ATCC 6538)

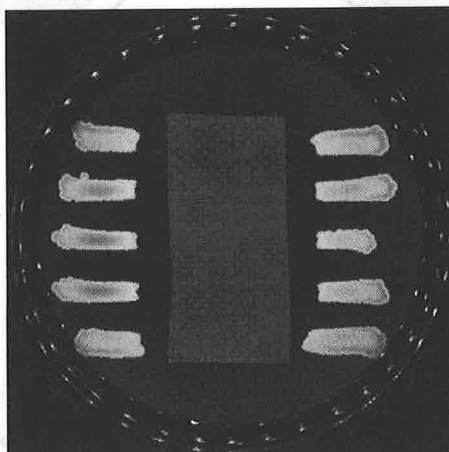


Figure 2: Photograph of plate for treated sample after 24 hrs contact time with Test Microorganism:  
*Staphylococcus aureus* (ATCC 6538)

**APPENDIX I** (cont'd)

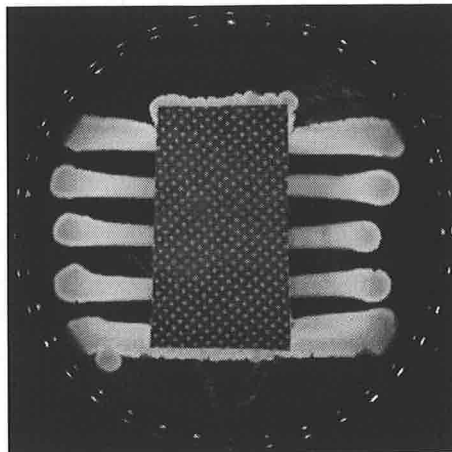


Figure 3: Photograph of plate for untreated sample after 24 hrs contact time with Test Microorganism:  
*Klebsiella pneumoniae* (ATCC 4352)

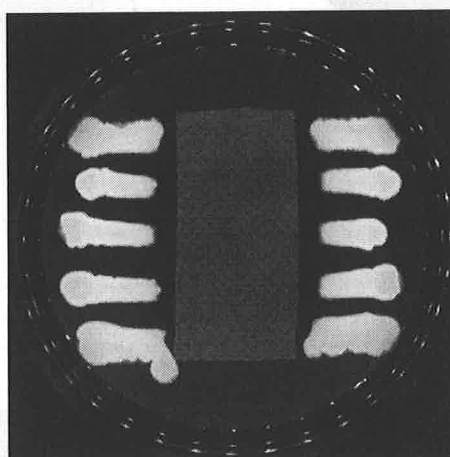


Figure 4: Photograph of plate for treated sample after 24 hrs contact time with Test Microorganism:  
*Klebsiella pneumoniae* (ATCC 4352)

**APPENDIX I** (cont'd)

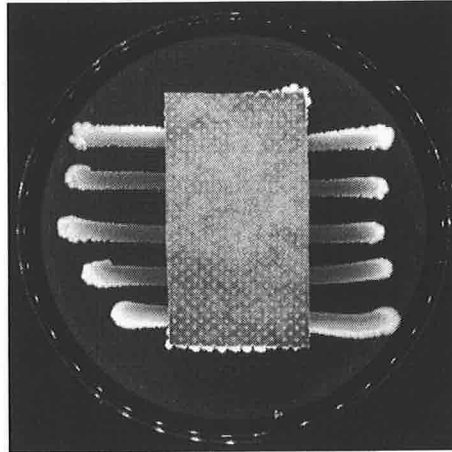


Figure 5: Photograph of plate for untreated sample after 24 hrs contact time with Test Microorganism: Methicillin Resistant *Staphylococcus aureus* (NCTC 12493)

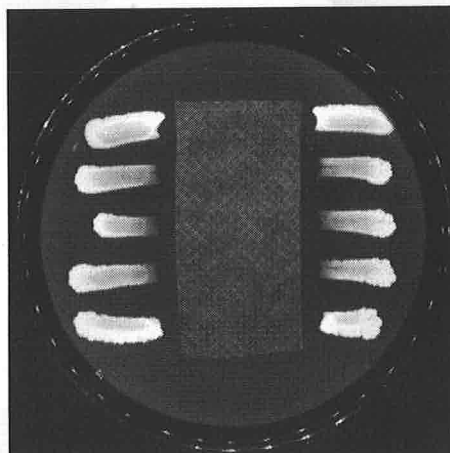


Figure 6: Photograph of plate for treated sample after 24 hrs contact time with Test Microorganism: Methicillin Resistant *Staphylococcus aureus* (NCTC 12493)

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**Effective 01 September 2020**

