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Report N°2008.52.D:

Antimicrobial evaluation

Evaluation:

JIS Z 2801.2000

Antimicrobial products – Test for antimicrobial  
activity and efficacy

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## Sample

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Ekotex Wandafwerking BV internal reference: San081224-02

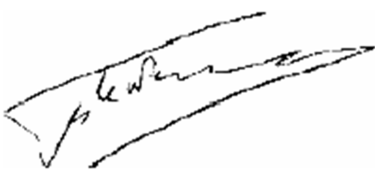

Description of the sample:

Gypsum plasterboard + wallcovering + acrylic  
paint

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## Results

	San081224-02
Antimicrobial activity (R)	2.11

Report	Function	Signature	Date
Written by: M. Le Nestour François	Research engineer		21/07/09
Checked by: M. Boubetra Abdelkader	Responsible R&D Biologie		21/07/09

# **EVALUATION OF THE ANTIMICROBIAL PROPERTIES OF EKOTEX HYGIËNE ACCORDING TO STANDARD JIS Z 2801:2000**

Product presented by: EKOTEX Wandafwerking BV  
Postbus 51  
3750 GB Bunschoten  
033-2471515  
info@ekotexwandafwerking.nl

Trade mark: Paintable wallcovering EKOTEX Hygiëne

Manufacturer of the product: EKOTEX Wandafwerking BV  
Postbus 51  
3750 GB Bunschoten  
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Summary description: Paintable wall covering made of glass fabric (75%) with organic coating (25%) doped with an antimicrobial and anti-fungic agent.

Date of the report : July 21st, 2009 this report comprises 3 pages

This report of analysis attests only characteristics of the samples submitted for testing and does not prejudge characteristics of similar products.  
It thus does not consist a certification of product.

With the collaboration of the Scientific Institute of Hygiene and Analysis

## Context of the study

### 1- Introduction

The objective of this study is to evaluate the antimicrobial activity on the surface of 3 samples according to standard **JIS Z 2801: 2000**.

### 2- Materials and methods

#### a. Description of the samples

The samples measure 5 X 5 cm<sup>2</sup> and were not sterilized or disinfected in order not to deteriorate the various components of the product for the tests of antimicrobial activity.

The tests were carried out on wallcoverings stuck on plasterboards and painted (sample B & C). The reference for the experimentation is a plasterboard sample only painted (sample A).

*Composition of sample A (reference):*

Plasterboard	Vinyl adhesive	Wallcovering	Finishing
Standard BA13	-	-	Standard acrylic paint

*Composition of sample B:*

Plasterboard	Vinyl adhesive	Wallcovering	Finishing
Standard BA13	Standard	EKOTEX Hygiène	Standard acrylic paint

*Composition of sample C:*

Plasterboard	Vinyl adhesive	Wallcovering	Finishing
Standard BA13	Standard	EKOTEX Hygiène	Antimicrobial acrylic painting

#### b. Bacterial strain

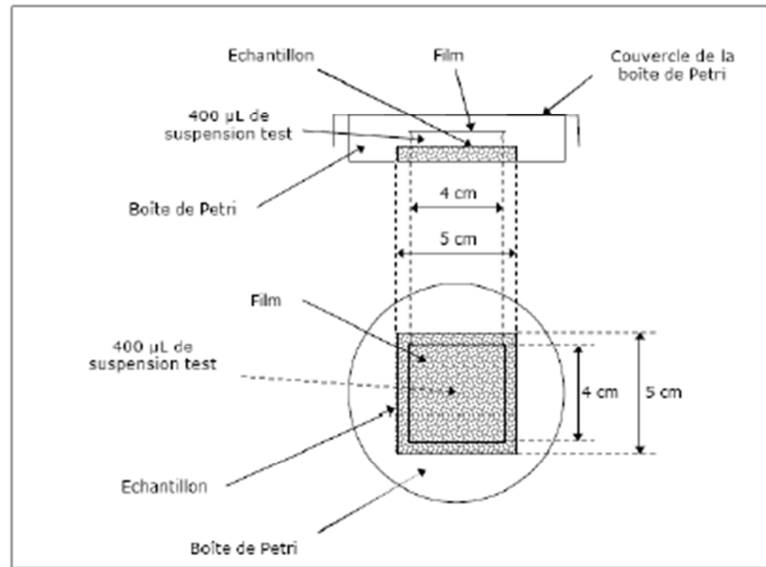
The bacterial strain used for these tests was:

- Staphylococcus aureus, stock of collection ATS 6538

#### c. Inoculation of the samples

Each sample was placed in a sterile Petri dish. A volume of 400 µL of the suspension of inoculation was placed on the sample. The Petri dish was then closed and placed in a drying oven at (37±1) °C during (24±1) h.

The diagram below represents the provision of the sample in the Petri dish.



d. Analyzes samples

After incubation, the number of colonies per box is counted. The bacterial concentration and the value of the antimicrobial activity (R) by sample are then calculated according to the formula:

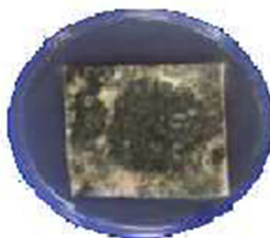
$$R = \log\left(\frac{A}{X}\right), \text{ with}$$

A: median number of viable cells on a control sample (A) after 24:00

X: median number of viable cells on an antimicrobial sample after 24:00  
(sample A, B or C)

3 series of measure are carried out to limit the variations.

**Only the values of R higher to 2.0 indicate that the product tested has an antimicrobial efficiency with respect to the studied micro-organism.**



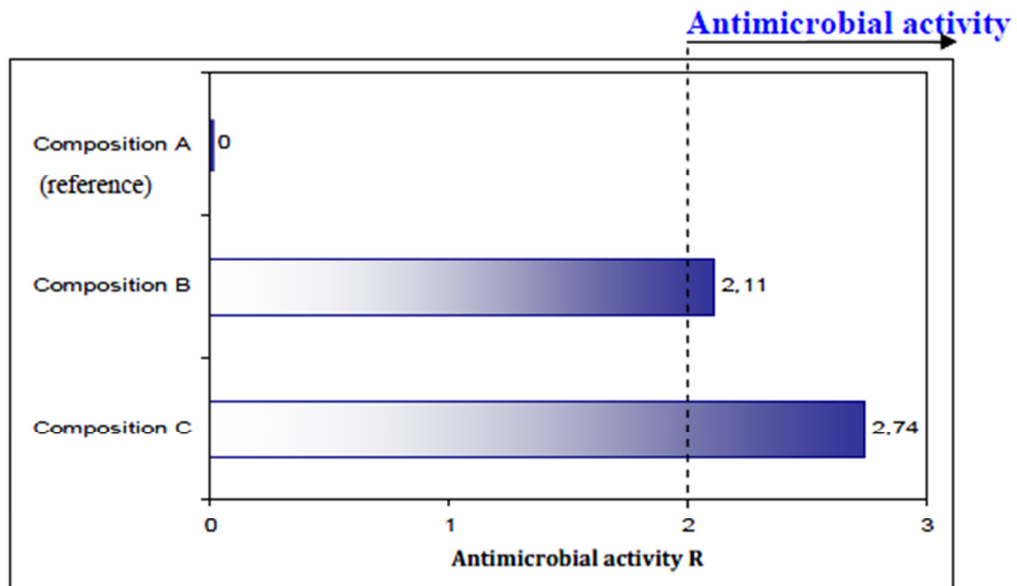
*Sample not presenting an antimicrobial activity  
=>  $R \sim 0$*



*Sample presenting a good microbial activity  
=>  $R > 2.0$*

### 3- Results with the strain *Staphylococcus aureus*

The chart below shows the experimental values of the antimicrobial activity for each samples tested.



### 4- Conclusion

In conclusion, it appears clearly that the samples B and C develop an antimicrobial activity on the strain *Staphylococcus aureus*, by comparison with painted plasterboard (value of the antimicrobial activity superior to 2).

**EKOTEX Hygiène has a real antimicrobial effectiveness on this strain.**

**Benjamin Blanchard**  
Research Engineer