

NOGUCHI MEDICAL RESEARCH, Co.,Ltd.

2021 July 8, 2021

To : BAE International Sdn Bhd

Noguchi Medical Research Co., Ltd.
Department of Product Development
Director Sachie Sekikawa



Antibacterial test report

We would like to report the following about the subject you requested.

Details

Measurement sample : BAE Energy Fabric

Test location : Boken Quality Evaluation Organization Tokyo Test Center

1-12-1, Mori, Koto-ku, Tokyo , Japan

Report number: No.30121013642-1

Test method : Antibacterial test JIS L 1902 (Bacterial solution absorption method,
Staphylococcus aureus used.

Standard cloth (cotton) is used as the control sample)

Bacterial fluid absorption method :

The most common method for antibacterial testing of textiles.

It is also a test method for the "antibacterial and deodorant processed fiber products" and "antibacterial processed fiber products" certification standards of the General Incorporated Association Textile Evaluation Technology Council / SEK mark.

Soak the sample with the bacterial solution and examine the change in the bacterial count after a certain period of time

1. Put 0.4 g of the test piece in a vial, drop 0.2 ml of the test bacterial solution, and then cover the vial.
2. Incubate the vial at 37 ° C for 18-24 hours.
3. Add 20 ml of wash-out solution to wash out the test bacteria from the test piece, and measure the number of viable bacteria in the wash-out solution by the pour plate culture method or the luminescence measurement method.
4. Calculate the antibacterial activity value according to the following formula.



結果：

Sample	Antibacterial activity value
BAE Energy Fabric	3.9
Standard cloth (cotton)	2.8

【Result & Consideration】

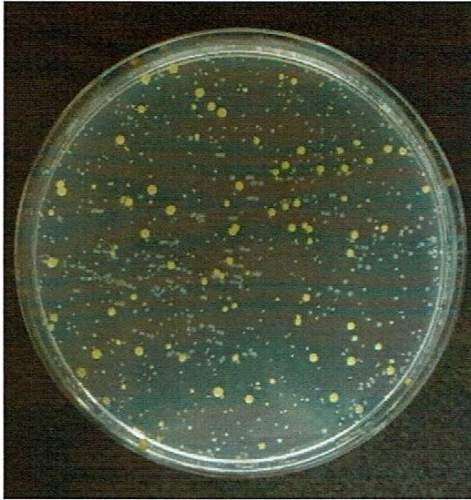
The antibacterial activity value of the BAE Energy Fabric was 3.9, which exceeded the evaluation standard value of 2.2, and it was judged that the antibacterial effect was exhibited.

Demand for antibacterial substances (which suppress the growth of bacteria on the surface of products) has been increasing on present day, but nowadays when the need for infectious disease control is being necessary, further demand is expected to grow, and antibacterial substances are expected. In the current situation where it has spread to processed textile products, the need for textile products that have high antibacterial activity values such as BAE Energy Fabric and are expected to be used in various situations will further increase. It is considered that it must be.

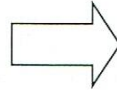
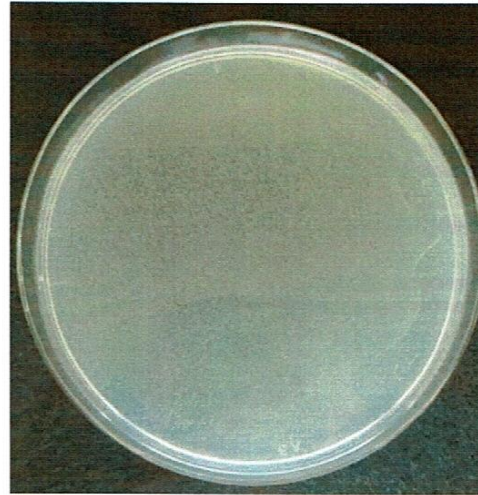
[Reference]

- Boken Quality Evaluation Organization website
- Japan Chemical Fiber Association

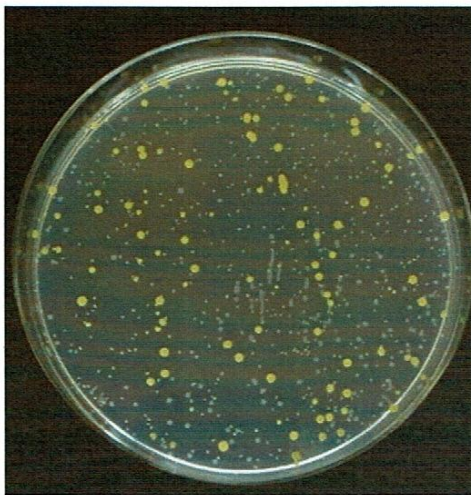
1. Standard cloth (cotton cloth)



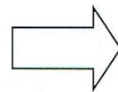
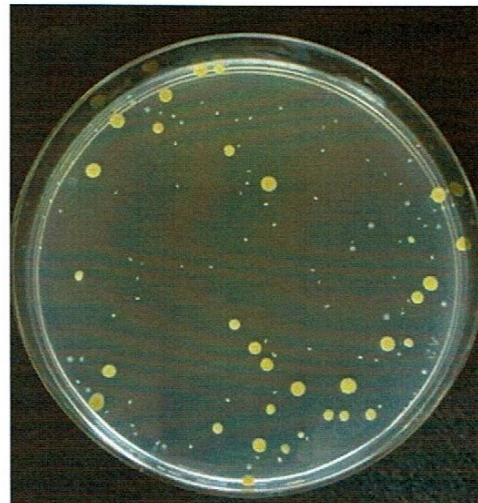
2. Standard cloth (cotton cloth)18 hour

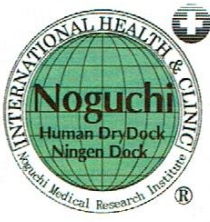


1. BAE Energy Fabric



2. BAE Energy Fabric 18 hour





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【Reference】

"Antibacterial processing" defined in "JIS L 1902 Antibacterial test method and antibacterial effect of textile products" is a processing that suppresses the growth of bacteria on the fiber by reducing the number of bacteria or killing the bacteria. It applies to all textile products, including textiles, padding, threads, clothing materials, bedding, textiles for furniture and miscellaneous goods.

【Test method】

JIS L 1902 defines four types of test methods.

The four types of test methods are a bacterial solution absorption method, a transfer method, a bacterial transcription method, and a halo method, and the types of bacteria used in the test include *Staphylococcus aureus* and *pneumonia bacillus*.

Usually, these inspections often confirm "durability of processing depending on the number of washings". In that case, it is necessary to carry out both unwashed and maximum number of washings, and the washing method and the number of washings are determined for each processing and category.

Antibacterial deodorant processing and antibacterial processing (general use) are repeatedly washed by the standard washing method, and antibacterial processing (specific use) is repeated by the high temperature accelerated washing method.

JAFET (former textile product new function evaluation council) standard compound detergent is used for both detergents.