

1-6-50 Morinomiya, Joto-ku, Osaka 536-8553, Japan  
Morinomiya Center  
TEL +81-6-6963-8011 FAX +81-6-6963-8015  
E-mail : mail@omtri.or.jp  
URL : http://www.omtri.or.jp

## REPORT

Number of Issuance: 0399  
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Applicant  
    Name: UES (Ueda Environmental Solutions) Co., Ltd  
    Address: 2-1-24 Kumanochō Higashi, Sakai-ku, Sakai-shi, Osaka  
Description: Determination of antibacterial activity of a test item by Halo Method  
  
Sample: Copper catalytic activated carbon  
The test item presented by the applicant was discal, and attached black powder to one side.

### TEST method:

We referred to JIS L 1902:2015 (Halo Method), and tested by the following methods.

#### (a) Microorganism

*Staphylococcus aureus* NBRC12732

#### (b) Cultivation

The bacterium was cultured in Nutrient Broth 'Eiken' (Eiken Chemical Co., Ltd.) overnight at 27 °C with shaking.

#### (c) Preparation of the plate inoculated with the microorganism, and measurement of width of the halo

The cultivated bacterial strain was diluted to ca.  $5 \times 10^6$  cfu/mL with physiological saline, its 1 mL was put in petri dish (φ 9 cm). After autoclaving of Nutrient Agar "Nissui" (Nissui Pharmaceutical Co., Ltd.), the medium was cooled down to 50 °C. Fifteen milliliter of the medium was put in the petri dish, and stirred to mix the bacterial cells and the medium. The mixture was cooled, and solidified to prepare the test agar plate. After drying the surface of the agar plate, the test item was put on it to stick the black powder side on. The presence of halo was checked, and the width of halo was measured after 24 h incubation at 37 °C.

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## Results:

Presence of a halo after 24 h at 37 °C in the agar plate was listed in Table 1 and shown in Fig. 1.

Table 1 Presence of halo, and its width

Name of test item	Microorganism	Presence of halo (width)
Copper catalytic activated carbon	<i>Staphylococcus aureus</i>	Visible (5.9 mm)

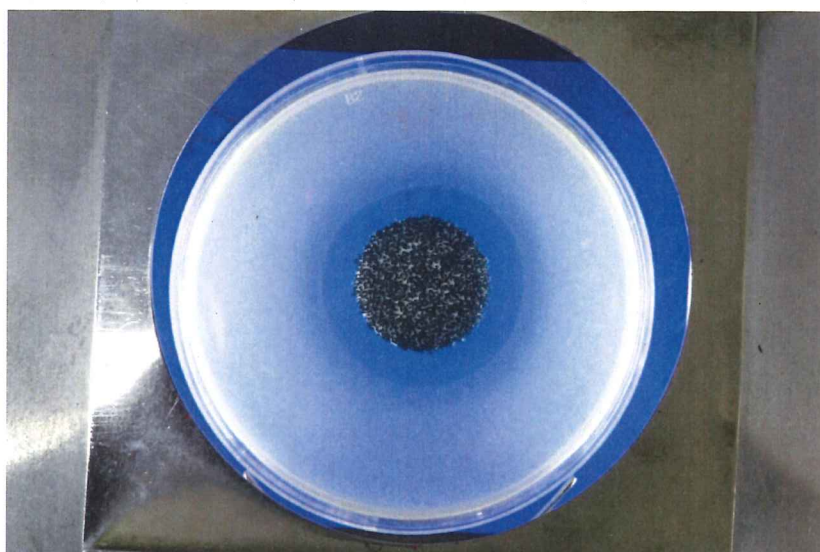


Fig. 1 Photograph of Copper catalytic activated carbon attached to the agar plate (after 24 h incubation at 37 °C)



Dr. Masami Nakamoto  
President  
Osaka Research  
Institute of Industrial  
Science and Technology