

Tests report (EN 13624)

This test report specifies a suspension test for establishing whether a chemical disinfectant or an antiseptic has a **bactericidal** activity in the area and fields described in the scope. This laboratory test takes into account practical conditions of application of the product including:

- contact time
- temperature
- test organisms
- interfering substances

Table1. Test condition

Reference regulation	BS EN 13624
identification of the testing laboratory	CIF B-96337217
Test organism	a) Escherichia coli K12, NCTC 10538 b) Pseudomonas aeruginosa, ATCC 15442 c) Staphylococcus aureus, ATCC 6538 d) Enterococcus hirae, ATCC 10541 e) Enterococcus faecium, ATCC 6057
Sample volume	1 Liter
Active substance(s)	NaOCL-HOCL-H ₂ O ₂ -Cl ₂ -CLO ₂ -O ₃ -O'-Water

Table2. Identification of the sample and experimental conditions

Name of the product	Multi Oxidant Disinfection Solution
batch number	20-06-01
manufacturer	BACO Environmental Engineering & Technology S.L.
date of delivery	18/06/2020
storage conditions	Room temperature and darkness
product diluent recommended by the manufacturer for use	Potable water (soft water)
active substance(s) and its/their concentration(s) (optional)	-
appearance of the product	Clear-Liquid
diluent used for product test solution	Distilled water
product test concentrations (ppm)	(% 100)8000-(% 75)6000-(% 50)4000-1000-100-20-10-2
contact time(min)	60-5-2
test temperature	Room temperature and darkness
stability and appearance of the mixtures during the procedure,	Transparent
temperature of incubation	36 °C
Interfering substances	bovine albumin 0,3 g/l.

1 BS EN 13624:2013 (evaluation of fungicidal or yeasticidal activity)

This document specifies a suspension test for establishing whether a chemical disinfectant or an antiseptic has a virucidal activity in the area and fields described in the scope.

This laboratory test takes into account practical conditions of application of the product including:

- contact time
- temperature
- test organisms
- interfering substances

1.1 Scope

This European Standard specifies a test method and the minimum requirements for fungicidal or yeasticidal activity of chemical disinfectant and antiseptic products that form a homogeneous, physically stable preparation when diluted with hard water, or - in the case of ready-to-use products - with water. Products can only be tested at a concentration of 80 % or less (97 % with a modified method for special cases) as some dilution is always produced by adding the test organisms and interfering substance.

This European Standard applies to products that are used in the medical area in the fields of hygienic handrub, hygienic handwash, surgical handrub, surgical handwash, instrument disinfection by immersion, and surface disinfection by wiping, spraying, flooding or other means.

Table 1 — Minimum and additional test conditions

Test conditions	Hygienic handrub and handwash	Surgical handrub and handwash	Instrument disinfection	Surface disinfection
Minimum spectrum of test organisms	<i>Candida albicans</i> (vegetative cells)	<i>Candida albicans</i> (vegetative cells)	a) fungicidal activity: <i>Aspergillus brasiliensis</i> (conidiospores) <i>Candida albicans</i> (veg. cells) b) yeastocidal activity: <i>Candida albicans</i> (veg. cells)	a) fungicidal activity: <i>Aspergillus brasiliensis</i> (conidiospores) <i>Candida albicans</i> (veg. cells) b) yeastocidal activity: <i>Candida albicans</i> (veg. cells)
additional	Any relevant test organism			
Test temperature	according to the manufacturer's recommendation, but at/ between			
	20 °C	20 °C	20 °C and 70 °C	4 °C and 30 °C
Contact time	according to the manufacturer's recommendation,			
	but between		but no longer than	
	30 s and 60 s	1 min and 5 min	60 min	5 min or 60 min ^a
Interfering substance clean conditions dirty conditions	0,3 g/l bovine albumin solution (hygienic handrub) ^b	0,3 g/l bovine albumin solution (surgical handrub) ^b	0,3 g/l bovine albumin solution	0,3 g/l bovine albumin solution
	3,0 g/l bovine albumin solution plus 3,0 ml/l erythrocytes (hygienic handwash) ^c	3,0 g/l bovine albumin solution plus 3,0 ml/l erythrocytes (surgical and handwash) ^c	and/or 3,0 g/l bovine albumin solution plus 3,0 ml/l erythrocytes	and/or 3,0 g/l bovine albumin solution plus 3,0 ml/l erythrocytes

^aThe contact times for surface disinfectants stated in this table are chosen on the basis of the practical conditions of the product. The recommended contact time for the use of the product is within the responsibility of the manufacturer. Products intended to disinfect surfaces that are likely to come into contact with the patient and/or the medical staff and surfaces, which are frequently touched by different people, leading to the transmission of microorganisms to the patient shall be tested with a contact time of maximum 5 min. The same applies where the contact time of the product shall be limited for practical reasons. Products for other surfaces than stated above may be tested with a contact time of maximum 60 min.

1.2 Test method

1.2.1 Principle

A sample of the product as delivered and/or diluted with hard water (or water for ready to use products) is added to a test suspension of fungi (yeast cells or mould spores) in a solution of an interfering substance. The mixture is maintained at the temperature and the contact time specified in Clause 4 At the end of this contact time, an aliquot is taken; the fungicidal and/or the fungistatic action in this portion is immediately neutralized or suppressed by a validated method. The method of choice is dilutionneutralization. If a suitable neutralizer cannot be found, membrane filtration is used. The numbers of surviving fungi in each sample are determined and the reduction is calculated.

1.3 Materials and reagents

1.3.1 Test organisms

The fungicidal activity shall be evaluated using the following strains as test organisms selected according to Clause 4 (Table 1)¹:

- *Candida albicans* ATCC 10231;
- *Aspergillus brasiliensis* (former "A.niger") ATCC 16404.

1.4 Culture media and reagents

1.4.1 Water

1.4.2 Malt extract agar (MEA)

1.4.3 Diluent

1.4.4 Neutralizer

1.4.5 Rinsing liquid (for membrane filtration)

1.4.6 Hard water for dilution of products

Test results

From the outcomes for experimenting 2 of repetitions per test with different microorganism mentioned Table 1 in 2, 5, and 60 min, at least a 5 decimal log (lg) reduction might be resulted when tested in accordance with Table 1 & 2 through all diluted samples. It can concluded Baco Mixed Oxidant Solution is an antibacterial solution.