



Test Report No 18/1998

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Applicant

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METHODS AND RESULTS OF TESTS CONDUCTS WITH VARYING CONTACT TIMES WITH “FOTOSAN” ANTIMICROBIAL AGENT

TEST No 1 Reference strain: *E.coli* ATCC 8739

Method: harvesting by contact dish (RODAC)

Results Level 1

Sample and relative contact time	Internal no.	Result cfu/untreated dish (*)	Result cfu/treated dish (*)
T1 = 30 min	18/5926 and 5934	7	0
T2 = 1 hour	18/5927 and 5935	7	0

Results Level 2

Sample and relative contact time	Internal no.	Result cfu/untreated dish (*)	Result cfu/treated dish (*)
T1 = 30 min	18/5928 and 5936	103	6
T2 = 1 hour	18/5929 and 5937	109	0

(*) substratum untreated/treated with the product “Fotosan”

TEST No. 2 Reference strain: *Enterococcus faecalis* ATCC 7080

Method: harvesting by contact dish (RODAC)

Results Level 1

Sample and relative contact time	Internal no.	Result cfu/untreated dish (*)	Result cfu/treated dish (*)
T1 = 30 min	18/5930 and 5938	11	0
T2 = 1 hour	18/5931 and 5939	2	2

Results Level 2

Sample and relative contact time	Internal no.	Result cfu/untreated dish (*)	Result cfu/treated dish (*)
T1 = 30 min	18/5932 and 5940	63	15
T2 = 1 hour	18/5933 and 5941	45	3

(*) substratum untreated/treated with the product “Fotosan”



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In compliance with the content of the UNI GEI EN ISO/IEC 17025 standard (see point 5.10.3.1, para d), provide an interpretation of the results.

It must be remembered first and foremost how the microbiological parameters used for the tests in question (*Escherichia coli* and *Enterococcus faecalis*) were chosen, in consideration of the particular meaning that can be attributed to them and that are summarised below:

- *Escherichia coli* is the element providing most proof of organic contamination, to which reference is commonly made in the various realm of the applied microbiology:
- *Enterococcus faecalis* is equally proof of organic contamination, distinguished by the non-negligible level of resistance to unfavourable conditions due to the strength of the cell walls, traced back to the gram-positive nature of the bacterial species (and the reason why it is preferred to *Staphylococcus aureus* when carrying out the herein experiment).

The results reported in the Test Reports referred to previously allow the considerations below to be made.

- The antibacterial activity of the tested product on *Escherichia coli* is to be considered high, also with the reduced contact times which were evaluated: this appears the case in particular from the tests carried out on higher levels of microbial load (levels specifically pre-chosen to simulate consistent microbiological contamination conditions), which are found to be almost completely eliminated.
- Similar activity on *Enterococcus faecalis* also seems to be significant, in consideration of what was stated in the preamble. Aside from the development of some colonies after the tested contact times, the consistent reduction in bacterial loads is immediately notable, especially in tests simulating massive contamination conditions.
- Adequate significance is given to the results obtained, also in reference to the new concept (at least in the traditional disinfection sector) of the photocatalytic action of the tested product: the increasing concerns regarding growing bacterial resistance to traditional-concept disinfectants are well known, in fact. With regard to future prospects, it is not inappropriate to consider this category of products as an important technical solution in the realm of disinfection, when considered as a whole.

Laboratory Manager

(Dr Riccardo Dal Molin)

[SIGNATURE]

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