



UNIVERSITÀ  
CATTOLICA  
del Sacro Cuore

Dipartimento di Scienze e Tecnologie Alimentari  
per una filiera agro-alimentare Sostenibile - DISTAS  
Area di Tecnologie alimentari, enologia e ambiente

UNIVERSITÀ CATTOLICA DEL S. CUORE  
DIPARTIMENTO DISTAS  
FACOLTÀ DI SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

IRIS Ceramica Group  
Via Ghiarola Nuova, 119  
41042 Fiorano Modenese (MO)

Piacenza, 18<sup>th</sup> February, 2020

## TEST REPORT N° 6A/2020

**Sample: CALACATTA SL. ACTIVE 2.0. 300x150 cm**

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### TEST RESULTS

As requested by the Company IRIS Ceramica Group the product **CALACATTA SL. ACTIVE 2.0. 300x150 cm** has been tested for resistance to fungal growth according to UNI 11021:2002 "Paints and varnishes – Coating material and coatings systems for indoor environments with the presence of foodstuff. – Requirements and test methods".

The test samples were prepared and provided by the company.

#### **Evaluation of fungal resistance efficacy**

The UNI 11021:2002 norm indicates the laboratory method for testing the resistance of paints, varnishes and similar products against fungal growth.

Before testing, the sample specimens were sterilized in autoclave at 120°C for 20 min. The sterilised specimens were placed centrally (with the surface to be tested face up) onto Petri plates containing Malt Agar as culture media. The specimens were then inoculated with a fixed volume of a fungal spore suspension of *Aspergillus niger*,



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*Penicillium sp.*, *Paecilomyces fulvum* in order to deposit  $10^5$  CFU. For each fungus three Petri plates were prepared.

At the same time, a trial in high humidity conditions was carried out. In this case the specimens were placed in Petri plates containing sterilised distilled water, always with the surface to be tested face up and on a support in order to be kept above the water level. The specimens were then inoculated with a fixed volume of a fungal spore suspension of *Aspergillus niger*, *Penicillium sp.*, *Paecilomyces fulvum* in order to deposit  $10^5$  CFU. For each fungus three Petri plates were prepared.

The inoculated Petri plates were incubated at  $23 \pm 2^\circ\text{C}$  for 25 days. At the end of the incubation time, fungal growth was assessed visually macroscopically and rated according to the UNI 11021:2002 assessment scale:

- 0 = no mycelium growth is observed
- 1 = very weak mycelium growth
- 2 = weak mycelium growth: percentage of specimen surface covered  $\leq 25\%$
- 3 = discrete mycelium growth: percentage of specimen surface covered  $\leq 50\%$
- 4 = strong mycelium growth: percentage of specimen surface covered  $> 50\%$

The efficacy of the sample against fungal growth is demonstrated if the specimens are rated  $\leq 1$ .

The obtained results are reported in the table below.

| Sample                                  | Rating of mycelium growth in culture media (Malt Agar) and in high humidity conditions |
|---|--|
|   | Average of ratings in the two conditions   |
| CALACATTA SL.<br>ACTIVE 2.0. 300x150 cm | 1  |



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Therefore, according to the UNI 11021:2002 norm:

- the product **CALACATTA SL. ACTIVE 2.0. 300x150 cm** is resistant to fungal growth since a very weak mycelium growth was observed onto the surface of the specimens.

**This test report contains results that refer only to the analysed sample and can only reproduced in full, without any change.**

The analyst  
(Dr. Roberta Galli)

Scientific Referent

(Prof. Giorgia Spigno)

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