



# UNIVERSITÀ DEGLI STUDI DI MILANO

Dipartimento di Chimica

Laboratorio di Processi e Impianti chimici per la Chimica Industriale

Test Report N. GF/1.2023

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## Test: NO<sub>x</sub> abatement tests from air on Active Surfaces White CS

Milan, 04/09/2023

Date of receipt	17/07/2023
Analysis start date	19/07/2023
Analysis end date	26/07/2023
Material	Ceramic Materials
Product	Ceramic slabs in porcelain gres
Sample	<b>Active Surfaces White CS</b>
Test information	<ul style="list-style-type: none"><li>• Photodegradation tests of nitrogen oxides (NO<sub>x</sub>) in air</li><li>• Tested sample: a 2x20 cm strip cut from an original slab, intact in all its parts, randomly selected from a production batch</li><li>• Pre-treatment procedure: according to ISO 22197-1 standard, the sample was irradiated under UV-A lamp for 6 hours, followed by immersion in deionized water for 2 hours</li><li>• Light source: UV-A lamp, Jelosil 500. Light intensity: 2.0 mW/cm<sup>2</sup> lux</li><li>• Exposure time: 6 hours</li><li>• Initial NO<sub>x</sub> concentration: 1000 ± 100 ppb in synthetic air</li><li>• Reactor type: laboratory research reactor. Results published in international scientific journals.</li><li>• Analytical method: chemiluminescence (SERINUS 40)</li><li>• Reproducibility: the measurement was repeated on 5 samples, each cut and randomly selected from 5 different slabs</li></ul>



## Conclusions

The porcelain stoneware slab **Active Surfaces White CS** was found to be effective in the photocatalytic degradation of nitrogen oxides (NO<sub>x</sub>) present in air.

Based on the data obtained after 6 hours of testing, the percentage of NO<sub>x</sub> degradation is **99.0%**.

The Scientific Supervisor

Prof. Claudia Letizia Bianchi

A handwritten signature in black ink, appearing to read 'Claudia L. Bianchi'.