

TEST REPORT

n° 2105G/24 21/05/2024

CLIENT	Graniti Fiandre S.p.A. Via Radici Nord 112 - 42014 Castellarano (RE)
TEST MATERIAL	Piastrella ceramica 50x50x6mm (cleaned by wiping with 70% ethanol) Untreated test: UBTQ Treated test: URBAN WHITE Active Surfaces, 300x100 cm 6 mm
BACTERIAL STRAIN	Escherichia Coli ATCC 8739
INOCULUM	150 µl 2,0 x 10 ⁶ ufc/ml
LIGHT SOURCE	Philips TL 8W BLB 1FM/10X25CC
RADIOMETER	VOLTCRAFT UV-500 Prod.n. VC-8330305
EXPOSURE CONDITIONS	Time: 8h Temperature: 25°C Intensity: 0,25 mW/cm ²
FILM	Polietilene 40x40mm – Transparency >85% tra 340nm e 380 nm
COVER GLASS	borosilicate glass Ø100mm x 1,1mm – Transparency >85% tra 340nm e 380 nm
SAMPLE RECEIVED DATE	10/05/2024
SAMPLE TESTED DATE	17/05/2024 – 21/05/2024

TEST RESULT

Antibacterial activity of semiconducting photocatalytic materials ISO 27447:2019 – Film cover method

A average number of viable bacteria of non-treated specimens, just after inoculation	1.4 x 10 ⁵ ufc	
B_L average number of viable bacteria of non-treated specimens, after UV irradiation	6.4 x 10 ⁵ ufc	
C_L average number of viable bacteria of photocatalytic treated specimens, after UV irradiation	1.2 x 10 ⁴ ufc	
R_L Log (B _L /C _L) = photocatalyst antibacterial activity value, after UV irradiation	1.71	98.0%
B_D average number of viable bacteria of non-treated specimens, after being kept in a dark place	4.8 x 10 ⁵ ufc	
C_D average number of viable bacteria of treated specimens, after being kept in a dark place	2.5 x 10 ⁴ ufc	
R_D Log (B _D /C _D) = antibacterial activity value in a dark place	1.28	94.8%
ΔR Log (B _L /C _L) - Log (B _D /C _D) = photocatalyst antibacterial activity value with UV irradiation	0.43	62.6%

Laboratory Director

Chim. Dott. Manuele Cerchiarì

