



Antibacterial & Antifungal Coatings

DETER-ALL

INDEPENDENT LABORATORY

Test
Summary

Test Summary: DETER-ALL



Issue 0 – 21.02.2024
B-Lab-For-095

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BioLabTests

Unit 3 Parade Court
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Summary of Analysis

Customer Name: NORIGIN SCIENTIFIC LIMITED
Customer Contact: Seamus Devlin
Customer Email/Phone: seamus@vexcolt.co.uk
Certificate Number: BL103/2024

Date Received: 19.06.2023
Date Analysed: 25.07.2023-28.12.2023
Date Reported: 26.02.2024

Tick box if customer has provided untreated control samples for inclusion in testing

Test Method: Determination of Antimicrobial Activity using Test Based on MOD ISO 22196: 2011 and MOD ASTM G21-15

| Sample Description | Organism Type | Test Organism | Culture Reference | Test Method | Contact Time* | | Reduction against Initial | |
|----------------------------|---------------|---|-------------------|------------------------|------------------------|------------------------|---------------------------|---------|
| | | | | | 0 Hrs | 24 Hrs | Log ₁₀ | % |
| DETER-ALL ANTIMICROBIAL | Bacteria | Drug-resistant <i>Streptococcus pneumoniae</i> | ATCC® 700677™ | MOD ISO 22196: 2011 | 5.39 x 10 ⁴ | 3.00 x 10 ² | 2.25 | 99.44% |
| | | <i>Clostridioides difficile</i> | ATCC® BAA-1382™ | | 3.59 x 10 ⁴ | 2.67 x 10 ² | 2.13 | 99.26% |
| | | Vancomycin-resistant <i>Enterococcus faecium</i> (VRE) | ATCC® 700221™ | | 9.79 x 10 ⁴ | ≤100 | ≥2.99 | ≥99.90% |
| | | Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) | ATCC® 43300™ | | 7.79 x 10 ⁴ | 5.00 x 10 ² | 2.19 | 99.36% |
| | | <i>Escherichia coli</i> | ATCC® 8739™ | | 9.12 x 10 ⁴ | ≤100 | ≥2.96 | ≥99.89% |
| | | Multidrug-resistant <i>Pseudomonas aeruginosa</i> | ATCC® BAA-2108™ | | 9.19 x 10 ⁴ | ≤100 | ≥2.96 | ≥99.89% |

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|-----------------------------|------------------------|--|---------------------------|------------------------|------------------------|------------------------|---------------------------|---------|
| | | | | | 0 Hrs | 24 Hrs | Log ₁₀ | % |
| DETER-ALL ANTIMICROBIAL | Bacteria | Drug-resistant <i>Campylobacter jejuni</i> | ATCC® BAA-373™ | MOD ISO 22196: 2011 | 5.64 x 10 ⁴ | 5.67 x 10 ² | 2.00 | 99.00% |
| | | <i>Klebsiella pneumoniae</i> | NCTC® 9633/ATCC® 13883 | | 8.89 x 10 ⁴ | 5.33 x 10 ² | 2.22 | 99.40% |
| | | Carbapenem-resistant <i>Acinetobacter baumannii</i> (CRAB) | ATCC® BAA-1605™ | | 8.39 x 10 ⁴ | ≤100 | ≥2.92 | ≥99.88% |
| | | ESBL-producing Enterobacterales <i>K. quasipneumoniae</i> | NCTC® 13368/ATCC® 700603™ | | 9.25 x 10 ⁴ | 6.67 x 10 ² | 2.14 | 99.28% |
| | | Drug-resistant nontyphoidal <i>Salmonella enterica</i> | ATCC® BAA-190™ | | 9.17 x 10 ⁴ | ≤100 | ≥2.96 | ≥99.89% |
| | | Carbapenem-resistant Enterobacterales <i>K. pneumoniae</i> (CRE) | NCTC® 13440 | | 9.44 x 10 ⁴ | ≤100 | ≥2.97 | ≥99.89% |
| | Fungi | <i>Candida albicans</i> | NCPF® 3255/ATCC® 2091 | | 7.70 x 10 ⁴ | ≤100 | ≥2.89 | ≥99.87% |
| | | <i>Candida auris</i> | ATCC® MYA-5001 | | 4.51 x 10 ⁴ | ≤100 | ≥2.65 | ≥99.78% |
| | | <i>Cryptococcus neoformans</i> | ATCC® 32045™ | | 6.19 x 10 ⁴ | ≤100 | ≥2.79 | ≥99.84% |
| | | <i>Candida glabrata</i> | ATCC® 2001™ | | 6.67 x 10 ⁴ | ≤100 | ≥2.82 | ≥99.85% |
| | | <i>Candida tropicalis</i> | NCPF® 3111 | | 6.36 x 10 ⁴ | ≤100 | ≥2.80 | ≥99.84% |
| <i>Candida parapsilosis</i> | NCPF® 3104/ATCC® 22019 | 3.61 x 10 ⁴ | ≤100 | ≥2.56 | ≥99.72% | | | |

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*Numbers represent Colony Forming Units at representative contact times.

Data show the changes in size of the initial organism populations due to their contact with the treated surface of the samples. The samples detailed in this CoA were tested for 24 hours (±1) at 35°C-37°C (±2) under a relative humidity of >90% as specified in the ISO 22196 method. The results detailed in this CoA relate only to the items tested. This summary shall not be reproduced except in full, without written approval of BioLabTests. All testing is performed on site at the BioLabTests address above unless otherwise disclosed.

| Sample Description | Organism Type | Test Organism | Culture Reference | Test Method | Observed Growth Rating (microscopic) | | |
|----------------------------|---------------|---------------------------------|--------------------------|--------------------|--------------------------------------|-------------|-------------|
| | | | | | Replicate 1 | Replicate 2 | Replicate 3 |
| DETER-ALL ANTIMICROBIAL | Fungi | <i>Penicillium chrysogenum</i> | NCPF 2802 | MOD ASTM G21-15 | 1 | 1 | 0 |
| | | <i>Aspergillus brasiliensis</i> | NCPF 2275/ ATCC®16404 | | 0 | 1 | 0 |

Data show the microscopic (40x) growth ratings on the sample's surfaces following 28 days incubation. 0 (0% coverage), 1 (<10% coverage), 2 (10-30% coverage), 3 (30-60% coverage) or 4 (>60% coverage). The samples detailed were tested for 28 days at 30°C under a relative humidity of >90% as specified in the ASTM G21 method. The results detailed in this summary relate only to the items tested. This summary shall not be reproduced except in full, without the written approval of BioLabTests. All testing is performed on site at the BioLabTests address above unless otherwise disclosed.

Richard Smith (BSc Hons)
 Laboratory Manager,
 BioLabTests Ltd



END OF REPORT