

Report
**Detection of the anti-bacterial effectivity of the device “Awions AW-D6”
 against Bacteria: strain *Enterococcus faecium*.**

Summary of results

The testing performed with gram-positive bacteria, strain *Enterococcus faecium* showed after 30 minutes of exposure under dry conditions a Log-Reduction-Factor of under the conditions of this test.

Test Species	Reduction Rate %	Log-Reduction
<i>Enterococcus faecium</i>	> 99.999	> 5.81 (30min)

Aim of Investigation

Detection of reduction rate of Bacteria: strain *Enterococcus faecium* in a 30 minutes dry-exposition on glass cover slides.

Material & Methods

Target-Species

Bacteria

- *Enterococcus faecium* DSM 2146 (gram positive)

Quantification method:

- Linear dilution series, spread plate method
- Slanetz-Agar
- Incubation: 48h resp. 72h at 37°C

Application of bacteria:

- Dry-Exposition:
 - 50µl each parallel on glass cover slides, application as 10 single spots
 - Drying at room temperature, 30min at 36°C.
 - Exposition at room temperature (1.5m³-chamber (closed), after pre-conditioning by running the device at level “1” for 30 minutes.
 - Exposition for 30 min (21.6° to 21.7 °C // 45.6% to 47.0% RH)
 - Resuspension after exposition in 400µl NaCl_{phys.}
- Controls, Dry-Exposition
 - 50µl each parallel on glass cover slides, application as 10 single spots
 - Drying at room temperature, 30min at 36°C.
 - Exposition at room temperature (same room, in a separate closed small box)
 - Exposition for 30 min
 - Resuspension after exposition in 400µl NaCl_{phys.}
- Parallels
 - each run, each control: 3-fold
- Date of test performance:
 - 28/04/2021

Results

Tab. 1: Overview on results, target species *Enterococcus faecium*

Test	Bacteria [CFU*/ml] <i>Enterococcus faecium</i>	%-Reduction
Test 1	<10	
Test 2	11	
Test 3	<10	
Mean Value	9.67 x 10⁰	>99.99985
Standard Deviation	1.16 x 10⁰	(>Log 0.985)
Control 1	7500000	
Control 2	4500000	
Control 3	6900000	
Mean Value	6.30 x 10⁶	Reference value
Standard Deviation	1.59 x 10⁶	(Log 6.80)

*CFU = colony forming units

Based on the generated mean values, the reduction rate of the applied bacteria in comparison to the initial bacteria concentration is >99.999 % under the conditions of this testing. The Log-Reduction Factor (RF) is >5.81.

Yours sincerely
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- End of test report -

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