Hygiene-Institut des Ruhrgebiets
Institut für Umwelthygiene und Toxikologie
Director: Dr. Thomas-Benjamin Seiler
Legal Entity: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V.

Hygiene-Institut · PO Box 10 12 55 · DE 45812 Gelsenkirchen · Germany

Viessmann Werke Allendorf GmbH
Mr. Armeli
Viessmannstraße 1
35108 Allendorf

Address:
Rotthauser Str. 21, DE 45879 Gelsenkirchen

Switchboard +49 (0)209 9242-0
Direct +49 (0)209 9242-238
Telefax +49 (0)209 9242-222
E-Mail klimatechnik@hyg.de
Internet www.hyg.de

Our reference: W-351157e-21-Ho
Contact person: Dipl.-Ing. (FH) S. Horn

Gelsenkirchen, 11.11.2021

TEST REPORT

Test of the microbial metabolisation pursuant to DIN EN ISO 846 (11/2020), method C

Client:	Viessmann Werke Allendorf GmbH Viessmannstraße 1 35108 Allendorf
Ordering Date:	Written order on 16.08.2021
Order number:	4506974883/42/01P (SAP 11 37 29 93 04)
Test material:	“VitoAir F 50 Flachkanal Z023105 Z023106 7372922”
Description of the test objects:	Black plastic tube with light blue inner side
Size of the test objects:	5 cm x 5 cm
Date of receipt of test samples:	18.08.2021
Test number:	119
Commencement of test:	23.09.2021
Case handler:	Dipl.-Ing. (FH) S. Horn
Our reference:	W-351157e-21-Ho
Scope of the report:	3 pages

1. Implementation

Testing was performed pursuant to DIN EN ISO 846 „Evaluation of the effect of microorganisms on synthetic materials“, method C. The evaluation was carried out by visual assessment.

Method C is suitable to assess the resistance of plastic to bacterial attack in absence of organic contaminants.

The specimens were disinfected before the test with an ethanol-water mixture (mass ratio 70:30).

Preparation of a bacteria suspension with the following test strain:
Pseudomonas aeruginosa DSM 1253

Blending of the bacteria suspension with a carbon-free or low-carbon culture medium which was liquefied and cooled down to 45°C,
Filling the Petri dishes with the inoculated agar,
Placing the specimens onto the cooled agar and then dousing the specimens with the inoculated agar (approx. 1mm cover layer on the specimens) (5 parallel sets),
In addition, three test specimens made of stainless steel are also inoculated and incubated as a negative control,
There is also a batch of 2 parallel sterile samples, onto each of which 3 ml of ethanol-water mixture with a mass ratio of 70:30 is pipetted.
Incubation of test specimens over a period of 4 weeks at a steady temperature of 29 ± 1°C and a relative humidity of > 95%.

Visual inspection of the test specimens with the naked eye as well as with a stereoscopic microscope (at 50 x magnification) for bacterial growth after 4 weeks followed by an evaluation of the growth in comparison to the control samples.

2. Assessment

The microbial growth on the test specimens was evaluated pursuant to Table 1

Table 1: Evaluation of the microbial growth (adapted according to method A, DIN EN ISO 846)

Intensity of growth	Rating
0	No growth visible when viewed microscopically.
1	No growth with the naked eye, but clearly visible under the microscope.
2	Growth visible to the naked eye.
3	Strong growth, visible to the naked eye.

3. Results

Table 2: Test results

Examination material	Growth intensity of the microbial growth according to table 1
"VitoAir F 50 Flachkanal Z023105 Z023106 7372922"	0
	0
	0
	0
	0

None of the five specimen pursuant to method C showed bacterial growth when viewed microscopically.

Gelsenkirchen, 11th of November 2021

Sincerely,

The Director of the Institute on behalf

(Dipl.-Ing. (FH) S. Horn)

Head of Department
Hygienic Building Technology