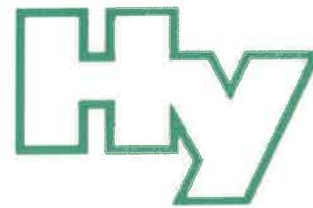


Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie

Director: Dr. Thomas-Benjamin Seiler

Legal Entity: Verein des Hygiene-Instituts des Ruhrgebiets e.V.



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

LATI Industria Termoplastici S.p.A.
Via Francesco Baracca, 7
21040 VEDANO OLONA (VA)
ITALY

Address:

Rotthäuser Str. 21, DE 45879 Gelsenkirchen

Switchboard +49 (0)209 9242-0
Direct +49 (0)209 9242-237
E-Mail j.albrecht@hyg.de
Internet www.hyg.de

Our reference: W-386737e-24-Alb/Krü
Contact person: Mrs. J. Albrecht

Gelsenkirchen, 05.04.2024

TEST REPORT

Test pursuant to DIN EN 16421: 2015-05, Influence of materials on water for human consumption, Method 2 – Measured by biofilm volume

Client:

LATI Industria Termoplastici S.p.A.
Via Francesco Baracca, 7
21040 VEDANO OLONA (VA)
ITALY

Ordering date:

23.03.2023

Description of the material:

Test material:

LATAMID 66 H2 G/30 NAT. F:0003

General composition:

Recipe:

submitted and checked (12990)

Requirements KTW-BWGL(03/22):

fulfilled

Field of application:

contact with drinking water

Test sample:

Nature and property:

97 pcs. of hard plastic discs, light beige, D: 10 cm

Manufacturing:

description submitted by the client

Production Place:

Via delle Industrie, Gornate Olona, Italy

Production Date:

27.02.2023

Lot / Batch no.:

124758

This test report consists of 3 pages

Our general terms and conditions apply (<http://www.hyg.de>). The assessment was carried out under the condition that the raw materials used to manufacture the product or their composition were fully disclosed and that no other substances are contained in the product. The validity of this document expires in case of changes in the composition of the material or in the processing conditions. The accreditation is valid for the test methods listed in the Annex to the accreditation certificate (<http://www.hyg.de>). Non accredited tests are marked. The results of our tests and the assessments apply to the test objects examined and the legal regulations in force at the time of the test. *This document may only be published or reproduced in complete and unaltered form without our express written permission.*



Deutsche
Akkreditierungsstelle
D-PL-13042-02-00

Legal Entity: Verein des Hygiene-Instituts des Ruhrgebiets e.V., Register: VR 519 Local Court Gelsenkirchen (Germany); VAT ID: DE125018356

Directorate: Prof. Dr. Jürgen Kretschmann (Head), Andrea Henze, Joachim Luchte, Dr. Frank Obenaus, Dr. Thomas-Benjamin Seiler (Executive Member), Dr. Dirk Waider

Sample was taken by:	-
Date of sampling:	-
Date of receipt of test sample:	26.07.2023
Condition at reception:	together in plastic bag
Storing conditions in the testing lab:	at room temperature, dark, dry

Test conditions:

The tests were performed in accordance with the requirements contained in DIN EN 16421: 2015-05, Method 2. Details regarding testing procedures, as well as testing conditions will be given in said Standard. The surface of the examined test pieces totals to 940 cm² each. Using twelve test items per test period the following test scheme was applied:

- monthly sampling of surface biomass (test period 3 months altogether)
- sampling after 2 months (test period 2 months altogether)
- sampling after 3 months (test period 3 months altogether)

Prior to testing, the test specimens were placed in running tap water for 20 hours, followed by a disinfection procedure using 1% chlorine bleach for (30 ± 5) minutes and then rinsed with drinking water.

Time of exposure:

1-month samples	1a:	1 st	test period from 04.01.2024 to 31.01.2024
	1b:	2 nd	test period from 31.01.2024 to 27.02.2024
	1c:	3 rd	test period from 27.02.2024 to 26.03.2024
2-month samples	2a:	1 st	test period from 04.01.2024 to 27.02.2024
3-month samples	3a:	1 st	test period from 04.01.2024 to 26.03.2024

The exposure took place in containers filled with ground water of drinking water quality at a continuous flow rate of approx. 20 l/h over a period of three months. The water temperature ranged from 9.0°C to 9.7°C.

After one, two and three months the surfaces of the test pieces, as well as the corresponding negative reference samples (stainless steel) and positive reference samples (paraffin on stainless steel) were scraped clean in order to examine for biofilm formation. Afterwards, the surface biomass was transferred to suitable centrifuge tubes. The subsequent centrifugation was carried out at 3.000 x g for 10 minutes followed by the determination of the volume of the sediment.

Special observations / deviations:

None

Test results:

The positive reference sample (pK) showed a pronounced formation of biofilm during all test periods. There was no formation of surface biomass on the negative reference sample (nK). The results of the analyses of the single specimens of 940 cm² surface in total, pursuant to DIN EN 16421: 2015-0, Method 2 were as follows:

Volume of surface biomass

(single values and arithmetic mean of 12 test pieces, given in ml / referring to 800 cm²)

Start of test: 04.01.2024		1-month values		2-month values		3-month values
04.01.2024 – 31.01.2024	1a	(< 0.01/< 0.01) -		2a (< 0.01/< 0.01) -		
	nK	< 0.01				
31.01.2024 – 27.02.2024	pK	≥ 1.5				
	1b	(< 0.01/< 0.01) -	nK	< 0.01	3a	(0.01/0.01) 0.01
27.02.2024 – 26.03.2024	nK	< 0.01	pK	≥ 1.5	nK	< 0.01
	pK	≥ 1.5			pK	≥ 1.5

Limiting values [ml / 800 cm²] pursuant to KTW-BWGL, 5.6.3

Mean values M1:	≤ (0.05 + 0.02)	≤ (0.05 + 0.02)	≤ (0.05 + 0.02)
Negative Control:	< 0.01 ml	< 0.01 ml	< 0.01 ml
Positive Control:	≥ 1.5 ml	≥ 1.5 ml	≥ 1.5 ml

Surface colonization was proved by contact cultures / swabs respectively.

The results correspond to the requirements in chapter 5.6.3 of KTW-BWGL (as of 7th March 2022).

[The measurement uncertainly and the standard deviation are not taken into account.]

The Director of the Institute
 p.p.

J. Albrecht M. Sc.
 Head of Department Microbiological Material and Hygiene Testings

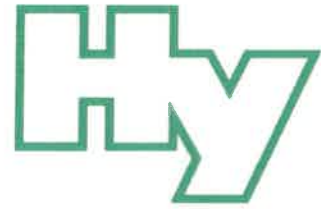


Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie

Director: Dr. Thomas-Benjamin Seiler

Legal Entity: Verein des Hygiene-Instituts des Ruhrgebiets e.V.



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

LATI Industria Termoplastici S.p.A.
Via Francesco Baracca, 7
21040 VEDANO OLONA (VA)
ITALY

Address:

Rotthausener Str. 21, DE 45879 Gelsenkirchen

Switchboard +49 (0)209 9242-0

Direct +49 (0)209 9242-237

E-Mail j.albrecht@hyg.de

Internet www.hyg.de

Our reference: W-386737ean-24-Alb/Krü

Contact person: Mrs. Dr. Ch. Schell

Gelsenkirchen, 05.04.2024

Test for hygienic suitability in contact with drinking water pursuant to DIN EN 16421: 2015-05, Method 2

Your order dated 23.03.2023

Dear Madam/Sir,

please find enclosed the test report **W-386737e-24-Alb/Krü** for the material **LATAMID 66 H2 G/30 NAT. F:0003**.

The composition check of the above-mentioned product was carried out in accordance with the requirements of Chapter 5.2 of the KTW evaluation criteria (KTW-BWGL).

From microbiological point of view the material mentioned above fulfills the requirements pertaining to the enhancement of microbial growth pursuant to KTW-BWGL (DIN EN 16421: 2015-05, Method 2, Measured by biofilm volume).

The composition requirements are met.

Evidence that the other requirements of the KTW evaluation criteria (as of 2022-03) are met can be verified by an examination in accordance with the requirements of the KTW-BWGL.

This letter does not represent a certification in terms of the recommendation for conformity attestation of product hygiene suitability for drinking water of the Federal Environmental Agency. The test results and assessments refer exclusively to the test item.

Best regards

The Director of the Institute

p.p.

J. Albrecht M. Sc.

Head of Department Microbiological Material and Hygiene Testings

Enclosure: test report

Our General Terms and Conditions (<http://www.hyg.de>) apply

Legal Entity: Verein des Hygiene-Instituts des Ruhrgebiets e.V., Register: VR 519 Local Court Gelsenkirchen (Germany); VAT ID: DE125018356

Directorate: Prof. Dr. Jürgen Kretschmann (Head), Andrea Henze, Joachim Löchte, Dr. Frank Obenaus, Dr. Thomas-Benjamin Seiler (Executive Member),

Dr. Dirk Waider