

Test report No. 1122K/07.04.2023-1/Z -EN

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Theme of order	Customer	Customer's order number
Influence of materials on water intended for human consumption	Well Stream Sp. z o.o. al. Jerozolimskie 214 02-486 Warszawa	0323-002

Analytical method:	Samples of water extracts after contact with the material were prepared in accordance with PN-EN 14395-1:2008 (A) (for organoleptic parameters) and PN-EN 12873-1:2014 (A) (for other parameters)	
Type and dimensions of test material:	Piece of material with dimensions: 10 x 10 [cm],	
Material:	PVC-U well pipes, DN 110mm - DN 450mm (WellPipe)	
Manufacturer:	HASS PIPE Sondaj Boru Imalati Sanayi ve Ticaret A.S.	
Manufacturer Address:	Fevzi Cakmak Mh. 42030 Karatay Konya - Turkiye	
Year of manufacture:	2023	
Applications of the material:	Assembly in the installations for the transmission of water intended for human consumption and household purposes.	
Condition of the sample upon admission to the laboratory:	Acceptable	
The volume of water used in each of the test periods:	• For method: PN-EN 12873-1:2014 – 1,20 [dm³] • For method: PN-EN 14395-1:2008 – 2,00 [dm³]	
Surface area of the material in contact with the test water:	• For method: PN-EN 12873-1:2014 – 6,00 [dm²] • For method: PN-EN 14395-1:2008 – 2,00 [dm²]	
Surface area to water volume ratio (S/V):	• For method: PN-EN 12873-1:2014 – 5,0 [dm⁻¹] • For method: PN-EN 14395-1:2008 – 1,0 [dm⁻¹]	
Type and parameters of test water:	Water from the Millipore MilliQ Gradient A10 laboratory water production station	
	Total organic carbon (TOC) content	<0,2 [mg/l]
	Conductivity	<2 [mS/m]
Temperature of the test:	23 ± 2 [°C]	
Migration time for test at 23°C:	72h for each of the 3 migration periods	
Number of parallel samples in the migration test:	2 samples	
Initial sample preparation and migration tests were performer by:	Laboratory workers	
The client delivered the sample to the laboratory on:	22.03.2023	
Test start date:	03.04.2023	
Test completion date:	21.04.2023	
The test sample was prepared and delivered to the laboratory by the Customer.		

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GENERAL INFORMATION

Sample code	Sample identification	Condition of sample	Start date of the migration period	The end date of migration period	Test completion date
23/11558/K	Migration period I blank sample	Acceptable	04.04.2023	07.04.2023	14.04.2023
23/11559/K	Migration period I sample 1	Acceptable	04.04.2023	07.04.2023	14.04.2023
23/11560/K	Migration period I sample 2	Acceptable	04.04.2023	07.04.2023	14.04.2023
23/11561/K	Migration period II blank sample	Acceptable	07.04.2023	10.04.2023	14.04.2023
23/11562/K	Migration period II sample 1	Acceptable	07.04.2023	10.04.2023	14.04.2023
23/11563/K	Migration period II sample 2	Acceptable	07.04.2023	10.04.2023	14.04.2023
23/11564/K	Migration period III blank sample	Acceptable	10.04.2023	13.04.2023	21.04.2023
23/11565/K	Migration period III sample 1	Acceptable	10.04.2023	13.04.2023	21.04.2023
23/11566/K	Migration period III sample 2	Acceptable	10.04.2023	13.04.2023	21.04.2023

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RESULTS OF ANALYSIS

Parameter			Results with uncertainty				Migration rate
Name	Analytical method	Unit	Sample code				M _{sr}
			23/11558/K	23/11559/K	23/11560/K	Mean value after subtraction of the blank	
Odour 23±2°C	A PN-EN 1622:2006 Simple method, even method, unforced choice, t - sample storage time	TON	<2 t [h]: 2	<2 t [h]: 2	<2 t [h]: 2	<2	-
Total organic carbon (TOC)	A PN-EN 1484:1999	mg/l	0,10 ± 25%	0,45 ± 25%	0,46 ± 25%	0,36	0,0237 [mg/dm ² /d]
Cadmium	A PN-EN ISO 17294-2:2016-11	mg/l	<0,00020 ± 35%	<0,00020 ± 35%	<0,00020 ± 35%	<0,00020	<0,000013 [mg/dm ² /d]
Lead	A PN-EN ISO 17294-2:2016-11	mg/l	<0,0010 ± 34%	0,082 ± 34%	0,079 ± 34%	0,081	0,0054 [mg/dm ² /d]
Phenolic index	A PN-ISO 6439:1994	mg/l	<0,0050 ± 30%	<0,0050 ± 30%	<0,0050 ± 30%	<0,0050	<0,00033 [mg/dm ² /d]

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Parameter			Results with uncertainty				Migration rate
Name	Analytical method	Unit	Sample code				
			23/11561/K	23/11562/K	23/11563/K	Mean value after subtraction of the blank	M _{sr}
Odour 23±2°C	A PN-EN 1622:2006 Simple method, even method, unforced choice, t - sample storage time	TON	<2 t [h]: 2	<2 t [h]: 2	<2 t [h]: 2	<2	-
Total organic carbon (TOC)	A PN-EN 1484:1999	mg/l	0,11 ± 25%	0,26 ± 25%	0,26 ± 25%	0,15	0,01 [mg/dm²/d]
Cadmium	A PN-EN ISO 17294-2:2016-11	mg/l	<0,00020 ± 35%	<0,00020 ± 35%	<0,00020 ± 35%	<0,00020	<0,000013 [mg/dm²/d]
Lead	A PN-EN ISO 17294-2:2016-11	mg/l	<0,0010 ± 34%	0,091 ± 34%	0,095 ± 34%	0,093	0,0062 [mg/dm²/d]
Phenolic index	A PN-ISO 6439:1994	mg/l	<0,0050 ± 30%	<0,0050 ± 30%	<0,0050 ± 30%	<0,0050	<0,00033 [mg/dm²/d]

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Parameter			Results with uncertainty				Migration rate	
Name	Analytical method	Unit	Sample code					
			23/11564/K	23/11565/K	23/11566/K	Mean value after subtraction of the blank	M _{sr}	
Odour 23±2°C	A	PN-EN 1622:2006 Simple method, even method, unforced choice, t - sample storagetime	TON	<2 t [h]: 2	<2 t [h]: 2	<2 t [h]: 2	<2	-
Total organic carbon (TOC)	A	PN-EN 1484:1999	mg/l	<0,10 ± 25%	0,24 ± 25%	0,19 ± 25%	0,22	0,0143 [mg/dm²/d]
Cadmium	A	PN-EN ISO 17294-2:2016-11	mg/l	<0,00020 ± 35%	<0,00020 ± 35%	<0,00020 ± 35%	<0,00020	<0,000013 [mg/dm²/d]
Lead	A	PN-EN ISO 17294-2:2016-11	mg/l	<0,0010 ± 34%	0,072 ± 34%	0,076 ± 34%	0,074	0,004933 [mg/dm²/d]
Phenolic index	A	PN-ISO 6439:1994	mg/l	<0,0050 ± 30%	<0,0050 ± 30%	<0,0050 ± 30%	<0,0050	<0,00033 [mg/dm²/d]

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Description of the abbreviations used (if applicable):

- Methods marked with the letter "A" are accredited by Polish Centre for Accreditation No. AB 700; reference - if the law so provides.
- Test methods marked with the letter "P" are approved by the PPIS in Poznań. Decyzja nr HK-WPS.9011.3.51.2022 z dnia 10.06.2022
- Test methods marked with the letter "N" are non-accredited methods. It applies to non-accredited methods covered by the system.
- Test methods marked with letters (NR) are tests performed with an alternative method to the reference method - the Laboratory has evidence of obtaining equivalence of results.
- Test methods marked with letters (W) are methods performed in accordance with withdrawn standards. est methods marked with letters (W) are methods performed in accordance with withdrawn standards.
- Test results presented as measurement values outside the accredited scope of the method are underlined and shown in parentheses. This value is information about the test result.
- The tests presented in italics were performed in the laboratory with PPIS accreditation and / or an approval and included in the list of subcontractors of Aquanet Laboratorium Sp. z o. o.. The laboratory code and / or PPIS approval number is given in the table with test results in the Test method column.

Notice (if applicable):

- The results only refer to the provided sample by the client.
- A client has the right to submit a complaint within 14 days of receipt of the analysis report.
- This test report can be reproduced only with a written permission of the Laboratory and in a full form.
- The measurement uncertainty of the results of samples provided by the client includes the uncertainty of the analysis method without the uncertainty of samples collecting process is represented as 95% confidence interval and $k = 2$. For microbiological testing, the reported expanded uncertainty of measurement has been estimated according to ISO 19036 and is based on the standard uncertainty multiplied by the coverage factor $k = 2$, providing a confidence level of approximately 95%. The composite standard uncertainty is taken to be equal to the standard uncertainty of within-laboratory reproducibility. The uncertainty does not take into account the uncertainty related to the data provided by the Customer.
- The test result obtained by the Laboratory, which goes beyond the scope of application of the accredited method in accordance with AB 700, in the form of "<value of the lower limit of the measuring range" or "> value of the upper limit of the measuring range" is given with expanded uncertainty for the lower or upper value. It does not apply to biological research.
- When in accordance with the requirements / specifications, the method of presenting the results described in point 5 is reported as a part of the opinion and interpretation.
- For the tested samples, where the final result is the sum of the determined components, if any of the obtained component values is outside the value of the lower limit of the application of the method accredited in accordance with AB 700, it is taken as equal to "0". If all components of the sum are below the value of the lower limit of application of the method accredited in accordance with AB 700, the lower limit of application of the method for the lowest component will be given as the sum in the test report in the form of "< value of the lower limit of the measuring range". The decision-making body, when making the final decision, may apply a different decision rule than the one presented above.
- Data provided by the client, which may affect the validity of the results, are included in the report in the fields: Theme of order, Customer, Customer's order number, Sample identification, Date and time of sampling declared by the customer (if applicable), Method of samples collection, Samples collected (if applicable). The above-mentioned data has been provided by the customer or his representative and con-firmed with a signature. Aquanet Laboratorium Sp. z. o. o. is not responsible for the data / information provided by the Customer.

The end of report

Date of the report: 09.05.2023

Authorized by:

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PG-P4.1B wyd.2 z dnia 10.02.2023

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Podpis jest prawidłowy

Dokument podpisany przez
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Data: 2023.05.09 12:18:19 CEST