

Micro Water Plant UG  
 Herr Herman Roelofsen  
 Bahnhofstraße 11a  
 73466 Lauchheim

 Analytik Institut Rietzler GmbH  
 Laborstandort Nürnberg  
 Schnorrstraße 5a  
 90471 Nürnberg

 Telefon 0911 86 88-20  
 Telefax 0911 86 88-222

 labor-nuernberg@rietzler-analytik.de  
 www.rietzler-analytik.de

## TEST REPORT AB1609366/PBMROH21-ra

Client: Micro Water Plant UG  
 Client address: Bahnhofstr. 11a, 73466 Lauchheim  
 Sampling location: as stated below  
 Sampler: Client  
 Sampling date: 09-08-2016  
 Date of receipt: 09-08-2016 - 09-22-2016  
 Testing period:

### Test Result Water

Sample name			Probe 1	Probe 2
Sample number			AP1637728	AP1637729
Sampling date			-	-
Sampling location				
Parameter	Method	Unit		
<b>Anionen</b>				
Nitrate	DIN EN ISO 10304-1*	mg/l	120	68
Nitrite	DIN EN ISO 10304-1*	mg/l	2	1,3

It is not allowed to copy the test report in extracts without written approval of the laboratory.  
 The test results relate only to the samples specified above. ■ The accreditation does apply for the methods in the test report marked with \*.

 Zugelassen nach  
 AbfKlärV, BioAbfV, DüngeV  
 Untersuchungsstelle nach  
 §15 Abs. 4 TrinkwV

 Untersuchungsstelle nach  
 §18 BBodSchG  
 Messstelle nach  
 §§26, 28 BImSchG

 Gegenprobensachverständige  
 nach § 43 LFGB  
 Zertifiziert nach  
 AQS-Leitstelle Bayern

 Akkreditiert nach  
 DIN EN ISO/IEC 17025


## Test Result Water

Sample name			Probe 1	Probe 2
Sample number			AP1637728	AP1637729
Sampling date			-	-
Sampling location				
Parameter	Method	Unit		
<b>Metalle</b>				
Aluminum	DIN EN ISO 17294-2 (E29)*	mg/l	0,82	0,12
Iron	DIN EN ISO 17294-2 (E29)*	mg/l	0,97	0,098
Arsenic	DIN EN ISO 17294-2 (E29)*	mg/l	0,052	0,008
Lead	DIN EN ISO 17294-2 (E29)*	mg/l	0,048	0,004
Cadmium	DIN EN ISO 17294-2 (E29)*	mg/l	0,050	0,0017
Chromium	DIN EN ISO 17294-2 (E29)*	mg/l	0,099	0,015
Copper	DIN EN ISO 17294-2 (E29)*	mg/l	0,93	0,041
Nickel	DIN EN ISO 17294-2 (E29)*	mg/l	0,050	0,007
Mercury	DIN EN ISO 12846*	mg/l	0,0055	0,00072
Zinc	DIN EN ISO 17294-2 (E29)*	mg/l	1,2	0,05

## Test Result Water

Sample name			Probe 1	Probe 2
Sample number			AP1637728	AP1637729
Sampling date			-	-
Sampling location				
Parameter	Method	Unit		
<b>Arzneimittelwirkstoffe</b>				
Primidon	LC-MS/MS	µg/l	0,46	0,11
Atenolol	LC-MS/MS	µg/l	0,88	0,067
Metoprolol	LC-MS/MS	µg/l	0,76	0,061
Sotalol	LC-MS/MS	µg/l	0,66	0,063
Bisoprolol	LC-MS/MS	µg/l	0,65	0,052
Clarithromycin	LC-MS/MS	µg/l	0,47	0,020
Erythromycin	LC-MS/MS	µg/l	0,55	0,035
Roxithromycin	LC-MS/MS	µg/l	0,48	<0,050
Trimethoprim	LC-MS/MS	µg/l	0,48	0,034
Sulfamethoxazole	LC-MS/MS	µg/l	0,43	0,10
N4-Acetylsulfamethoxazol	LC-MS/MS	µg/l	0,44	0,12
Phenazone	LC-MS/MS	µg/l	0,48	0,10
Naproxen	LC-MS/MS	µg/l	0,52	0,12
Ibuprofen	LC-MS/MS	µg/l	0,46	0,12
Propyphenazon	LC-MS/MS	µg/l	0,49	0,11
4-Formylaminoantipyrin	LC-MS/MS	µg/l	0,51	0,12
4-Acetylaminoantipyrin	LC-MS/MS	µg/l	0,51	0,12
Clofibric acid	LC-MS/MS	µg/l	0,46	0,13
Bezafibrate	LC-MS/MS	µg/l	0,53	0,13
Gemfibrozil	LC-MS/MS	µg/l	0,44	0,11
Oxazepam	LC-MS/MS	µg/l	0,59	0,13
Temazepam	LC-MS/MS	µg/l	0,54	0,12
Diazepam	LC-MS/MS	µg/l	0,47	0,095

**Task:**

The adsorption capacity of a filter cartridge for nitrate, nitrite, selected metals and drug active substances should be tested.

For this purpose, 25L drinking water was doped with standard substances. For the determination of the initial concentration, a sample of the test solution (Probe 1) and the test batch were then passed through the filter cartridge immediately before the experiment, and a sample (Probe 2) was taken directly thereafter to the filter outlet and transferred to the laboratory.

**Result:**

The measured concentrations show a significant reduction for all parameters.

The following retention rates were obtained:

Nitrate: 43%


Nitrite: 35%

Metals: 85% (arsenic, chromium) - 97% (cadmium)

Drug actives: 72% (clofibranic acid) - 100% (roxithromycin)

A statement on the adsorption capacity of the filter cannot be derived from this.

Analytik Institut Fietzler GmbH, Nuremberg, 10-11-2016



ppa. Roland Auernheimer

Dipl.-Ing. (FH)

- Laborleitung -