

Einfach sauberes Wasser.



ATB Umwelttechnologien GmbH-Südstr. 2-32457 Porta Westfalica/Germany

HCT Sustainables
to Jutta Zillgen
119 McLeod Avenue
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Ihre Nachricht vom:
Ihre Zeichen:

Unsere Zeichen:
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Datum: 31. August 2017

Informationen for PUROO® - NSF 40 test

Dear Ms. Zillgen,

We are pleased to present you a current extract of the official test results at the PIA institute in Aachen/Germany, created and sent by NSF to us (Job-Nr. J-00226336).

In the table on page 1 is documented that our product PUROO is being tested at the PIA institute. The PIA is the biggest accredited and notified testing body for the certification of wastewater treatment products in Europe.

On page 2, the parameters tested for the NSF 40 standard are shown over the entire 26-week-test. The test was successfully completed on 27.08.2017, only the documentation of the last test week is still pending. In the second table is documented, that the test is already successfully completed in compliance with the limits for the parameters CBOD and TSS (NSF 40 standard).

The documents for the approval are currently being prepared according to the requirements of the NSF. We expect the approval in the next month.

We ask you and the authorities to whom this document is submitted for a confidential handling until the official approval is available.

Please contact me if you need any help.

Best regards,

ATB Umwelttechnologien GmbH

i.A. Torsten Vogt

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- Technical development team -

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Steuer-Nr.: 335/5702/4233
USt-IdNr.: DE812905479
Handelsregister: HRB 3847
Amtsgericht 8ad Deynhausen

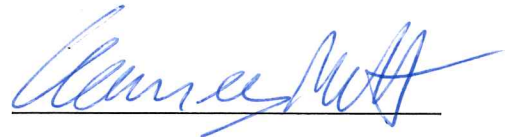
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Date of inquiry	No. of certification	Telephone 0241 / 75082-20 Telefax 0241 / 75082-29	Date
	PUROO	+49 241 7508216	06 th Sep 2017

Performance Test of the PUROO small waste water treatment system of the company ATB Environmental GmbH

The performance test according NSF 40 was carried out on the PUROO system from ATB Environmental GmbH from 06.02.2017 – 27.08.2017 by PIA Prüfinstitut für Abwassertechnik GmbH.

Aachen den 06.09.2017



Clemens Neff B.Sc. RWTH

(Testing Engineer Water Reuse Department)

Standards that the unit is being tested to:	Facility Name	Plant Code	Rated Capacity	Test Location	Job Number
Standard 40 - Residential Wastewater Treatment Systems	ATB	PUROO	400	PIA	J-00226336
Standard 245 - Wastewater Treatment Systems- Nitrogen reduction					
Standard 350 - Onsite Residential and Commercial Water Reuse Treatment Systems					
Standard 40 - & Standard 245					
Standard 245 - & Standard 350					

Instruction for Data Entry

Please fill in the table above to complete the job information for these datasheets
 Round DO to two digits after the decimal (hundredths)
 Round Temperature to a whole number
 Round pH to one digit after the decimal (tenths)
 Round BOD, CBOD, and TSS to the nearest whole number for values less than 100 mg/L
 Round BOD, CBOD, and TSS to the nearest 10 if only ≥ 100 - for example 236 = 240
 Round BOD, CBOD, and TSS to the nearest 100 if ≥ 1000 - for example 1147 = 1100

Rounding Rules:

- 1- If the first digit discarded is less than 5, do not change the last digit retained.
 For example, 3.423, if rounded to two digits, would be 3.42; if rounded to one digit, 3.4.
- 2- If the first digit discarded is greater than 5, or if it is a 5 followed by at least one digit other than 0, increase the last digit retained by one unit.
 For example 8.367, if rounded to two digits, would be 8.37; if rounded to one digit, 8.4.
- 3- If the first digit discarded is exactly 5, followed only by zeros, round the last digit retained upward if it is an odd number, but make no adjustment if it is an even number.
 For example, 4.35, when rounded to one digit, would be 4.4.

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	Eff TSS (mg/L)	Eff CBOD (mg/L)	Eff TSS (mg/L)	Eff CBOD (mg/L)
Week 1	9.8	14.0	Passing	Passing
Week 2	5.0	25.4	Passing	Passing
Week 3	7.8	11.4	Passing	Passing
Week 4	9.4	7.6	Passing	Passing
Week 5	8.4	6.6	Passing	Passing
Week 6	11.6	7.2	Passing	Passing
Week 7	9.5	12.5	Passing	Passing
Week 8	5.7	11.0	Passing	Passing
Week 9	3.2	7.0	Passing	Passing
Week 10	5.8	5.2	Passing	Passing
Week 11	7.4	6.6	Passing	Passing
Week 12	17.2	11.4	Passing	Passing
Week 13	13.6	10.8	Passing	Passing
Week 14	25.2	21.4	Passing	Passing
Week 15	21.2	15.8	Passing	Passing
Week 16	13.7	10.0	Passing	Passing
Week 17	15.0	17.7	Passing	Passing
Week 18	13.8	14.3	Passing	Passing
Week 19	15.0	12.3	Passing	Passing
Week 20	18.5	16.0	Passing	Passing
Week 21	25.3	18.3	Passing	Passing
Week 22	20.0	14.0	Passing	Passing
Week 23	31.3	27.7	Passing	Passing
Week 24	13.2	10.6	Passing	Passing
Week 25	10.0	9.4	Passing	Passing
Week 26	X	X	Failing	Failing

Total Number of Dosage Days
182

Days Eff TSS > 100 (mg/L)
0

Days Eff CBOD > 60 (mg/L)
0

Rated Capacity: 400 gpd
Minimum Dosage: 360 gpd
Maximum Dosage: 440 gpd

	Volume (gal)	Inf TSS (mg/L)	Inf CBOD (mg/L)	Eff TSS (mg/L)	Eff CBOD (mg/L)	Inf Alkalinity (mg/L)	Average of Inf Alkalinity (mg/L) over the course of testing
1st-30 Days	400	139	152	8	14	223.08	258
2nd-30 Days	400	195	185	8	9	264.55	
3rd-30 Days	400	170	195	11	9	274.62	
4th-30 Days	400	228	210	20	17	262.22	
5th-30 Days	388	322	273	19	15	275.00	
6th-30 Days	393	242	260	16	14	248.57	
1st-30 Days	Passing	Passing	Passing	Passing	Passing	Passing	Passing
2nd-30 Days	Passing	Passing	Passing	Passing	Passing	Passing	
3rd-30 Days	Passing	Passing	Passing	Passing	Passing	Passing	
4th-30 Days	Passing	Passing	Passing	Passing	Passing	Passing	
5th-30 Days	Passing	Passing	Passing	Passing	Passing	Passing	
6th-30 Days	Passing	Passing	Passing	Passing	Passing	Passing	