



INSTITUTE FOR TESTING AND CERTIFICATION

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Division CSI - Centre of Civil Engineering



REPORT

No. 465200052-2 / 2022

Product: **Sewage Treatment Plant,
type: Mälaren**

Applicant **EMKAN-PRO KRZYSZTOF MURAWSKI
Pstrągi Gniewoty 6
18-300 Zambrów, Poland**

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Mgr. Jiří Heš
General director

1. Introduction

The applicant **EMKAN-PRO KRZYSZTOF MURAWSKI, Pstrągi Gniewoty 6, 18-300 Zambrów, Poland** asked Institut pro testování a certifikaci, a. s. Zlín to test the product:
Sewage Treatment Plant, type: Mälaren 4

2. Product specification

One type of **Sewage Treatment Plant** was delivered by client to ITC for testing.
Sewage Treatment Plant, type: Mälaren 4

3. Sampling and test methods

3.1. Place and method of sampling

The samples were taken in the manufacturer's site by his representatives, subsequently sent to ITC and taken over in the testing laboratory ITC, a. s. Zlín. The tests were carried out on the complete wastewater treatment plant type F- SBR ONE 4 (same as Mälaren 4).

3.2. Samples description and identification

The client submitted for the testing 1 piece of F- SBR ONE 4 (same as Mälaren 4), small waste water treatment system tank for 4 PT. The sample was registered under ITC number 753501971/01.

3.3. Place and date of the tests, test equipment, tests conditions

The treatment efficiency test for E-coli performed in the laboratories of the Institut pro testování a certifikaci, a.s. in Zlín, during January 2022 - March 2022 (Microbiological evaluation was tested by accredited laboratory No. 1393 - Zdravotní ústav se sídlem v Ostravě. – subcontracted)

Methods of testing:

1) E-coli - Enumeration of Escherichia coli and coliform bacteria - Part 1: Membrane filtration method for waters with low bacterial background flora according to ČSN EN ISO 9308-1.

Test conditions:

Ad 1) Nominal inflow rate = 600 l/day. Universal testing simulating system ITC acc. to ČSN EN 12566-3+A2. Microbiological evaluation method used ČSN EN ISO 9308-1.

3.4. Test results

Ad. 1) Treatment efficiency test for E-coli

Table No.1 Test results – E-coli

Sample	Unit	Value	Uncertainty ¹⁾	Efficiency of E-coli treatment
Inflow	KTJ/100ml	500 ²⁾	$\pm 4,6 \times 10^2 - 5,5$	96% ²⁾
outflow	KTJ/100ml	19 ²⁾	12-29	

1) expanded uncertainty for coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95%

2) Only one sample collected and tested

Abbreviations explanation:

E-coli – Escherichia coli

Operation and maintenance procedures during testing

Routine maintenance was carried out during the test by the laboratory staff:

- visual check
- nominal inflowing check.
- no desludging during the test period

4. List of the documents used for the Test Report elaborating

- Contract No. 465200052
- Test report, reference No. 753501971-03, issued by ITC (Institute for Testing and Certification), a.s. in Zlín, Czech Republic, on 29th March 2022
- Confirmation letter from manufacturer FRUKKO about identity of the product from 13. 6. 2022