

Laboratorien Dr. Döring Haferwende 21 28357 Bremen

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Feithspark 6

9356 BZ TOLBERT, NL

October 22nd 2025

Analysis Report 240425035-2

Order No. Customer: -
Project Name: -
Sampling: by Customer
Sample Transport: via Laboratorien Dr. Döring GmbH
Sample Reception: 13.12.2024
Period of Measurement: 13.12.2024 – 22.08.2025
Sample Number: 181163 / 24, 25147297
Sample Material: Soil
Packaging: White glass (0,8 L)
Remarks: Grain distribution in the appendix, Adoption of values from the previous analysis report
Sonstiges: The measurement error in these tests is within the usual range. We will gladly provide you with further details upon request. Lists of measurement uncertainties can be viewed on the homepage. The test results refer exclusively to the specified test items. Information on outsourcing and accreditation under measurement procedures. Any reproduction of an extract from this test report requires the written permission of Laboratorien Dr. Döring GmbH. Any totals shown for individual parameters are calculated automatically. Sums are created purely numerically and the digits given do not correspond to significance. Determination limits can vary depending on the matrix/initial weight.
Results of Analysis: Pages 3 – 5
Measurement Methods: Page 2
Quality Check:

Dr. Dirk Schlüter
(Project Manager)

Dr. Joachim Döring
(CEO)

| Method | Norm | Measurement uncertainty [%] |
|--|--|-----------------------------|
| Sample preparation | DIN 19747: 2009-07 ¹⁾ | - |
| Dry matter | DIN EN 14346: 2007-03 ¹⁾ | 3 |
| TOC | DIN EN 15936: 2012-11 ¹⁾ | 16 |
| Hydrocarbons (GC;F) | DIN EN 14039: 2005-01 DIN EN 14039: 2005-1: i.V. mit LAGA KW/04: 2019-09 ¹⁾ | 22 |
| Digestion | DIN EN 13657: 2003-01 ¹⁾ | - |
| Arsenic | DIN EN ISO 17294-2 (E29): 2017-01 ¹⁾ | 23 |
| Lead | DIN EN ISO 17294-2 (E29): 2017-01 ¹⁾ | 21 |
| Cadmium | DIN EN ISO 17294-2 (E29): 2017-01 ¹⁾ | 25 |
| Chrome, in total | DIN EN ISO 17294-2 (E29): 2017-01 ¹⁾ | 24 |
| Copper | DIN EN ISO 17294-2 (E29): 2017-01 ¹⁾ | 12 |
| Nickel | DIN EN ISO 17294-2 (E29): 2017-01 ¹⁾ | 28 |
| Mercury | DIN EN ISO 12846 (E12): 2012-08 ¹⁾ | 22 |
| Zinc | DIN EN ISO 17294-2 (E29): 2017-01 ¹⁾ | 26 |
| PCB | DIN EN 15308: 2016-12 ¹⁾ | 31 |
| PAH | DIN ISO 18287: 2006-05 ¹⁾ | 32 |
| Phosphorous, in total | DIN EN ISO 17294-2 (E29): 2017-01 2) ¹⁾ | - |
| Nitrogen, in total | DIN 11261b ¹⁾ | - |
| Organotin compounds | DIN 38107-13 (F13): 2001-03 ¹⁾ | - |
| Hexachlorobenzene | DIN ISO 10382: 2003-05 ¹⁾ | 30 |
| Pentachlorophenole | DIN ISO 14154: 2005-12 ¹⁾ | 30 |
| Organochlorine insecticides | DIN 38407-2 (F2, GC/MS) ¹⁾ | - |
| Eluate 10:1 | DIN EN 12457-4: 2003-01 ¹⁾ | - |
| Nitrogen/Carbon | DIN EN 12260:2003-12 analogue DIN EN 15936: 2012-11 ¹⁾ | - |
| Density | DIN 18125-2: 2020-11 ¹⁾ | - |
| Grain distribution | DIN 18123: 2011 ¹⁾ | - |
| Freeze drying | DIN 38414-S 22 ¹⁾ | - |
| Grain-size fractions (> 63, < 63, < 20µm) | Sieve analysis according to the BfG method ¹⁾ | - |
| Separating the fine grain fraction < 20 µm | DIN 18123: 2011 ¹⁾ | - |

¹⁾ Laboratorien Dr. Döring GmbH, a testing laboratory accredited by DAkkS according to DIN EN ISO/IEC 17025:2018. The accreditation is valid only for the scope of accreditation listed in the certificate annex D-PL-13462-01-00

²⁾ The testing was carried out on a subcontract basis by the accredited testing laboratory Chemisches Untersuchungsamt Emden GmbH

¹⁾ Laboratorien Dr. Döring GmbH, non-accredited measurement method

¹⁾ The testing was carried out on a subcontract basis by the testing laboratory Chemisches Untersuchungsamt Emden GmbH, non-accredited measurement method

¹⁾ The testing was carried out on a subcontract basis by the testing laboratory Chemisches Untersuchungsamt Emden GmbH, non-accredited measurement method, on newly received material.

Parameters according to GÜBAK 1/3

| Laboratory number | | 181163 | Baltic Sea guideline values ³⁾ | |
|-------------------------------|-------------------|-------------------------|---|-------|
| Sample name | | BEI-GO9-091-2-VC | R1 | R2 |
| Sampling depth | | 0,0-2,00m | | |
| Parameter | Dimension | whole fraction | | |
| Dry matter | % | 81,3 | | |
| TOC | % | 0,19 | | |
| Phosphorous, in total | mg/kg dm | 350 | 500 | 500 |
| Nitrogen, in total | mg/kg dm | < 100 | 1.500 | 1.500 |
| Monobutyltin ⁺⁺⁺ | µg/kg dm | < 1 | | |
| Dibutyltin ⁺⁺ | µg/kg dm | < 1 | | |
| Tributyltin ⁺ | µg/kg dm | < 1 | 20 | 300 |
| Tetrabutyltin | µg/kg dm | < 1 | | |
| Triphenyltin ⁺ | µg/kg dm | < 1 | | |
| Sum TBT | µg/kg dm | n.d | | |
| Grain size fraction [> 63 µm] | % | 79,3 | | |
| Grain size fraction [< 63 µm] | % | 20,7 | | |
| Grain size fraction [< 20 µm] | % | 7,6 | | |
| C:N-ratio | - | > 25 | | |
| Density | g/cm ³ | 2,0 | | |

³⁾ Common transitional provision for the handling of dredged material in coastal waters, as of: August 2009, Table 1

Parameters according to GÜBAK 2/3

| Laboratory number | | 181163 | Baltic Sea guideline values ³⁾ | |
|------------------------------------|-----------|-------------------------|---|-----|
| Sample name | | BEI-GO9-091-2-VC | R1 | R2 |
| Sampling depth | | 0,0-2,00m | | |
| Parameter | Dimension | < 63 µm fraction | | |
| Hydrocarbons, n-C ₁₀₋₂₂ | mg/kg dm | < 5 | | |
| Hydrocarbons, n-C ₁₀₋₄₀ | mg/kg dm | < 5 | 250 | 750 |
| Hexachlorobenzene | µg/kg dm | < 1 | 2 | 6 |
| Pentachlorobenzene | µg/kg dm | < 1 | | |
| α-HCH | µg/kg dm | < 1 | 1 | 3 |
| γ-HCH | µg/kg dm | < 1 | 6 | 18 |
| p,p'-DDE | µg/kg dm | < 1 | 8 | 24 |
| p,p'-DDD | µg/kg dm | < 1 | 7 | 21 |
| p,p'-DDT | µg/kg dm | 2 | 7 | 21 |
| PCB 28 | µg/kg dm | < 1 | | |
| PCB 52 | µg/kg dm | < 1 | | |
| PCB 101 | µg/kg dm | < 1 | | |
| PCB 118 | µg/kg dm | < 1 | | |
| PCB 138 | µg/kg dm | < 1 | | |
| PCB 153 | µg/kg dm | < 1 | | |
| PCB 180 | µg/kg dm | < 1 | | |
| Sum PCB (7 Kong.) | µg/kg dm | n.d. | 40 | 120 |
| Naphthaline | mg/kg dm | < 0,001 | | |
| Acenaphthylene | mg/kg dm | < 0,001 | | |
| Acenaphthene | mg/kg dm | < 0,001 | | |
| Fluorene | mg/kg dm | < 0,001 | | |
| Phenanthrene | mg/kg dm | < 0,001 | | |
| Anthracene | mg/kg dm | < 0,001 | | |
| Fluoranthene | mg/kg dm | < 0,001 | | |
| Pyrene | mg/kg dm | < 0,001 | | |
| Benzo(a)anthracene | mg/kg dm | < 0,001 | | |
| Chrysene | mg/kg dm | < 0,001 | | |
| Benzo(b)fluoranthene | mg/kg dm | < 0,001 | | |
| Benzo(k)fluoranthene | mg/kg dm | < 0,001 | | |
| Benzo(a)pyrene | mg/kg dm | < 0,001 | | |
| Indeno(1,2,3-cd)pyrene | mg/kg dm | < 0,001 | | |
| Dibenzo(a,h)anthracene | mg/kg dm | < 0,001 | | |
| Benzo(g,h,i)perylene | mg/kg dm | < 0,001 | | |
| Sum PAH (EPA) | mg/kg dm | n.d. | 3 | 9 |

³⁾ Common transitional provision for the handling of dredged material in coastal waters, as of: August 2009, Table 1

Parameters according to GÜBAK 3/3

| Laboratory number | | 181163 | Baltic Sea guideline values ³⁾ | |
|-------------------|-----------|-------------------------|---|-----|
| Sample name | | BEI-GO9-091-2-VC | R1 | R2 |
| Sampling depth | | 0,0-2,00m | | |
| Parameter | Dimension | < 20 µm fraction | | |
| Arsenic | mg/kg dm | 25 | 20 | 60 |
| Lead | mg/kg dm | 43 | 100 | 300 |
| Cadmium | mg/kg dm | 0,4 | 2 | 6 |
| Chrome | mg/kg dm | 56 | 90 | 270 |
| Copper | mg/kg dm | 44 | 70 | 210 |
| Nickel | mg/kg dm | 61 | 70 | 210 |
| Mercury | mg/kg dm | 0,3 | 0,4 | 1,2 |
| Zinc | mg/kg dm | 91 | 250 | 750 |

| Laboratory number | | 181163 | Baltic Sea guideline values ³⁾ | |
|-----------------------|-----------|-------------------------|---|----|
| Sample name | | BEI-GO9-091-2-VC | R1 | R2 |
| Sampling depth | | 0,0-2,00m | | |
| Parameter | Dimension | 10:1 ELUATE | | |
| Phosphorous, in total | mg/L | < 0,050 | 2 | 2 |
| Nitrogen, in total | mg/L | < 0,5 | 6 | 6 |

³⁾ Common transitional provision for the handling of dredged material in coastal waters, as of: August 2009, Table 1