

TEST REPORT



TÜV SÜD Industrie Service GmbH

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Report No: 23-D1927-01

Client: DESOTEC
Ms. Emma Deniere
Regenbeekstraat 44
8800 Roeselare, Belgium

Order: IO/23/07090/ETSUKRUEVA, dated 2023-05-09

Sample arrival: 2023-05-17

Internal sample ID: 20230512957

Test sample: B-Pure® 10-NB (DESOTEC)

Test specification: DIN EN 12915-1: 2009-07 (tables 1 and 2)

Test period: 2023-05-17 – 2023-06-22

Date: 2023-07-24

Our reference:
IS-USL-MUC/

Document:
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10-NB (DESOTEC).docx

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The test results refer
exclusively to the units
under test.

Result:

Regarding the parameters tested, the granular activated carbon **B-Pure® 10-NB (DESOTEC)** complies with the requirements of DIN EN 12915-1 (tables 1 and 2) and with the purity requirements according to the List of Preparation Substances and Disinfection Processes in compliance with § 11 German Drinking Water Ordinance (Part I b: treatment substances, that are used as solids; granulated activated carbon).

This statement is applicable as long as the foreseeable contact conditions have not been altered negatively in terms of the test conditions and the materials meet the qualities tested. The validity of this document expires in the event of changes to legal regulations, reformulation or changes in the manufacturing process or at the latest five years after the date of issue.


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1 Subject of the order

According to the client's request the granular activated carbon "*B-Pure® 10-NB* (DESOTEC)" should be tested and assessed as specified in DIN EN 12915-1 (tables 1 and 2).

2 Basis of test and assessment

- (1) DIN EN 12915-1:2009-07, Products used for the treatment of water intended for human consumption - Granular activated carbon - Part 1: Virgin granular activated carbon.
- (2) German Drinking Water Ordinance, edition dated 2016-03-10 (BGBl. I S. 459), as amended by Article 1 of the Regulation of 2021-09-22 (BGBl. I S.4343).
- (3) List of Preparation Substances and Disinfection Processes in compliance with § 11 German Drinking Water Ordinance (Part I b: treatment substances, that are used as solids; granulated activated carbon). (Status as of November 2022)
- (4) DIN EN 12902:2005-02, Products used for treatment of water intended for human consumption - Inorganic supporting and filtering materials - Methods of test.
- (5) DIN EN ISO 11885:2009-09, Water quality - Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 11885:2007).
- (6) DIN EN ISO 17294-2:2017-01, Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of selected elements including uranium isotopes (ISO 17294-2:2016).
- (7) DIN 38405-13: 2011-04, German standard methods for the examination of water, waste water and sludge - Anions (group D) - Part 13: Determination of cyanides (D 13).
- (8) DIN 38407-39: 2011-09, German standard methods for the examination of water, waste water and sludge - Jointly determinable substances (group F) - Part 39: Determination of selected polycyclic aromatic hydrocarbons (PAH) - Method using gas chromatography with mass spectrometric detection (GC-MS) (F 39).



3 Test results

3.1 Impurities and minor constituents

Table 1: Impurities and minor constituents

Parameter	Unit	Limit ^{a)}	Result
Ash	weight, %	15	2.7
Water content ^{b)} (at the time of packaging) ^{c)}	weight, %	5	0.5
Water-soluble components	weight, %	3	1.5
Zinc	weight, %	0.002	< 0.0001

a) Limit according to DIN EN 12915-1 (table 1), referring to the dry residue, except water content.

b) Higher or lower values may be required for different applications.

c) The water content can increase after packaging, for example during transportation.

3.2 Water-extractable substances

Table 2: Water-extractable substances

Parameter	Unit	Limit*	Result
Arsenic (As)	µg/l	10	< 1
Cadmium (Cd)	µg/l	0.5	0.1
Chromium (Cr)	µg/l	5	< 5
Mercury (Hg)	µg/l	0.3	< 0.1
Nickel (Ni)	µg/l	15	< 1
Lead (Pb)	µg/l	5	< 5
Antimonium (Sb)	µg/l	3	1
Selenium (Se)	µg/l	3	< 1
Cyanides (CN)	µg/l	5	< 5
PAH's (polycyclic aromatic hydrocarbons)	-	-	-
Fluoranthene	µg/l	-	< 0.003
Benzo(b)fluoranthene	µg/l	-	< 0.003
Benzo(k)fluoranthene	µg/l	-	< 0.003
Benzo(a)pyrene	µg/l	-	< 0.003
Benzo(ghi)perylene	µg/l	-	< 0.003
Indeno(1,2,3-cd)pyrene	µg/l	-	< 0.003
Sum of the PAH's	µg/l	0.02	< 0.02

* Limit according to DIN EN 12915-1 (table 2), referring to the extraction water.



4 Result

Regarding the parameters tested, the granular activated carbon "*B-Pure® 10-NB* (DESOTEC)" complies with the requirements of DIN EN 12915-1 (tables 1 and 2) and with the purity requirements according to the List of Preparation Substances and Disinfection Processes in compliance with § 11 German Drinking Water Ordinance (Part I b: treatment substances, that are used as solids; granulated activated carbon).

Parameters marked (!) are out of DIN EN ISO/IEC 17025 accreditation scope.

Parameters marked (*) were subcontracted to a partner laboratory accredited for this parameter.

Unless otherwise agreed or normatively specified, PASS or FAIL verdicts are given based on the measured value without any considerations of measurement uncertainties (decision rule). Every test method has a measurement uncertainty which has been evaluated by the laboratory and is available on request. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as PASS nor as FAIL. Please inform us if you intend to use a different decision rule as part of your own conformity assessment. We are glad to provide you with the relevant information on the expanded measurement uncertainty.