



Report number: 2830-24/104377-25/50865-25/1600DP

## WASTE CHARACTERISTICS REPORT

**CLIENT:**

**JP VOKA SNAGA d.o.o.**

**EWC: 19 12 12**

**WASTE:**

**Other wastes (including mixtures of materials) from  
mechanical treatment of wastes other than those mentioned  
in 19 12 11**

**(Light fraction (LF-A))**

Title: WASTE CHARACTERISTICS REPORT FOR COMPANY JP VOKA SNAGA D.O.O., EWC 19 12 12 - OTHER WASTES (INCLUDING MIXTURES OF MATERIALS) FROM MECHANICAL TREATMENT OF WASTES OTHER THAN THOSE MENTIONED IN 19 12 11 - LIGHT FRACTION (LF-A)

Contractor: NATIONAL LABORATORY OF HEALTH, ENVIRONMENT AND FOOD  
ENVIRONMENT AND HEALTH CENTRE  
DEPARTMENT OF GROUND AND SURFACE WATER, WASTE AND SOIL  
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Declaration: *During the assessment of the waste, all the available data were used and considered, particularly those relating to the source of the waste (for the waste that resulted from a repeated and determinable production process, the deviations of the parameter values were also evaluated for the waste that resulted from normal changes in the waste creation process). In the process of waste investigation, there were no available data from which it could be inferred that other substances had been mixed in with the waste and in doing so, had affected the properties of the waste. This assessment is valid for the inspected and sampled volume of the waste.*

Contracting authority: JP VOKA SNAGA d.o.o.  
VODOVODNA CESTA 90  
1000 LJUBLJANA

Purchase order number: 4500348634

Date of order: 7.8.2024

Offer number: PO-2830-24/104377-24/88355

Contract number: 4638N

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Waste and soil unit with laboratory

## 1 Introduction

Based on the order of JP VOKA SNAGA d.o.o., we carried out a confirmation of the waste classification number with an analysis pursuant to the Regulation of wastes (Official Gazette RS, No. 77/22, 113/23 and 13/25). For confirming the European Waste Code, we evaluated hazardous properties of the waste from HP1 to HP15.

## 2 Sampling method

The waste was sampled in accordance with SIST EN 14899:2006 at first inspection. Description of sampling is annexed to this report.

## 3 Data on the waste holder, type and source of the waste

### 3.1 Waste holder: JP VOKA SNAGA d.o.o.

Address: Vodovodna cesta 90  
Post code: 1000 Ljubljana  
Registration number: 5046688000  
Activity code: E36.000 – Collection, purification and distribution of water

### 3.2 Waste classification number: 19 12 12

Waste name: Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (LF-A)

According to Article 5 of the Waste Regulation (Official Gazette of the RS No. 77/22, 113/23 and 13/25), the waste number was determined by the holder.

### 3.3 Description of waste:

The waste is gray with variously colored impurities, it emits a weak smell of municipal solid waste. It is solid, heterogeneous and mostly dry (93 % of dry matter), with majority of particles sized between 0 and 250 mm. The waste is represented by processed waste fractions 20 03 01 and 20 03 07 (description in point 3.5), which the client processes in accordance with the issued environmental permit, whereby the properties of the considered waste depend on the quantity and quality of the incoming fractions and their seasonal dynamics. We do not expect contamination with hazardous substances or atypical pollutants in this waste, given the source and method of generation and its processing. Gross calorific value of the sampled waste is 24,9 MJ/kg of dry matter. Other volatile substances are not expected to occur in this type of the waste, given the source and method of generation and its processing. Basic mass fractions of waste are represented as follows: paper ≈ 4,5 %, plastic particles ≈ 41,1 %, textile ≈ 12,7 %, rubber ≈ 0,3 %, wood ≈ 1 % and other impurities ≈ 40,4 %. Picture of sampled waste is in Annex of this assessment.

### 3.4 Source facility or location of the waste:

Waste holder: JP VOKA SNAGA d.o.o.  
Address: Cesta dveh cesarjev 101  
Post code: 1000 Ljubljana

### 3.5 Waste generation description:

Waste fractions entering the process:

- MKO – municipal solid waste (EWC 20 03 01)
- POSD – residual waste from service activities (EWC 20 03 01)

- KOS – bulky waste (EWC 20 03 07)

Light fraction with EWC 19 12 12 in RCERO Ljubljana is produced during the process of mechanical biological treatment of municipal solid waste (MKO + POSD) and bulky waste (KOS). In this process, two categories of EWC 19 12 12 waste are produced, namely 'Light fraction A' (LF-A) and 'Light fraction B' (LF-B), which have different calorific value and particle size. Mixed municipal waste is processed at the RCERO Ljubljana plant according to procedure D8. Waste collection trucks deliver MSW to a deep bunker with approximately 5,000 m<sup>3</sup> volume. Two bridge cranes dose MSW into two hoppers for mechanical pre-treatment of MSW. The filling hoppers have a movable bottom and dose MSW into the primary crushers.

The crushed MSW is then transported to a drum sieve, which separates crushed MSW into 3 fractions:

- fine fraction (<90 mm)

A size fraction of approximately 40 mm to 90 mm is transported through a magnetic metal separator to a star sieve. Here it is separated into two sizes – the fraction up to 40 mm in size, which is further processed anaerobically, the fraction size 40 to 90 mm is further used as a structural material in stabilization or is directly stored in LF-B storage.

- medium fraction (90 mm do 250 mm)

Ferrous and non-ferrous metals which are collected on different belts and then transported to containers, are first separated from the medium-sized fraction. The remaining material is transported back to the deep bunker, and from the deep bunker via the hopper to the sorting line.

- large fraction (>250 mm)

The fraction over 250 mm in size is transported to the bulky waste storage tank, where it is then crushed in the bulky waste crusher, and then added to the sorting line through the hopper.

The sorting line includes automatic and manual sorting. It starts with a ballistic separator that separates three-dimensional (3D) material, two-dimensional material (2D) and particles smaller than 40 mm. The latter are transported directly to the LF-B storage. All three fractions, processed in the aforementioned way, form waste LF-B EWC 19 12 12 with particle sized between 0-250 mm.

The storage space of LF-B is emptied by wheel loaders, which load each fraction directly onto transporting trucks for removal or further processing. LF-B in bulk condition can be compressed into round bales with a diameter of 1,3m for storage or easier transport. Those are wrapped with plastic film using a baling machine.

The processing procedure has not changed since the implementation of the previous assessment.

### 3.5.1 Annual quantity of waste: 6000 t

### 3.5.2 Quantity of waste inspected: ≈ 170 m<sup>3</sup>

### 3.5.3 Sample number:

Field code: SL 34

Laboratory number: 25/50865

## 4 Waste properties

### 4.1 State of waste and other special characteristics

#### 4.1.1 State of waste at 20 °C:

- |  |  |   |   |
|--|--|---|---|
| <input type="checkbox"/> Liquid                  | <input type="checkbox"/> Homogenous                | <input type="checkbox"/> Powder-like              | <input checked="" type="checkbox"/> Dry |
| <input type="checkbox"/> Dense liquid/paste-like | <input checked="" type="checkbox"/> Non-homogenous | <input checked="" type="checkbox"/> Grained/bulky | <input type="checkbox"/> Moist          |
| <input type="checkbox"/> Sludge-like             | <input type="checkbox"/> Dispersion                | <input type="checkbox"/> In a lump                | <input type="checkbox"/> Hygroscopic    |
| <input checked="" type="checkbox"/> Solid        | <input type="checkbox"/> Emulsion                  | <input type="checkbox"/> Wrapped                  |   |

#### 4.1.2 Hazardous properties (HP1–HP15)\*: ☐ YES ☒ NO

*\* Properties that make the waste classified as hazardous waste (in accordance with the waste regulation).*

- |                              |                              |                               |                               |
|------------------------------|------------------------------|-------------------------------|-------------------------------|
| <input type="checkbox"/> HP1 | <input type="checkbox"/> HP5 | <input type="checkbox"/> HP9  | <input type="checkbox"/> HP13 |
| <input type="checkbox"/> HP2 | <input type="checkbox"/> HP6 | <input type="checkbox"/> HP10 | <input type="checkbox"/> HP14 |
| <input type="checkbox"/> HP3 | <input type="checkbox"/> HP7 | <input type="checkbox"/> HP11 | <input type="checkbox"/> HP15 |
| <input type="checkbox"/> HP4 | <input type="checkbox"/> HP8 | <input type="checkbox"/> HP12 |                               |

### 4.2 Color: Gray with variously colored impurities

#### 4.3 Smell: ☐ Strong ☒ Faint ☐ none ☐ odor: municipal solid waste

#### 4.4 Reactivity:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Inert              | <input type="checkbox"/> Reacts with acid/lye   | <input type="checkbox"/> Incombustible          |
| <input type="checkbox"/> Reacts with oxygen | <input type="checkbox"/> Accelerates combustion | <input type="checkbox"/> Biodegradable          |
| <input type="checkbox"/> Reacts with water  | <input type="checkbox"/> Gas forming            | <input checked="" type="checkbox"/> Combustible |

#### 4.5 Solubility: ☒ YES ☐ NO

Justification: The waste is poorly soluble in water and other solvents.

#### 4.6 Physical properties:

Density or bulk density at room temperature:  $\text{ / kg/m}^3$

Range of particle size: 0-25 mm

#### 4.7 Safety precautions:

##### 4.7.1 Handling in temporary storage:

Technical safety precautions: Store indoors in closed containers, protected from rainfall.

Personal protective equipment: Protective goggles, clothing, gloves, footwear and respirator.

Fire and explosion safety: Waste is combustible, but will not self-ignite.

Water pollution protection: Waste is poorly soluble in water. Prevent contact with water and waterbodies. In case of pollution, mechanically remove material and notify the competent authorities.

##### 4.7.2 Accident and fire prevention:

Measures in case of pollution: Mechanically collect with appropriate tools.

Appropriate extinguishing agent: All extinguishing agents are suitable.

Non-appropriate extinguishing agent: All extinguishing agents are suitable.

Appropriate binding agents: /

##### 4.7.3 Additional safety precaution considering management of waste:

No additional safety precautions are required for waste 19 12 12.
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## 5 Waste number classification determination

The waste is classified into groups according to the classification list of waste as defined in Article 4 of the Regulation on waste Official Gazette RS No. 77/22, 113/23 and 13/25.

Individual waste, given the nature of the occurrence, can be classified in the group and sub-group of waste with the waste classification list, as provided in Article 4 and 5 of the Regulation on waste Official Gazette No. RS 77/22, 113/23 and 13/25, so that the waste is assigned with classification number of waste.

Based on the technology of waste generation and the conducted research on hazardous properties (the evaluation is annexed to this report), we conclude that the waste does not exhibit hazardous properties, as it does not contain hazardous substances or hazardous ingredients or pathogen germs.

According to the source and composition, the waste can be classified into waste group:

- |                        |   |
|------------------------|---|
| 19                     | Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use |
| 19 12                  | Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, palletizing) not otherwise specified  |
| <b><u>19 12 12</u></b> | <b><u>Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11</u></b>                                 |

## 6 Annex

- Report on the study of hazardous waste properties
- Task report 2830-24/104377-25/50865, dated 13.08.2025

**END OF REPORT**

**ANNEX 1: REPORT ON THE STUDY OF HAZARDOUS WASTE PROPERTIES** (according to the criteria from Annex 3 of the Waste Regulation (Official gazette RS 77/22,113/23 and 13/25).

Note: Hazard class and hazard category symbols and symbols for hazard statements for waste components for the classification of waste used in Annex III of Directive 2008/98/EC are summarized according to Regulation (EC) no. 1272/2008 of the European Parliament and the Council of 16 December 2008 on the classification, labelling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and the amendment of Regulation (EC) no. 1907/2006 (OJ L No. 353, 31/12/2008, p. 1), last amended by Commission Delegated Regulation (EU) 2021/1962 of 12 August 2021 amending Annex VI to Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (OJ L No. 400, 12 November 2021, p. 16), (hereinafter: Regulation (EC) No. 1272/2008).

**Property:**      **HP1 »Explosive«**      **Has HP 1**      ☐ Yes ☒ No

**Description:** Waste which is capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic waste, explosive organic peroxide waste and explosive self-reactive waste is included..

**Determination:** When a waste contains one or more substances classified by one of the hazard class and category codes and hazard statement codes shown in Table 1, the waste shall be assessed for HP 1, where appropriate and proportionate, according to test methods. If the presence of a substance, a mixture or an article indicates that the waste is explosive, it shall be classified as hazardous by HP 1.

Table 1: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents for the classification of wastes as hazardous by HP 1:

Hazard Class and Category Code(s)	Hazard statements Code(s)
Unst. Expl.	H 200
Ekspl. 1.1	H 201
Ekspl. 1.2	H 202
Ekspl. 1.3	H 203
Ekspl. 1.4	H 204
Self-react. A	H 240
Org. Perox. A	
Self-react. B	H 241
Org. Perox. B	

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the hazard class labels and hazard statement labels shown in Table 1.



**Property:** HP2 »Oxidizing«**Has HP 2**☐ Yes ☒ No**Description:** Waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials.**Determination:** When a waste contains one or more substances classified by one of the hazard class and category codes and hazard statement codes shown in Table 2, the waste shall be assessed for HP 2, where appropriate and proportionate, according to test methods. If the presence of a substance indicates that the waste is oxidising, it shall be classified as hazardous by HP 2.

Table 2: Hazard Class and Category Code(s) and Hazard statement Code(s) for the classification of wastes as hazardous by HP 2:

Hazard Class and Category Code(s)	Hazard statements Code(s)
Ox. Gas 1	H 270
Ox. Liq. 1	H 271
Ox. Sol. 1	
Ox. Liq. 2, Ox. Liq. 3	H 272
Ox. Sol. 2 Ox. Sol 3	

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the hazard class labels and hazard statement labels shown in Table 2.

**Property:** HP3 »Flammable«**Has HP 3**☐ Yes ☒ No**Description:**

- Flammable liquid waste – liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;
- Flammable pyrophoric liquid and solid waste – solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;
- Flammable solid waste – solid waste which is readily combustible or may cause or contribute to fire through friction;
- Flammable gaseous waste – gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;
- Water reactive waste – waste which, in contact with water, emits flammable gases in dangerous quantities;
- Other flammable waste – flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

**Determination:** When a waste contains one or more substances classified by one of the following hazard class and category codes and hazard statement codes shown in Table 3, the waste shall be assessed, where appropriate and proportionate, according to test methods. If the presence of a substance indicates that the waste is flammable, it shall be classified as hazardous by HP 3.

Table 3: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents for the classification of wastes as hazardous by HP 3

Hazard Class and Category Code(s)	Hazard statements Code(s)
Flam. Gas 1	H220
Flam. Gas 2	H221
Aerosol 1	H222
Aerosol 2	H223
Flam. Liq. 1	H224
Flam. Liq. 2	H225
Flam. Liq. 3	H226
Flam. Sol.1	H228
Flam. Sol.2	
Self-react CD	H242
Self-react EF	
Org. Perox. 1 CD	
Org. Perox. 1 EF	
Pyr. Liq. 1	H250
Pyr. Sol. 1	
Self-heat. 1	H251
Self-heat. 2	H252
Water-react. 1	H 260
Water-react. 2	H 261
Water-react. 3	

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the hazard class labels and hazard statement labels shown in Table 3.

**Property:** HP4 »Irritant – skin irritation and eye damage«

**Has HP 4** ☐ Yes ☒ No

**Description:** Waste which on application can cause skin irritation or damage to the eye.

**Determination:** When a waste contains one or more substances in concentrations above the cut-off value, that are classified by one of the following hazard class and category codes and hazard statement codes and one or more of the following concentration limits is exceeded or equalled, the waste shall be classified as hazardous by HP 4.

The cut-off value for consideration in an assessment for Skin corr. 1A (H314), Skin irrit. 2 (H315), Eye dam. 1 (H318) and Eye irrit. 2 (H319) is 1 %

If the sum of the concentrations of all substances classified as Skin corr. 1A (H314) exceeds or equals 1 %, the waste shall be classified as hazardous according to HP 4.

If the sum of the concentrations of all substances classified as H318 exceeds or equals 10 %, the waste shall be classified as hazardous according to HP 4.

If the sum of the concentrations of all substances classified H315 and H319 exceeds or equals 20 %, the waste shall be classified as hazardous according to HP 4.

Note that wastes containing substances classified as H314 (Skin corr.1A, 1B or 1C) in amounts greater than or equal to 5 % will be classified as hazardous by HP 8. HP 4 will not apply if the waste is classified as HP 8.

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the hazard class and category symbols and symbols for hazard sentences, or would exceed the limit value.

**Property:** HP5 »Specific Target Organ Toxicity (STOT) / Aspiration Toxicity«

Has HP 5 ☐ Yes ☒ No

**Description:** Waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.

**Determination:** When a waste contains one or more substances classified by one or more of the following hazard class and category codes and hazard statement codes shown in Table 4, and one or more of the concentration limits in Table 4 is exceeded or equalled, the waste shall be classified as hazardous according to HP 5. When substances classified as STOT are present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 5.

When a waste contains one or more substances classified as Asp. Tox. 1 and the sum of those substances exceeds or equals the concentration limit, the waste shall be classified as hazardous by HP 5 only where the overall kinematic viscosity (at 40 °C) does not exceed 20.5 mm<sup>2</sup>/s.

Table 4: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 5

Hazard Class and Category Code(s)	Hazard statements Code(s)	Concentration limit
STOT SE 1	H370	1 %
STOT SE 2	H371	10 %
STOT SE 3	H335	20 %
STOT RE 1	H372	1 %
STOT RE 2	H373	10 %
Asp. Tox. 1	H304	10 %

**Observations:**

Based on the review of the waste generation technology, the review of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the hazard class labels and hazard statement labels shown in Table 4 and at the same time exceed the given limit value.

**Property:** HP6 »Acute Toxicity«

Has HP 6 ☐ Yes ☒ No

**Description:** Waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.

**Determination:** If the sum of the concentrations of all substances contained in a waste, classified with an acute toxic hazard class and category code and hazard statement code given in Table 5, exceeds or equals the threshold given in that table, the waste shall be classified as hazardous by HP 6. When more than one substance classified as acute toxic is present in a waste, the sum of the concentrations is required only for substances within the same hazard category.

The following cut-off values shall apply for consideration in an assessment:

- For Acute Tox. 1, 2 or 3 (H300, H310, H330, H301, H311, H331): 0.1 %;
- For Acute Tox. 4 (H302, H312, H332): 1 %.

Table 5: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 6.

Hazard Class and Category Code(s)	Hazard statements Code(s)	Concentration limit
Acute Tox.1 (Oral)	H300	0,1 %
Acute Tox. 2 (Oral)		0,25 %
Acute Tox. 3 (Oral)	H301	5 %
Acute Tox 4 (Oral)	H302	25 %
Acute Tox.1 (Dermal)	H310	0,25 %
Acute Tox.2 (Dermal)		2,5 %
Acute Tox. 3 (Dermal)	H311	15 %
Acute Tox 4 (Dermal)	H312	55 %
Acute Tox 1 (Inhal.)	H330	0,1 %
Acute Tox.2 (Inhal.)	H330	0,5 %
Acute Tox. 3 (Inhal.)	H331	3,5 %
Acute Tox. 4 (Inhal.)	H332	22,5 %

**Observations:**

Based on the review of the waste generation technology, the review of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the hazard class labels and hazard statement labels shown in Table 5 and at the same time exceed the given limit value.

**Property:** HP7 – Carcinogenic

**Has HP 7**

☐ Yes ☒ No

**Description:** Waste which induces cancer or increases its incidence.

**Determination:** When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 6, the waste shall be classified as hazardous by HP 7. When more than one substance classified as carcinogenic is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 7.

Table 6: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 7:

Hazard Class and Category Code(s)	Hazard statements Code(s)	Concentration limit
Carc. 1A	H350	0,1 %
Carc. 1B		
Carc. 2	H351	1,0 %

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the hazard class labels and hazard statement labels shown in Table 6 and at the same time exceed the given limit value.

**Property:** HP8 »Corrosive«**Has HP 8**☐ Yes ☒ No**Description:** Waste which on application can cause skin corrosion.

**Determination:** When a waste contains one or more substances classified as Skin corr.1A, 1B or 1C (H314) and the sum of their concentrations exceeds or equals 5 %, the waste shall be classified as hazardous by HP 8.

The cut-off value for consideration in an assessment for Skin corr. 1A, 1B, 1C (H314) is 1.0 %.

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the above-mentioned hazard class labels and labels for hazard statements and at the same time exceed the given limit value.

**Property:** HP9 »Infectious«**Has HP 9**☐ Yes ☒ No

**Description:** Waste containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms

Waste has HP9 if it contains:

- microorganisms dangerous to human health or
- Infectious material of animal origin.

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could attribute HP 9 to the waste.

**Property:** HP10 »Toxic for reproduction« **Has HP 10** ☐ Yes ☒ No

**Description:** Waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring.

**Determination:** When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 7, the waste shall be classified hazardous according to HP 10. When more than one substance classified as toxic for reproduction is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 10.

Table 7: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 10

Hazard Class and Category Code(s)	Hazard statements Code(s)	Concentration limit
Repr. 1A	H360	0,3 %
Repr. 1B		
Repr. 2	H361	3,0 %

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the labels for hazard statements and the labels for additional hazard statements shown in Table 7 and at the same time exceeded the limit value.

**Property:** HP11 »Mutagenic« **Has HP 11** ☐ Yes ☒ No

**Description:** Waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell

**Determination:** When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 8, the waste shall be classified as hazardous according to HP 11. When more than one substance classified as mutagenic is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 11.

Table 8: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 11:

Hazard Class and Category Code(s)	Hazard statements Code(s)	Concentration limit
Muta. 1A	H340	0,1 %
Muta. 1B		
Muta. 2	H341	1,0 %

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the labels for hazard statements and the labels for additional hazard statements shown in Table 8 and at the same time exceeded the limit value.

**Property:**      **HP12 »Release of an acute toxic gas«**      **Has HP 12**      ☐ Yes ☒ No

**Description:** Waste which releases acute toxic gases (Acute Tox. 1, 2 or 3) in contact with water or an acid.

**Determination:** When a waste contains a substance assigned to one of the following supplemental hazards EUH029, EUH031 and EUH032, it shall be classified as hazardous by HP 12 according to test methods or guidelines.

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances to which one of the supplemental hazards EUH029, EUH031 or EUH032 would be assigned.

**Property:**      **HP13 »Sensitising«**      **Has HP 13**      ☐ Yes ☒ No

**Description:** Waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.

**Determination:** When a waste contains a substance classified as sensitising and is assigned to one of the hazard statement codes H317 or H334 and one individual substance equals or exceeds the concentration limit of 10 %, the waste shall be classified as hazardous by HP 13.

**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the H317 or H334 hazard statements and at the same time exceed the concentration limit of 10% for individual substance.

**Property:**      **HP14 »Ecotoxic«**      **Has HP 14**      ☐ Yes ☒ No

**Description:** Waste which presents or may present immediate or delayed risks for one or more sectors of the environment.

**Determination:** Waste which fulfils any of the following conditions shall be classified as hazardous by HP 14:

- Waste which contains a substance classified as ozone depleting assigned the hazard statement code H420 in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council (<sup>14</sup>) and the concentration of such a substance equals or exceeds the concentration limit of 0,1 %.
- [c (H420) ≥ 0,1 %];

– Waste which contains one or more substances classified as aquatic acute assigned the hazard statement code H400 in accordance with Regulation (EC) No 1272/2008 and the sum of the concentrations of those substances equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % shall apply to such substances.

–  $[\sum c (H400) \geq 25 \%]$ ;

– Waste which contains one or more substances classified as aquatic chronic 1, 2 or 3 assigned to the hazard statement code(s) H410, H411 or H412 in accordance with Regulation (EC) No 1272/2008, and the sum of the concentrations of all substances classified as aquatic chronic 1 (H410) multiplied by 100 added to the sum of the concentrations of all substances classified as aquatic chronic 2 (H411) multiplied by 10 added to the sum of the concentrations of all substances classified as aquatic chronic 3 (H412) equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % applies to substances classified as H410 and a cut-off value of 1 % applies to substances classified as H411 or H412.

–  $[100 \times \sum c (H410) + 10 \times \sum c (H411) + \sum c (H412) \geq 25 \%]$ ;

– Waste which contains one or more substances classified as aquatic chronic 1, 2, 3 or 4 assigned the hazard statement code(s) H410, H411, H412 or H413 in accordance with Regulation (EC) No 1272/2008, and the sum of the concentrations of all substances classified as aquatic chronic equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % applies to substances classified as H410 and a cut-off value of 1 % applies to substances classified as H411, H412 or H413.

–  $[\sum c H410 + \sum c H411 + \sum c H412 + \sum c H413 \geq 25 \%]$

Where:  $\Sigma$  = sum and c = concentrations of the substances.

#### Observations:

Based on a review of the technology of waste generation, review of incoming raw materials, composition of waste and review of the results of the performed analyses, we conclude that the waste in question does not contain any of the substances that meet and exceed the above-mentioned criteria.

**Property:** **HP15 »Waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste«**

**Has HP 15** ☐ Yes ☒ No

**Determination:** When a waste contains one or more substances assigned to one of the hazard statements or supplemental hazards shown in Table 9, the waste shall be classified as hazardous by HP 15, unless the waste is in such a form that it will not under any circumstance exhibit explosive or potentially explosive properties.

Table 9: Hazard statements and supplemental hazards for waste constituents for the classification of wastes as hazardous by HP 15:

Hazard Statement(s)/Supplemental Hazard(s)	
May mass explode in fire	H205
Explosive when dry	EUH001
May form explosive peroxides	EUH019
Risk of explosion if heated under confinement	EUH044



**Observations:**

Based on a review of the waste generation technology, an examination of the incoming raw materials and the composition of the waste, we conclude that the waste in question does not contain any of the substances that could be classified with one of the labels for hazard statements and labels for additional hazard statements shown in Table 9.

**Conclusion on the hazardous properties of the waste (the waste belongs to hazardous or non-hazardous waste due to the following identified hazardous properties):**

Based on the conducted survey of hazardous properties in accordance with the Waste Regulation (Official Gazette RS, no. 77/22,113/23 and 13/25), we note that the waste in question does not exhibit any hazardous properties, therefore it is classified as non-hazardous waste.



## Task report

### JP VOKA SNAGA - Monitoring odpadkov RCERO Ljubljana 2024-2026

Task report 2830-24/104377-25/50865/1 completely replaces Task report 2830-24/104377-25/50865, dated 11. 07. 2025.

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Translation of the original report

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Evidence code: 2830-24/104377-25/50865/1

Customer: JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O.  
VODOVODNA CESTA 90  
1000 Ljubljana

Request: PO-2830-22/104377-22/76779, 03.06.2022  
Okvirni sporazum št. 4638N, PG-2830-22/104377-24/88340, 06.08.2024  
Naročilo št. 4500348634, 07.08.2024

Contractor: Department for Groundwater and Surface Water, Waste and Soil  
Department for Chemical Analysis of Food, Water and Other Environmental Samples  
Kranj  
Department for Chemical Analysis of Food, Water and Other Environmental Samples  
Maribor  
Department for Chemical Analysis of Food, Water and Other Environmental Samples  
Novo mesto

Head of task: Sebastijan Lamut, mag. ekol. biod.

Maribor, 13.08.2025

Department for Groundwater and Surface Water,  
Waste and Soil  
Head of task:

Sebastijan Lamut, mag. ekol. biod.

The time of the certified signature of deputy and information about the certificate are shown at the top of the first page of the document.

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Document authenticity check on: <http://www.nlzoh.si/istovetnost>.



## Sample information

**Sample:** JP VOKA SNAGA d.o.o. - 19 12 12 - LF A (SL 34)  
**Sample number:** 25/50865  
**Purpose:** Analysis on owner request  
**Customer:** JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O., VODOVODNA  
CESTA 90, 1000 Ljubljana  
**Sample taken by:** Sebastijan Lamut, NLZOH OPPVOT  
**Time of sampling:** 19.05.2025 09:20  
**Place of sampling:** JP VOKA SNAGA d.o.o., JP VOKA SNAGA d.o.o. - 19 12 12 - LF A  
**Sample received by:** Sebastijan Lamut  
**Place and time of receiving:** Novo mesto, 19.05.2025 14:11

## Report annexes:

Testing report with evidence code 2830-24/104377-25/50865-T/1  
Report of chemical analyses with evidence code 1072-24/104377-25/50865-K



Evidence code: 2830-24/104377-25/50865-T/1

# Testing report

Testing report 2830-24/104377-25/50865-T/1 completely replaces Testing report 2830-24/104377-25/50865-T, dated 11. 07. 2025.

Translation of the original report

**Sample:** JP VOKA SNAGA d.o.o. - 19 12 12 - LF A (SL 34)  
**Matrix:** Waste  
**Sample number:** 25/50865  
**Purpose:** Analysis on owner request  
**Title:** JP VOKA SNAGA - Monitoring odpadkov RCERO Ljubljana 2024-2026  
**Head of task:** Sebastijan Lamut, mag. ekol. biod.  
**Customer:** JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O., VODOVODNA CESTA 90, 1000 Ljubljana  
**Request:** PO-2830-22/104377-22/76779, 03.06.2022  
Okvirni sporazum št. 4638N, PG-2830-22/104377-24/88340, 06.08.2024  
Naročilo št. 4500348634, 07.08.2024  
**Subject of sampling:** Is defined in the description of sampling.  
**Sampling plan:** DN 231525, 19.05.2025  
**Place of sampling:** JP VOKA SNAGA d.o.o., JP VOKA SNAGA d.o.o. - 19 12 12 - LF A  
**Methodology of sampling:** SIST EN 14899:2006 in SIST-TP CEN/TR 15310-1 do -5  
**Sample status:** The sample complies with criteria for the reception

<b>Sampling</b>	<b>Sample receiving</b>	<b>Issue date:</b>	13.08.2025
<b>Date and hour:</b> 19.05.2025 09:20	<b>Date and hour:</b> 19.05.2025 14:11		
<b>Taken by:</b> Sebastijan Lamut, NLZOH OPPVOT	<b>Received by:</b> Sebastijan Lamut		

**Picture or scheme of the location of sampling / sample:**



JP VOKA SNAGA d.o.o. - 19 12 12 - LF A



### Sampling description

Waste sampling was carried out according to SIST EN 14899:2006.

The subject of sampling was a pile of treated waste with waste number 19 12 12 LF-A, and an estimated volume of 170 cubic meters. It was located under dedicated light fraction effluent conveyor belt within temporary storage space in the waste processing building in the regional waste management center RCERO Ljubljana (see image of the sampling location). At this location, a representative sample consisting of 48 increments, with 0.5 l volume each, was taken using the clients equipment (front loader) and an INOX sampling shovel (OPR-OPPVOT-EOT-NM-140). In accordance with the above-mentioned standard, increments were taken at different places and depths of the pile. The sample was then homogenized and filled into appropriate packaging. It was kept in a cool and dark place until it was accepted for analysis.

### Analytic results

# Results marked with # refer to not accredited activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
Original						
Waste analysis						



## Analytic results

# Results marked with # refer to **not accredited** activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
<b>Waste analysis</b>						
Composition		#			Laboratory method, NM	16.06.25 16.06.25
		Wood: 1,0 % Paper: 4,5 % Plastic: 41,1 % Rubber: 0,3 % Textile: 12,7 % Other: 40,4 %				

Head of task:  
Sebastijan Lamut, mag. ekol. biod.

Electronically signed by deputy Sebastijan Lamut, mag. ekol. biod. at 13.08.2025  
13:57:13

Results refer only to the sampled sample. The test report shall not be reproduced except in full without written approval of the department. It should not be used for advertising purposes.  
The sample was kept in accordance to the requirements until testing. All additional information on testing is available at the department.



Evidence code: 1072-24/104377-25/50865-K

## Report of chemical analyses

**Sample:** JP VOKA SNAGA d.o.o. - 19 12 12 - LF A (SL 34)  
**Matrix:** Waste  
**Sample number:** 25/50865  
**Purpose:** Analysis on owner request  
**Title:** JP VOKA SNAGA - Monitoring odpadkov RCERO Ljubljana 2024-2026  
**Head of task:** Sebastijan Lamut, mag. ekol. biod.  
**Customer:** JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O., VODOVODNA CESTA 90, 1000 Ljubljana  
**Request:** PO-2830-22/104377-22/76779, 03.06.2022  
Okvirni sporazum št. 4638N, PG-2830-22/104377-24/88340, 06.08.2024  
Naročilo št. 4500348634, 07.08.2024  
**Place of sampling:** JP VOKA SNAGA d.o.o., JP VOKA SNAGA d.o.o. - 19 12 12 - LF A  
**Sample status:** The sample complies with criteria for the reception  
**Sampling** **Sample receiving** **Issue date:** 11.08.2025  
**Date and hour:** 19.05.2025 09:20 **Date and hour:** 19.05.2025 14:11  
**Taken by:** Sebastijan Lamut, NLZOH OPPVOT **Received by:** Sebastijan Lamut

### Analytic results

# Results marked with # refer to not accredited activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
Original						
Non-targeted analyses of organic compounds						
GC-MS scan (volatiles)	Attachment #		mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Waste analysis						
Antimony	17		mg/kg DW	Sb	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Arsenic	1.1		mg/kg DW	As	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Copper	99		mg/kg DW	Cu	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Barium	360		mg/kg DW	Ba	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Beryllium	<0.23		mg/kg DW	Be	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Boron	76		mg/kg DW	B	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 03.06.25
Zinc	400		mg/kg DW	Zn	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Cadmium	1.8		mg/kg DW	Cd	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Cobalt	5.1		mg/kg DW	Co	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Tin	21		mg/kg DW	Sn	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25





**NATIONAL LABORATORY OF  
HEALTH, ENVIRONMENT AND FOOD**

CENTRE FOR CHEMICAL ANALYSIS OF FOOD,  
WATER AND OTHER ENVIRONMENTAL SAMPLES

**Evidence code:** 1072-24/104377-25/50865-K

**Analytic results**

# Results marked with # refer to **not accredited** activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
Chromium	90		mg/kg DW	Cr	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Manganese	140		mg/kg DW	Mn	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Molybdenum	7.3		mg/kg DW	Mo	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Nickel	40		mg/kg DW	Ni	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Selenium	0.87		mg/kg DW	Se	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Lead	56		mg/kg DW	Pb	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Thallium	<0.16	<0.12	# mg/kg DW	Tl	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Tellurium	<0.16	<0.11	# mg/kg DW	Te	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Vanadium	6.3		mg/kg DW	V	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
Mercury	0.25		mg/kg DW	Hg	SIST EN ISO 12846, modification in point 5, without chapter 7 <sup>[1]</sup> , NM	26.05.25 27.05.25
Naphthalene	0.30		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Acenaphthylene	<0.10	<0.03	# mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Acenaphthene	<0.10		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Fluorene	0.12		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Phenanthrene	0.60		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Anthracene	<0.10		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Fluoranthene	0.45		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Pyrene	0.45		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Benzo(b)fluoranthene	0.11		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Benzo(a)anthracene	0.11		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Benzo(k)fluoranthene	0.18		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Chrysene	0.17		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Benzo(a)pyrene	<0.10		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Benzo(ghi)perylene	0.12		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Dibenzo(a,h)anthracene	<0.10	<0.03	# mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25





## Analytic results

# Results marked with # refer to not accredited activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
Indeno(1,2,3-cd)pyrene	<0.10		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
Polycyclic aromatic hydrocarbons (sum)	2.6		mg/kg DW		ISO 18287:2006 modified in point 7.2, NM	03.06.25 06.06.25
PCB-28 (2,4,4'-trichlorobiphenyl)	0.034	#	mg/kg DW		SIST EN 17322:2020, NM	04.06.25 19.06.25
PCB-52 (2,2',5,5'-tetrachlorobiphenyl)	0.013	#	mg/kg DW		SIST EN 17322:2020, NM	04.06.25 19.06.25
PCB-101 (2,2',4,5,5'-pentachlorobiphenyl)	0.012	#	mg/kg DW		SIST EN 17322:2020, NM	04.06.25 19.06.25
PCB-138: (2,2',3,4,4',5'-hexachlorobiphenyl)	0.013	#	mg/kg DW		SIST EN 17322:2020, NM	04.06.25 19.06.25
PCB-118	0.030	#	mg/kg DW		SIST EN 17322:2020, NM	04.06.25 19.06.25
PCB-153 (2,2',4,4',5,5'-hexachlorobiphenyl)	0.011	#	mg/kg DW		SIST EN 17322:2020, NM	04.06.25 19.06.25
PCB-180 (2,2',3,4,4',5,5'-heptachlorobiphenyl)	0.003	#	mg/kg DW		SIST EN 17322:2020, NM	04.06.25 19.06.25
PCB - sum	0.12	#	mg/kg DW		SIST EN 17322:2020, NM	04.06.25 19.06.25
Hydrocarbon oil index	2690		mg/kg DW		SIST EN 14039:2005, modified in points 8.3, 10.3, NM	29.05.25 02.06.25
Volatile aromatic hydrocarbons (BTX)	1.9		mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 03.06.25
<i>Result not accredited because parameter used to calculate the sum is not accredited.</i>						
Benzene	<0.08		mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 03.06.25
Toluene	0.65		mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 03.06.25
Xylene (sum of o-, m-, p- isomers)	1.0		mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 03.06.25
<i>The result is not accredited due to a deviation from the prescribed procedure (repeatability of parallels).</i>						
Phenol index	7.4	#	mg/kg DW		ND-CKA-146, version 2, NM	28.05.25 29.05.25
Total Cyanide	<2.0		mg/kg DW	CN <sup>-</sup>	SIST EN ISO 17380:2013, NM	21.05.25 22.05.25
<i>Due to sample interference result reported under higher reporting level.</i>						
Fluoride	140	#	mg/kg DW	F <sup>-</sup>	ISO 10359-1:1992, NM	03.06.25 03.06.25
Ignition Residue	9.7	#	%DW		SIST EN 15935:2021, point 7.3, NM	09.06.25 12.06.25
<i>Ignition at 815 °C</i>						
Highly volatile halogenated hydrocarbons	<0.070	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Trichloromethane (Chloroform)	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Tribromomethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
cis-1,2-Dichloroethene	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25



## Analytic results

# Results marked with # refer to not accredited activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
Dichloromethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
1,2-Dichloroethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Trichloroethene (Trichloroethylene)	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
1,2-Dichloroethylene	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
1,1-Dichloroethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
1,1,1-Trichloroethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
1,1-Dichloroethene	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Tetrachloroethene (tetrachloroethylene)	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
1,1,2-Trichloroethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
trans-1,2-Dichloroethene	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
1,1,1,2-Tetrachloroethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
1,1,2,2-Tetrachloroethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Bromodichloromethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Dibromochloromethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Ethylbenzene	0.27		mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 03.06.25
Tetrachloromethane	<0.07	#	mg/kg DW		SIST EN ISO 15009:2016, NM	20.05.25 17.06.25
Dry matter	93.0		%		SIST EN 15934:2012 - method A, NM	21.05.25 21.05.25
Moisture	7.0	#	%		SIST EN 15934:2012 - method A, NM	27.05.25 30.05.25
<b>Inorganic parameters</b>						
Total Phosphorus	0.051	#	%	P	SIST EN ISO 6878, point 4.7, modified <sup>[2,3]</sup> , NM	05.06.25 05.06.25
Total Phosphorus	0.055	#	%DW	P	SIST EN ISO 6878, point 4.7, modified <sup>[2,3]</sup> , NM	05.06.25 05.06.25
Iron	3700	#	mg/kg DW	Fe	ISO 17294-2, modified <sup>[1]</sup> , NM	02.06.25 02.06.25
<b>Elements</b>						
Silicon	17000	#	mg/kg DW	Si	ISO 17294-2:2016, modified, MB	16.06.25 18.06.25
<b>Sample preparation</b>						
Dray matter from 40 °C to 105 °C	97.5		%		SIST EN 15934:2012 - method A, NM	23.05.25 23.05.25



## Analytic results

# Results marked with # refer to not accredited activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
<b>Physico-chemical parameters</b>						
Bromine	<0.01	#	<0.001	#	%DW	SIST EN 15408:2011, KR 05.06.25 09.06.25
Hydrogen	73436				mg/kg DW	SIST EN ISO 21663:2021, KR 05.06.25 17.06.25
Gross calorific value	24927				kJ/kg DW	SIST-TS CEN/TS 16023:2014, KR 05.06.25 09.06.25
Nitrogen	0.74				%DW	SIST EN 15408:2011, KR 05.06.25 09.06.25
Nitrogen	7393				mg/kg DW	SIST EN 15408:2011, KR 05.06.25 09.06.25
Fluorine	0.0043				%DW	SIST EN 15408:2011, KR 05.06.25 09.06.25
Chlorine	0.55				%DW	SIST EN 15408:2011, KR 05.06.25 09.06.25
Chlorine	5524				mg/kg DW	SIST EN 15408:2011, KR 05.06.25 09.06.25
Net calorific value	21692				kJ/kg	SIST-TS CEN/TS 16023:2014, KR 05.06.25 09.06.25
Net calorific value	23325				kJ/kg DW	SIST-TS CEN/TS 16023:2014, KR 05.06.25 09.06.25
Net calorific value	23325				kJ/kg DW	SIST-TS CEN/TS 16023:2014, KR 05.06.25 09.06.25
Sulfur	0.13				%DW	SIST EN 15408:2011, KR 05.06.25 09.06.25
Sulfur	0.33				%DW	SIST EN 15408:2011, KR 05.06.25 09.06.25
<b>Leachate</b>						
<b>Analysis of eluates</b>						
Phenol Index	0.29				mg/L	ISO 14402:1999(E)-point 4, NM 26.05.25 26.05.25
Fluoride	0.26				mg/L	F <sup>-</sup> ISO 10359-1:1992 <sup>[4]</sup> , NM 28.05.25 28.05.25
Adsorbable organic halogens - AOX	0.37				mg/L	Cl <sup>-</sup> SIST EN ISO 9562: 2005 <sup>[5]</sup> , NM 28.05.25 28.05.25
Aluminium	1.1				mg/L	Al ISO 17294-2:2023, NM 03.06.25 03.06.25
Antimony	0.027				mg/L	Sb ISO 17294-2:2023, NM 02.06.25 02.06.25
Arsenic	0.0045				mg/L	As ISO 17294-2:2023, NM 02.06.25 02.06.25
Copper	0.033				mg/L	Cu ISO 17294-2:2023, NM 02.06.25 02.06.25
Barium	0.24				mg/L	Ba ISO 17294-2:2023, NM 02.06.25 02.06.25
Beryllium	<0.0005		<0.0002	#	mg/L	Be ISO 17294-2:2023, NM 02.06.25 02.06.25



## Analytic results

# Results marked with # refer to not accredited activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
Boron	0.92		mg/L	B	ISO 17294-2:2023, NM	03.06.25 03.06.25
Zinc	1.5		mg/L	Zn	ISO 17294-2:2023, NM	02.06.25 02.06.25
Cadmium	0.00057		mg/L	Cd	ISO 17294-2:2023, NM	02.06.25 02.06.25
Cobalt	0.022		mg/L	Co	ISO 17294-2:2023, NM	02.06.25 02.06.25
Tin	0.0067		mg/L	Sn	ISO 17294-2:2023, NM	02.06.25 02.06.25
Chromium	0.086		mg/L	Cr	ISO 17294-2:2023, NM	02.06.25 02.06.25
Manganese	1.1		mg/L	Mn	ISO 17294-2:2023, NM	02.06.25 03.06.25
Molybdenum	0.014		mg/L	Mo	ISO 17294-2:2023, NM	02.06.25 02.06.25
Nickel	0.14		mg/L	Ni	ISO 17294-2:2023, NM	02.06.25 02.06.25
Selenium	<0.001		mg/L	Se	ISO 17294-2:2023, NM	02.06.25 02.06.25
Silver	<0.001	<0.0002 #	mg/L	Ag	ISO 17294-2:2023, NM	02.06.25 02.06.25
Lead	0.018		mg/L	Pb	ISO 17294-2:2023, NM	02.06.25 02.06.25
Thallium	<0.0020	#	mg/L	Tl	ISO 17294-2:2023, NM	02.06.25 02.06.25
Tellurium	<0.0020	#	mg/L	Te	ISO 17294-2:2023, NM	02.06.25 02.06.25
Vanadium	0.0055		mg/L	V	ISO 17294-2:2023, NM	02.06.25 02.06.25
Iron	4.4	#*	mg/L	Fe	ISO 17294-2:2023, NM	02.06.25 02.06.25
Mercury	<0.0001		mg/L	Hg	SIST EN ISO 12846, modification in point 5, without chapter 7, NM	27.05.25 27.05.25
Total Cyanide	<0.01		mg/L	CN <sup>-</sup>	SIST EN ISO 14403-2:2013, NM	23.05.25 27.05.25
Total bound Nitrogen	110	#	mg/L	N	SIST EN ISO 20236:2022, NM	27.05.25 27.05.25
Ammonium	28	#	mg/L	N	ISO 11732:2005, chapter 4, NM	27.05.25 27.05.25
Chloride	140		mg/L	Cl <sup>-</sup>	SIST EN ISO 10304-1:2009/AC:2012, NM	26.05.25 26.05.25
Leaching with water					SIST EN 12457-4:2004, NM	22.05.25 23.05.25

non-crushing particles, %: does not contain  
particles > 10 mm, %: does not contain  
water content, %: 7  
test proportion, g: 90  
added water, ml: 900  
date of preparation: 22.5.2025-23.5.2025  
filter paper: glass filter, 0,45 µm



## Analytic results

# Results marked with # refer to **not accredited** activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
pH	6.9  T=22,0°C				SIST ISO 10523: 2012, NM	27.05.25 27.05.25
Temperature	22.2	#	°C		SIST EN 12457-4:2004, NM	23.05.25 23.05.25
<b>Ash</b>						
<b>General parameters</b>						
Potassium	0.92	#	%DW	K <sup>+</sup>	ISO 17294-2, modified, NM	09.06.25 09.06.25
<b>Inorganic parameters</b>						
Total Phosphorus	0.25	#	%DW	P	SIST EN ISO 6878, point 4.7, modified <sup>[2,3]</sup> , NM	02.06.25 02.06.25
Copper	0.12		%DW	Cu	ISO 17294-2, modified, NM	09.06.25 09.06.25
Iron	1.8	#	%DW	Fe <sub>2</sub> O <sub>3</sub>	ISO 17294-2, modified, NM	09.06.25 09.06.25
Cadmium	0.0012		%DW	Cd	ISO 17294-2, modified, NM	09.06.25 09.06.25
Chromium	0.043		%DW	Cr	ISO 17294-2, modified, NM	09.06.25 09.06.25
Lead	0.028		%DW	Pb	ISO 17294-2, modified, NM	09.06.25 09.06.25
Magnesium	1.1		%DW	Mg <sup>2+</sup>	ISO 17294-2, modified, NM	09.06.25 09.06.25
Aluminium	1.0	#	%DW	Al	ISO 17294-2, modified, NM	09.06.25 18.06.25
<b>Elements</b>						
Calcium	26	#	%DW	CaO	ISO 17294-2, modified, NM	09.06.25 09.06.25
Manganese	0.10		%DW	Mn	ISO 17294-2, modified, NM	09.06.25 09.06.25
Mercury	<0.000015	#	<0.000006 #	%DW	Hg SIST EN ISO 12846, modification in point 5, without chapter 7, NM	04.06.25 04.06.25
Sodium	2.3	#	%DW		ISO 17294-2, modified, NM	09.06.25 09.06.25
Titanium	1.7	#	%DW	Ti	ISO 17294-2, modified, NM	09.06.25 20.06.25
Silicon	210000	#	mg/kg DW	SiO <sub>2</sub>	ISO 17294-2:2016, modified, MB	16.06.25 20.06.25
<b>Basic parameters</b>						
Ash	11.0	#	%		SIST EN ISO 21656:2021, NM	27.05.25 09.06.25
	<i>Ignition at 815 °C</i>					
Ash	11.3	#	%DW		SIST EN ISO 21656:2021, NM	27.05.25 09.06.25
	<i>Ignition at 815 °C</i>					





## Analytic results

# Results marked with # refer to **not accredited** activity

Parameter	Result Note	Values below LOQ	Unit	Expressed as/on	Method Place of execution	Start/End
Total carbon - TC	0.49		%DW		SIST EN 15936:2022, Method A, KR	23.06.25 23.06.25
Total carbon - TC	1.8		%DW		SIST EN 15936:2022, Method A, KR	23.06.25 23.06.25
Dry matter	99.7		%		SIST EN 15934:2012 - method A, NM	29.05.25 29.05.25
Fluorine	0.0037		%DW		SIST EN 15408:2011, KR	05.06.25 09.06.25
Chlorine	0.19		%DW		SIST EN 15408:2011, KR	05.06.25 09.06.25
Hydrogen	<1		%DW		SIST EN ISO 21663:2021, KR	05.06.25 17.06.25
Sulfur	0.15		%DW		SIST EN 15408:2011, KR	05.06.25 09.06.25

[1] Digestion of test sample according to SIST EN 13656:2020, modif.

[2] SIST EN 16179:2013

[3] SIST EN 13650:2002, modif. in pt. 8 (microwave digestion)

[4] Combined fluoride electrode.

[5] Shaking procedure (Adsorption on activated carbon, oxidation by high temperature 1000 C in an oxygen stream, Coulometric titration). Filtered sample.

### Locations of analyses:

NM - OKA Novo mesto, Dalmatinova ulica 3, Novo mesto

MB - OKA Maribor, Prvomajska ulica 1, Maribor

KR - OKA Kranj, Gosposvetska ulica 12, Kranj

Measurement uncertainty data are available on the request of the client.

\*The result is outside the range of accredited method.

LOD-limit of detection, the lowest analyte concentration which can be detected but not necessarily quantified.

LOQ-limit of quantification, the lowest analyte concentration which can be quantified with acceptable accuracy under the specified conditions.

In the column "Values below LOQ" we show the measured values between LOD and LOQ. Prefix "<" in front of the value indicates that the value is below LOD. This results refer to not accredited activity (#) and are shown following the request of the customer or legislation.

### 25-50865 (GC-MS)\_EN

Electronically confirmed by:

Pija Rep, univ. dipl. kem.

OKA Maribor

Head of department:

Jernejka Franko, univ.dipl.inž.kem.inž.

Electronically signed by deputy Maja Križan, univ.dipl.kemik at 11.08.2025 08:06:19

mag. Andreja Dremelj, univ.dipl.kem.

OKA Kranj

Results refer only to the sampled sample. The test report shall not be reproduced except in full without written approval of the department. It should not be used for advertising purposes.  
The sample was kept in accordance to the requirements until testing. All additional information on testing is available at the department.

Annex to the chemical testing report

## IDENTIFICATION OF ORGANIC COMPOUNDS (GC/MS)

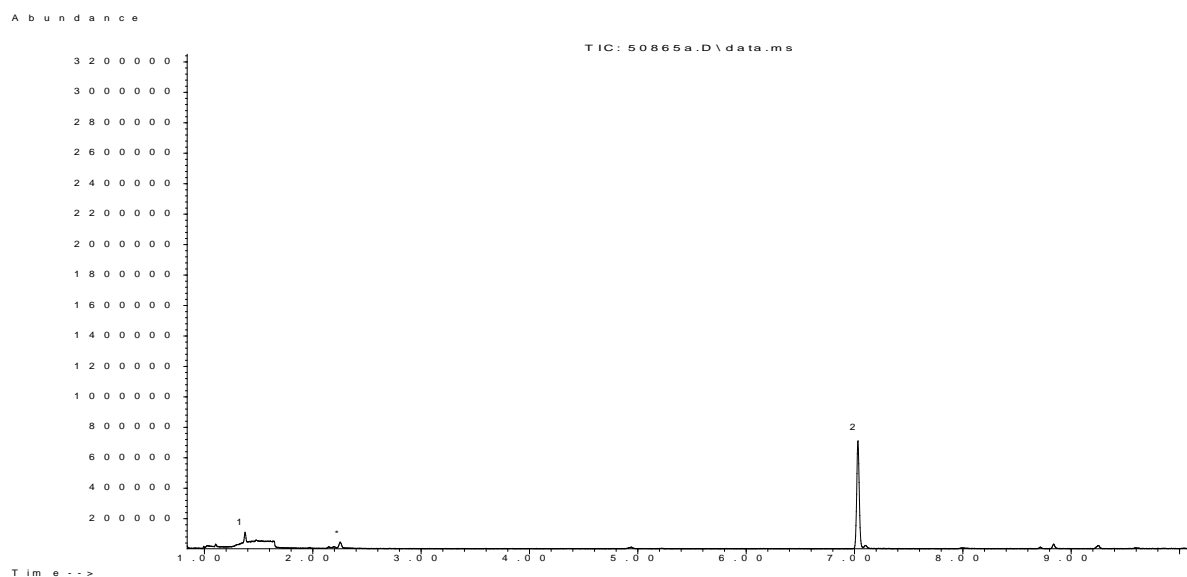
GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTOR

**Sample name:** ODPADKI – JP VOKA SNAGA d.o.o. - 19 12 12 - LF A

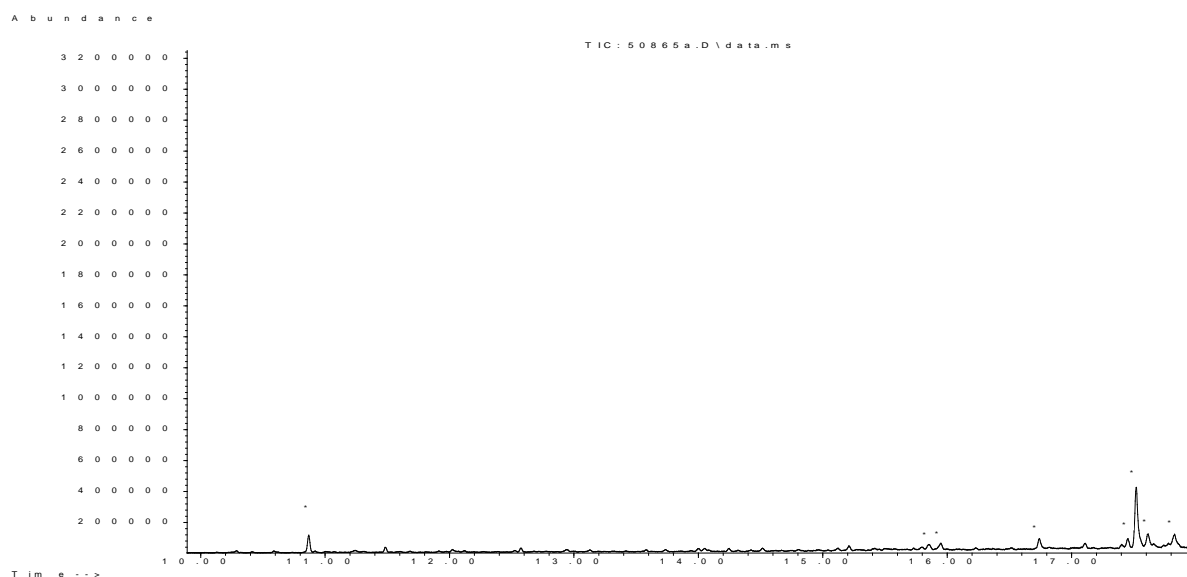
**Laboratory number:** 25-50865

**Preparation:** Solid/liquid methanol extraction

**Sample input:** 2.1263g/40mL--->100uL/5mL (SL)



*Section 1 of the ion chromatogram: ret. time:0 min -10 min*



*Section 2 of the ion chromatogram: ret. time:10 min -18 min*

*Table 1: identified compounds*

no.	ret. time (min)	compound (most likely identification)	CAS
1	2.16	isopentane	78-78-4
*	2.25	unidentified compound (m/z: 42.55.41.39)	-
2	7.03	internal standard toluene-d8 (25.8ug/L)	2037-26-5
*	10.87	unidentified compound (m/z: 68.93.67.79)	-
*	15.85	unidentified compound (m/z: 43.41.55.119)	-
*	15.95	unidentified compound (m/z: 205.57.220.206)	-
*	16.74	unidentified compound (m/z: 71.43.28.41)	-
*	17.45	unidentified compound (m/z: 197.212.155.153)	-
*	17.52	unidentified compound (m/z:: 191.57.29.41)	-
*	17.65	unidentified compound (m/z: 191.95.135.109)	-
*	17.83	unidentified compound (m/z: 95.41.191.69)	-

**COMMENT:**

The waste sample is extracted with methanol and the extract is flushed with water (P&T) and analyzed on a gas chromatograph coupled to a mass selective detector (GC/MSD). The mass spectra of the detected peaks are compared with the spectra from the NIST 2.3 (2017) standard mass spectral library or we provide our own interpretation of the mass spectrum.

The compounds listed in the table above were identified in the extract. Compounds marked with \* and/or unmarked (section 2) are part of the analytical procedure background or system interference.