



# SLOVENSKI STANDARD

## SIST ISO 10086-2:2005

01-november-2005

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Coal -- Methods for evaluating flocculants for use in coal preparation -- Part 2:  
Flocculants as filter aids in rotary vacuum filtration systems

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Charbon -- Méthodes d'évaluation des floculants utilisés dans la préparation des  
charbons -- Partie 2: Floculants comme aides à la filtration dans des systèmes rotatoires  
de filtration sous vide

Ta slovenski standard je istoveten z: **ISO 10086-2:2004**

### ICS:

73.040

Premogi

Coals

**SIST ISO 10086-2:2005**

**en**

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# INTERNATIONAL STANDARD

**ISO**  
**10086-2**

First edition  
2004-01-15

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## **Coal — Methods for evaluating flocclulants for use in coal preparation — Part 2: Flocclulants as filter aids in rotary vacuum filtration systems**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

*Charbon — Méthodes d'évaluation des flocclulants utilisés dans  
la préparation des charbons —*

*Partie 2: Flocclulants comme aides à la filtration dans des systèmes  
rotatoires de filtration sous vide*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10086-2 was prepared by Technical Committee ISO/TC 27, *Solid mineral fuels*, Subcommittee SC 1, *Coal preparation: Terminology and performance*.

ISO 10086 consists of the following parts, under the general title *Coal — Methods for evaluating flocculants for use in coal preparation*:

— *Part 1: Basic parameters*

— *Part 2: Flocculants as filter aids in rotary vacuum filtration systems*

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# Coal — Methods for evaluating flocculants for use in coal preparation —

## Part 2: Flocculants as filter aids in rotary vacuum filtration systems

### 1 Scope

This part of ISO 10086 specifies a method for the comparative evaluation of the performance of flocculants used as filter aids for rotary vacuum filtration applications on a given slurry.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10086-1:2000, *Coal — Methods for evaluating flocculants for use in coal preparation — Part 1: Basic parameters*

[SIST ISO 10086-2:2005](https://standards.iteh.ai/catalog/standards/sist/e45f9d31-b246-4c08-9738-a92bb97d3eda/sist-iso-10086-2-2005)

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### 3 Principle

The performance of different flocculants on a given slurry is determined by measuring the cake yield and moisture content.

A flocculant solution is added to an aliquot of slurry in a beaker. A filter leaf is then applied to the flocculated sample and the cake thus produced on the apparatus is weighed wet, dried and reweighed. A measure of the efficiency of the flocculant is obtained from the cake yield and moisture content.

### 4 Apparatus

Ordinary laboratory apparatus and the following.

NOTE The apparatus is generally arranged as shown in Figure 1.

**4.1 Laboratory vacuum pump or piped vacuum system**, capable of producing a vacuum better than that proposed for the plant equipment.

**4.2 Vacuum gauge**

**4.3 Two-way valves**, of at least 2 mm to 3 mm bore, manufactured in glass or plastics.

**4.4 Buchner flask**, with a minimum volume of 1 L.

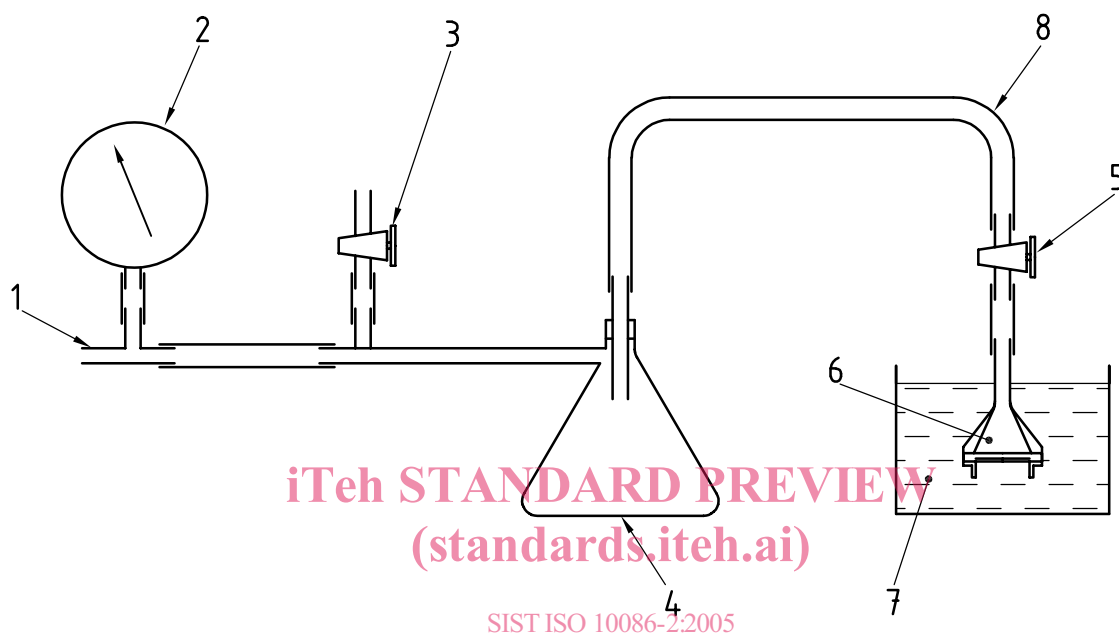
## ISO 10086-2:2004(E)

**4.5 Filter-leaf apparatus**, consisting of a drainage plate and filter cloth in an assembly, as shown in Figure 4.

**4.6 Vacuum tubing and glass/plastics tubing**

**4.7 Stirrers**, motorized variable-speed stirrers, capable of speeds up to 1 000 r/min, one for flocculant preparation and one for sample homogenization.

**4.8 Syringes**, having capacities of 1 ml, 2 ml, 5 ml, 10 ml and 50 ml.



#### Key

- |                      |                           |
|----------------------|---------------------------|
| 1 vacuum pump/source | 5 two-way valve           |
| 2 vacuum gauge       | 6 filter leaf             |
| 3 two-way valve      | 7 slurry in 800 mL beaker |
| 4 buchner flask      | 8 vacuum tubing           |

**Figure 1 — Laboratory vacuum filter-leaf apparatus**

## 5 Materials

### 5.1 Slurry

The slurry for evaluation shall be collected and divided by the method described in ISO 10086-1. The contents of each test cylinder shall then be poured into an 800 ml beaker for evaluation.

### 5.2 Water

The water used for the preparation of flocculant solutions shall be collected by the method described in ISO 10086-1.

## 6 Sampling

The flocculant samples should be collected according to the recommendations described in ISO 10086-1.



## 7 Preparation of flocculant solutions

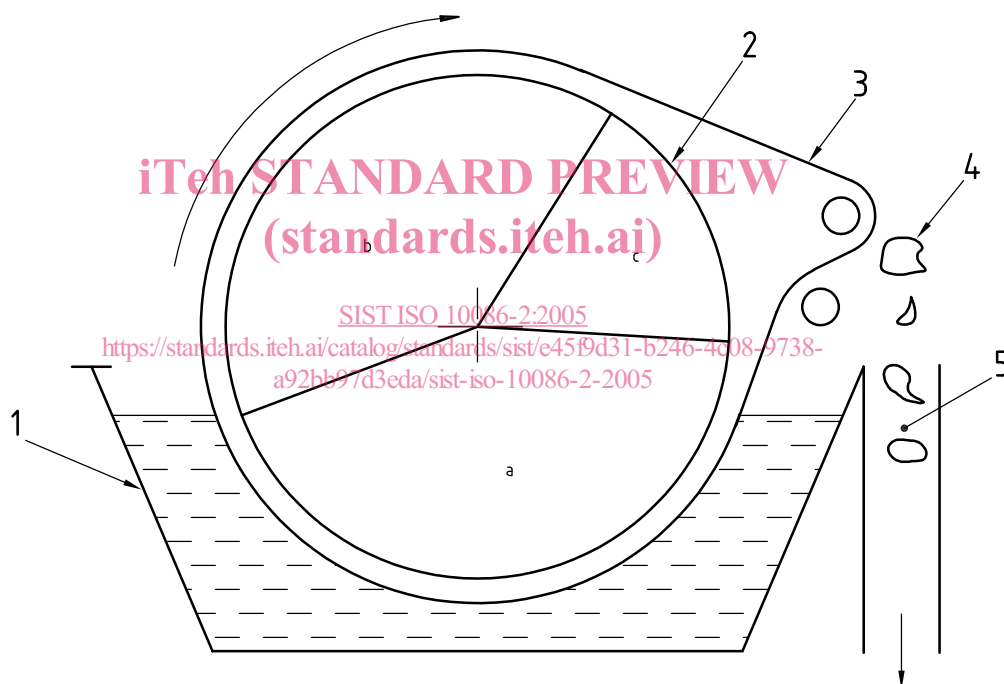
The flocculant, both powder and liquid grades, shall be prepared in accordance with the methods specified in ISO 10086-1.

## 8 Test procedure

### 8.1 Preliminary

The test procedure shall simulate the operating conditions of a rotary vacuum filter on a plant (see Figures 2 and 3). Where the slurry is taken from a plant using such equipment, the immersion and drying times in the test procedure shall be the same as on the plant equipment. Where these times are not known, or where no vacuum filtration system exists, the following times shall apply:

- immersion time: 1 min 10 s;
- drying time: 2 min.



#### Key

- 1 filter bowl
- 2 filter drum
- 3 filter cloth
- 4 filter cake
- 5 filter cake

- a Filter leaf.
- b Slurry in 800 mL beaker.
- c Vacuum tubing.

**Figure 2 — Diagram to show the immersion, drying and discharge sequences of a rotary vacuum drum filter**