

ICS 13.030.20

English Version

Characterization of sludges - Laboratory chemical conditioning procedure

Caractérisation des boues - Procédure de conditionnement
chimique en laboratoire

Charakterisierung von Schlammern - Laborverfahren zur
chemischen Konditionierung

This Technical Report was approved by CEN on 28 February 2006. It has been drawn up by the Technical Committee CEN/TC 308.

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Foreword

This Technical Report (CEN/TR 14742:2006) has been prepared by Technical Committee CEN/TC 308 "Characterization of sludge", the secretariat of which is held by AFNOR.

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Introduction

The laboratory assessment of sludge dewaterability is sensitive to the operating procedure adopted for the conditioning step. No generalized ranking of products in order of effectiveness can be given since the ranking changes with the sludge type, dosage of conditioning agent, degree of shearing and dewatering device.

This method gives a standardized procedure for the conditioning operation when selecting a conditioning product at laboratory scale.

An informative annex is also given in order to have some view of the industrial conditioning with mineral coagulants or with polyelectrolytes.

The test may give information about the energy needed for the procedure as far as determination of the mixing power is available.

1 Scope

This Technical Report specifies a procedure for the chemical conditioning in laboratory of sludges.

This Technical Report is applicable to sludges and sludge suspensions from:

- storm water handling;
- urban wastewater collecting systems;
- urban wastewater treatment plants;
- treating industrial wastewater similar to urban wastewater (as defined in Directive 91/271/EEC);
- water supply treatment plants.

This method is applicable to sludge and sludge suspensions of other origin.

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.

EN 12176, *Characterisation of sludge — Determination of pH value*

EN 12880, *Characterisation of sludges — Determination of dry residue and water content*

EN 12832:1999, *Characterisation of sludges — Utilisation and disposal of sludges — Vocabulary (Trilingual version)*

EN 14701-1, *Characterisation of sludges — Filtration properties — Part 1: Capillary suction time (CST)*

EN 14701-2, *Characterisation of sludges — Filtration properties — Part 2: Determination of the specific resistance to filtration*

3 Terms and definitions

For the purposes of this Technical Report, the terms and definitions given in EN 12832:1999 and the following apply.

3.1

chemical conditioning

mixing of a chemical product with the sludge in order to increase its dewaterability

4 Principle

The procedure refers to the mixing of conditioning agents with a sludge in order to give reproducible results. The test is performed as a batch process. The sludge conditioned following this procedure should then undergo specific characterization tests which will give the information of the most suitable operating conditions: nature of the reagents, dosage, addition sequences.

NOTE Variables and/or parameters which can have significant effects are either chemical or physical.