



NSAI
Standards

Standard Recommendation
S.R. CEN/TR 15809:2008

Characterization of sludges - Hygienic aspects - Treatments

S.R. CEN/TR 15809:2008

Incorporating amendments/corrigenda issued since publication:

<i>This document replaces:</i>	<i>This document is based on:</i> CEN/TR 15809:2008	<i>Published:</i>
This document was published under the authority of the NSAI and comes into effect on: 21 January, 2009		ICS number: 13.030.20
NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie
Price Code: I		
Údarás um Chaighdeáin Náisiúnta na hÉireann		

ICS 13.030.20

English Version

Characterization of sludges - Hygienic aspects - Treatments

Caractérisation des boues - Aspects hygiéniques -
Traitements

Charakterisierung von Schlämmen - Hygienische Aspekte -
Schlammbehandlung

This Technical Report was approved by CEN on 25 August 2008. It has been drawn up by the Technical Committee CEN/TC 308.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Hygienic considerations	6
4.1 General.....	6
4.2 From concept to good practice	6
4.3 Aspects of microbiology, virology and parasitology.....	7
4.4 Aspects of epidemiology	7
4.5 Definition of the hygienic objective of treatment	8
5 General methodologies and tools to define the hygienic effect of treatment, and to manage the hygienic safety	9
5.1 General.....	9
5.2 Health risk assessment.....	10
5.2.1 Hazard identification	10
5.2.2 Dose-response assessment	10
5.2.3 Exposure assessment.....	10
5.2.4 Risk characterisation	10
5.3 Quality Assurance and Hazard Analysis and Critical Control Point (HACCP) for use in sludge	11
6 Treatments available: efficiency and drawbacks	14
6.1 General.....	14
6.2 Biological treatment	16
6.2.1 Anaerobic digestion	16
6.2.2 Composting	16
6.2.3 Thermophilic aerobic digestion (TAD) or Aerobic thermophilic stabilisation (ATS).....	17
6.2.4 Long term storage	17
6.2.5 Reedbeds.....	17
6.3 Chemical treatment.....	18
6.3.1 Treatment with lime	18
6.3.2 Other chemical methods.....	18
6.4 Physical treatment.....	19
6.4.1 Pasteurisation of sludge	19
6.4.2 Thermal drying	19
6.4.3 Thermal hydrolysis	19
6.5 Combined treatment and other methods	19
Annex A (informative) Micro organisms which could be found in sewage sludge	21
Bibliography	24

Foreword

This document (CEN/TR 15809:2008) has been prepared by Technical Committee CEN/TC 308 "Characterization of sludges", the secretariat of which is held by AFNOR.

The status of this document as CEN/TR has been chosen because much of its content is not completely in line with the practice and regulations in each member state.

This document gives general principles about hygienic aspects. Other guides on good practice for the use of sludge (Guides 2, 4, 5, 6, 7, 8) contain the specific recommendations based on the hygienic aspects described in this guide.

Introduction

This Technical Report has been prepared within the framework of CEN/TC 308 on characterization of sludges. This document concentrates on hygienic aspects for good practice concerning treatment of sludge, but acknowledges that existing national regulations remain in force.

The use of sewage sludge on land is controlled within the EU by the sludge directive (86/278/EEC [1]) "on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture". Regarding the purpose of the directive, it states:

- whereas the aim of this Directive is to regulate the use of sewage sludge in agriculture in such a way as to prevent harmful effects on soil, vegetation, animals and man, while encouraging its correct use;

Regarding hygiene, it requires:

- whereas sludge must be treated before being used in agriculture; whereas Member States may nevertheless authorize, on certain conditions, the use of untreated sludge, without risk to human or animal health, if it is injected or worked into the soil;
- whereas a certain period must elapse between using the sludge and putting stock out to pasture or harvesting fodder crops or certain crops which are normally in direct contact with the soil and normally consumed raw;
- whereas the use of sludge on fruit and vegetable crops during the growing season, except for fruit-tree crops, must be prohibited.

86/278/EEC defines 'treated sludge' as:

- sludge which has undergone biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its fermentability and the health hazards resulting from its use;

EU Member States have enacted the directive into their national legislations with conditions that are no less stringent than the directive. In many cases they have more detailed treatment requirements than those written in the directive.

The European Commission has said repeatedly that 86/278/EEC, which was the first soil protection directive, has been a success because there have been no cases of adverse effect where it has been followed.

Sludge treatments and practices that control health risks can also affect odour; in the public's mind they are linked.

When making choices in sludge management the hygienic aspects should be considered alongside the environmental impacts of the treatment such as energy use or emissions and the benefits of the final product.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-