
**Sludge recovery, recycling, treatment
and disposal — Guidance on thermal
treatment of sludge**

*Valorisation, recyclage, traitement et élimination des boues — Lignes
directrices pour le traitement thermique des boues*

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Published in Switzerland

Contents

	Page
Foreword.....	vi
Introduction.....	vii
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Abbreviated terms.....	3
5 Sludge properties.....	4
5.1 General.....	4
5.2 Physico-chemical characteristics.....	4
5.2.1 General.....	4
5.2.2 Dry matter.....	4
5.2.3 Loss on ignition.....	4
5.2.4 Calorific value.....	5
5.2.5 Grease, scum and screening.....	5
5.2.6 Physical consistency and others.....	6
5.3 Chemical and microbiological characteristics.....	6
5.3.1 General.....	6
5.3.2 Sulfur.....	6
5.3.3 Phosphorus.....	7
5.3.4 Nitrogen.....	7
5.3.5 Chlorine and other halogens.....	7
5.3.6 Organic micro pollutants.....	7
5.3.7 Trace elements.....	8
5.3.8 Pathogens.....	8
6 Thermal processes fundamentals.....	8
6.1 General.....	8
6.2 Drying.....	9
6.3 Hydrolysis.....	10
6.4 Incineration.....	11
6.5 Pyrolysis.....	12
6.6 Gasification.....	13
6.7 Thermolysis.....	14
6.8 Carbonization.....	14
6.9 Wet oxidation.....	14
6.10 Melting.....	15
6.11 Pasteurization.....	15
7 Technologies.....	16
7.1 General.....	16
7.2 Drying.....	16
7.2.1 Direct dryers.....	16
7.2.2 Indirect dryers.....	20
7.2.3 Solar dryers.....	22
7.3 Hydrolysis.....	23
7.4 Incineration.....	24
7.4.1 Fluidized bed furnace.....	24
7.4.2 Multiple hearth furnace (MHF).....	28
7.4.3 Hybrid furnace.....	31
7.4.4 Others.....	32
7.5 Pyrolysis.....	33
7.6 Gasification.....	33
7.7 Thermolysis.....	35
7.8 Carbonization.....	36

7.9	Wet oxidation	36
7.10	Melting	37
7.11	Pasteurization	39
7.12	Emerging technologies	40
7.12.1	General	40
7.12.2	Oxidation technologies	40
7.12.3	Enzymatic sludge hydrolysis	41
7.12.4	Plasma gasification	41
7.12.5	Ultrasound pretreatment	41
7.12.6	Microwave irradiation	41
7.12.7	Infrared radiation	42
7.13	Design aspects	42
7.14	Auxiliary equipment	42
7.14.1	General	42
7.14.2	Transport, receiving area, storage and feeding systems	43
7.14.3	Heat supply and recovery	43
7.14.4	Gas cleaning	44
7.14.5	Ash and other residues handling	44
7.14.6	Wastewater treatment	44
7.14.7	Process monitoring	44
7.14.8	Safety systems	45
8	Operational aspects	45
8.1	General	45
8.2	Drying	46
8.3	Hydrolysis	46
8.4	Incineration	46
8.4.1	General	46
8.4.2	Fluidized bed furnace	47
8.4.3	Multiple hearth furnace	48
8.5	Pyrolysis	49
8.6	Gasification	49
8.7	Thermolysis	49
8.8	Carbonization	49
8.9	Wet oxidation	49
8.10	Melting	50
8.11	Pasteurization	50
8.12	Hazards	50
9	Management of energy and secondary resources	50
9.1	General	50
9.2	Drying	51
9.3	Hydrolysis	51
9.4	Incineration	51
9.5	Pyrolysis	52
9.6	Gasification	53
9.7	Thermolysis	54
9.8	Carbonization	54
9.9	Wet oxidation	54
9.10	Melting	54
9.11	Pasteurization	54
9.12	Thermal treatments and circular economy	55
10	Management of residues	55
10.1	General	55
10.2	Flue gas	55
10.2.1	Characteristics and parameters	55
10.2.2	Equipment	57
10.3	Ashes	59
10.3.1	Composition/parameters	59

10.3.2	Processes and equipment	60
10.4	Wastewater	61
11	Decommissioning of installations	61
11.1	General	61
11.2	Specific considerations	61
12	Co-management with other organic wastes	62
12.1	General	62
12.2	Specific considerations	63
12.3	Additional storage and transport aspects	65
12.3.1	General	65
12.3.2	Storage	65
12.3.3	Transport	66
13	Assessment of sustainability	66
13.1	General	66
13.2	Environmental aspects	67
13.3	Economical aspects	67
13.4	Social aspects	67
Annex A (informative)	Calorific values calculations	69
Annex B (informative)	Various systems to input sludge into a household waste incineration plant	70
Annex C (informative)	Case studies	72
Annex D (informative)	Regulatory aspects	86
Bibliography		89

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 275, *Sludge recovery, recycling, treatment and disposal*.

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Introduction

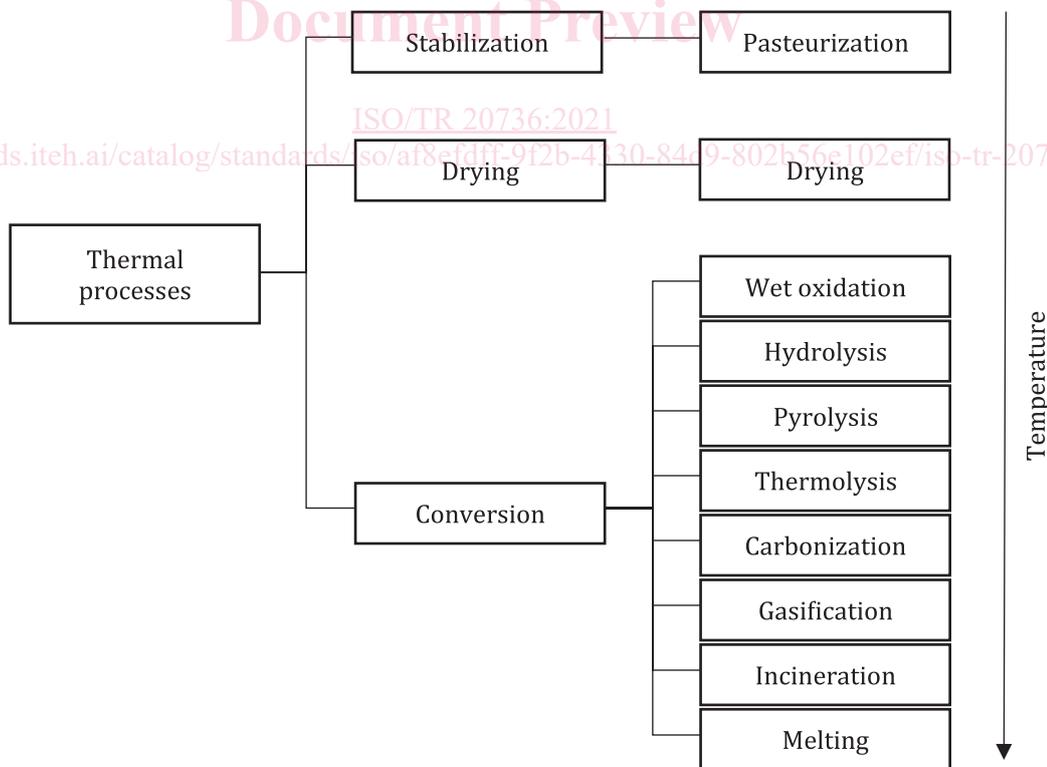
Sludge treatment and management is globally a growing challenge for most countries:

- sludge is a by-product of water treatment process produced in large quantities as new wastewater treatment facilities are built and the existing ones are upgraded to keep up with the population growth;
- sludge treatment and disposal constitutes one of the most significant costs associated with water and wastewater treatment;
- stricter regulations on conventional outlets such as beneficial agricultural land, composting, landfilling require more treatment due to concerns about the long-term impacts on public health and environment;
- sludge is now being considered as a source of renewable energy, and also a source of valuable components such as carbon and nutrients.

The growing trend to recover energy and resources from waste sludge and stricter regulations on outlets have created interest in a number of thermal treatments and may meet, under certain conditions, the circular economy principles.

The objective of this document is to pragmatically present the methods for thermal treatment of sludge by covering the different process fundamentals, the associated technologies and operational aspects, the management of energy, valuables and residues, the aspects related to impacts and integration of installations referring to them.

[Figure 1](#) highlights the thermal processes covered according to their main function and operating temperature.



NOTE The processes listed in the right column and connected to conversion and drying as main functions also achieve the sludge stabilization.

Figure 1 — Thermal processes covered by this document