

# DIN EN 14997:2015-05 (E)

## Characterization of waste - Leaching behaviour test - Influence of pH on leaching with continuous pH control

---

<b>Contents</b>		<b>Page</b>
Foreword .....		4
Introduction .....		5
1	Scope .....	7
2	Normative references .....	7
3	Terms and definitions .....	7
4	Symbols and abbreviations .....	8
5	Principle .....	9
6	Reagents .....	9
7	Equipment .....	10
7.1	General .....	10
7.2	Laboratory equipment .....	10
8	Sample preparation .....	11
8.1	Laboratory sample .....	11
8.2	Preparation of the test sample .....	11
8.3	Determination of dry residue .....	11
8.4	Preparation of the test portion .....	12
9	Procedure .....	12
9.1	Contact time .....	12
9.2	pH range .....	12
9.3	Leaching test .....	12
9.3.1	General .....	12
9.3.2	Preparation of leachant .....	13
9.3.3	Leaching procedure .....	15
9.4	Natural pH .....	16
10	Eluate treatment, storage and analysis .....	16
11	Blank test .....	16
12	Performance characteristics .....	17
13	Test report .....	17
Annex A (informative) Example of a data sheet .....		19
Annex B (informative) Operation and uses of the test -- Influence of pH on the leaching behaviour ..		20
B.1	Clarification of the two modes of operation of the test: influence of pH on the leaching behaviour .....	20
B.2	Expression of results .....	22
B.3	Scope and limits of the application field of the test .....	22

B.3.1	Remarks on the use of pH dependence test results to assess the effects of ageing .....	22
B.3.2	Examples of test result use and considerations on scope .....	23
B.4	Example: Identification of the sensitivity of leaching to pH over the environmentally relevant pH range .....	24
Annex C (informative) Preliminary determination of the acid/base consumption .....		25
C.1	General .....	25
C.2	Titration procedure to estimate the ANC and the BNC .....	25
C.2.1	Reagents and laboratory devices .....	25
C.2.2	Test portion .....	25
C.2.3	Procedure .....	25
C.2.4	Expression of results .....	26
C.3	Arbitrary division of the maximum acid/base consumption for the extreme pH values .....	27
C.3.1	General .....	27
C.3.2	Reagents and laboratory devices .....	27
C.3.3	Test portion .....	27
C.3.4	Procedure .....	27
C.3.5	Expression of results .....	28
Annex D (informative) Examples of acid and base neutralization capacities for waste, soil, sediment and construction materials .....		29
D.1	Examples of acid and base neutralization capacities .....	29
D.2	Use of acid and base neutralization capacity data .....	31
Annex E (informative) Repeatability and reproducibility data .....		32
E.1	Materials used in the interlaboratory comparison study .....	32
E.2	Interlaboratory comparison results .....	32
Bibliography .....		50