SLOVENSKI STANDARD
SIST EN 12945:2014/oprA1:2015

01-februar-2015

Sredstva za apnjenje - Določevanje nevtralizacijske vrednosti - Titrimetrijske metode

Liming materials - Determination of neutralizing value - Titrimetric methods

Kalkdünger - Bestimmung des Neutralisationswertes - Titrimetrische Verfahren

Amendements minéraux basiques - Détermination de la valeur neutralisante - Méthodes par titrimétrie

Ta slovenski standard je istoveten z: EN 12945:2014/prA1

ICS:

65.080 Gnojila Fertilizers

SIST EN 12945:2014/oprA1:2015 en,fr,de

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 65.080

English Version

Liming materials - Determination of neutralizing value - Titrimetric methods

Amendements minéraux basiques - Détermination de la valeur neutralisante - Méthodes par titrimétrie

Kalkdünger - Bestimmung des Neutralisationswertes - Titrimetrische Verfahren

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 260.

This draft amendment A1, if approved, will modify the European Standard EN 12945:2014. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Contents

Foreword

This document (EN 12945:2014/prA1:2014) has been prepared by Technical Committee CEN/TC 260 “Fertilizers and liming materials”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12945:2014.

1 Modification to Clause 9, Calculation and expression of results for method A and method B

Under 9.1 modify Formula (1) and the explanations of symbols as follows:

$$N_{\mathrm{d}} = \frac{C \times (M_1 \times V_1 \times f_1 \times A - M_2 \times V_2 \times f_2) \times 100}{m_{\mathrm{t}} \times A} \qquad (1)$$

where

C	is the factor to convert hydrochloric acid standard solution consumption into CaO or HO^- equivalent;
C	= 0,028 when neutralizing value should be expressed as CaO
C	= 0,017 when neutralizing value should be expressed as HO^-
M_1	is the molarity of hydrochloric acid standard solution (5.2), in mol/l;
V_1	is the total volume of hydrochloric acid standard solution (5.2), in millilitres;
f_1	is the factor of hydrochloric acid standard solution (5.2);
A	is equal to 1 for method A, and the factor of the taken aliquot is 0,5 for method B;
M_2	is the molarity of sodium hydroxide standard solution (5.3), in mol/l;
V_2	is the volume of sodium hydroxide standard solution (5.3), in millilitres;
f_2	is the factor of sodium hydroxide standard solution (5.3);
m_{t}	is the mass of the test portion in the aliquot portion taken, in grams.

Under 9.2 insert after the last sentence the following sentence:

"According to the required unit of expression, and as specified under d) in Clause 11, the result of neutralizing value measurement shall be expressed as follows:

xx (eq CaO) and/or yy (eq HO^-)."

2 Modification to Annex

Insert a new Annex B after Annex A as follows:

"Annex B
(informative)

Conversion tables

The following Tables B.1 and B.2 give the conversion factors between CaO and HO^-.

Table B.1 — Conversion from CaO to OH^- equivalents

CaO	HO^-	CaO	HO^-	CaO	HO^-
15	9.10	50	30.33	85	51.56
16	9.70	51	30.93	86	52.16
17	10.31	52	31.54	87	52.77
18	10.92	53	32.15	88	53.38
19	11.52	54	32.75	89	53.98
20	12.13	55	33.36	90	54.59
21	12.74	56	33.97	91	55.20
22	13.34	57	34.57	92	55.80
23	13.95	58	35.18	93	56.41
24	14.56	59	35.79	94	57.02
25	15.16	60	36.39	95	57.62
26	15.77	61	37.00	96	58.23
27	16.38	62	37.61	97	58.84
28	16.98	63	38.21	98	59.44
29	17.59	64	38.82	99	60.05
30	18.20	65	39.43	100	60.66
31	18.80	66	40.03	101	61.26
32	19.41	67	40.64	102	61.87
33	20.02	68	41.25	103	62.48
34	20.62	69	41.85	104	63.08
35	21.23	70	42.46	105	63.69
36	21.84	71	43.07	106	64.30
37	22.44	72	43.67	107	64.90
38	23.05	73	44.28	108	65.51
39	23.66	74	44.89	109	66.12
40	24.26	75	45.49	110	66.72
41	24.87	76	46.10	111	67.33
42	25.48	77	46.71	112	67.93
43	26.08	78	47.31	113	68.54
44	26.69	79	47.92	114	69.15
45	27.30	80	48.52	115	69.75
46	27.90	81	49.13	116	70.36
47	28.51	82	49.74	117	70.97
48	29.11	83	50.34	118	71.57
49	29.72	84	50.95	119	72.18
50	30.33	85	51.56	120	72.79

Table B.2 — Conversion from HO^- to CaO equivalents

HO^-	CaO	HO^-	CaO
10	16.49	45	74.19
11	18.14	46	75.84
12	19.78	47	77.49
13	21.43	48	79.13
14	23.08	49	80.78
15	24.73	50	82.43
16	26.38	51	84.08
17	28.03	52	85.73
18	29.68	53	87.38
19	31.32	54	89.03
20	32.97	55	90.68
21	34.62	56	92.32
22	36.27	57	93.97
23	37.92	58	95.62
24	39.57	59	97.27
25	41.22	60	98.92
26	42.86	61	100.57
27	44.51	62	102.22
28	46.16	63	103.86
29	47.81	64	105.51
30	49.46	65	107.16
31	51.11	66	108.81
32	52.76	67	110.46
33	54.41	68	112.11
34	56.05	69	113.76
35	57.70	70	115.40
36	59.35	71	117.05
37	61.00	72	118.70
38	62.65	73	120.35
39	64.30	74	122.00
40	65.95	75	123.65
41	67.59	76	125.30
42	69.24	77	126.95
43	70.89	78	128.59
44	72.54	79	130.24
45	74.19	80	131.89

The values are calculated with five digits after the decimal place and then rounded to two digits after the decimal place. The converting factor from CaO to OH^- is 0,606 56."