DIN EN 196-2:2026-03 (E)

Methods of testing cement - Part 2: Chemical analysis of cement

Contents

Page

European foreword 3

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 6

4 General requirements for testing 7
4.1 Number of tests 7
4.2 Repeatability and reproducibility 7
4.3 Expression of masses, volumes, factors and results 7

5 Analysis by wet chemistry 8
5.1 General 8
5.2 Reagents 9
5.3 Apparatus 21
5.4 Analysis procedure 27
5.5 Determination of major elements 35

6 Chemical analysis by X-ray fluorescence 60
6.1 Reagents and reference materials 60
6.2 Apparatus 62
6.3 Flux 63
6.4 Determination of loss on ignition and the change in mass on fusion of the cement 64
6.5 Factoring test results and correcting total analyses for presence of sulfides and halides 66
6.6 Preparation of fused beads and pressed pellets 68
6.7 Calibration and validation 70
6.8 Calculation and expression of results 80
6.9 Performance criteria (repeatability, accuracy and reproducibility limits) 81

7 Chemical analysis by inductively coupled plasma optical emission spectroscopy (ICP-OES) 81
7.1 Determination of SO3 - alternative method 81

Annex A (informative) Examples of fluxes 84

Annex B (informative) Sources of certified reference materials 85

Annex C (informative) Examples of calibration standards and monitor beads and pellets 86

Annex D (informative) Guidance on preparation of standard calibration solutions 87

D.1 Stock solutions 87
D.2 Blank calibration solution 87

Bibliography 88