

DIN EN 17845:2024-07 (E)

Construction products: Assessment of release of dangerous substances - Determination of biocide residues using liquid chromatography with mass spectrometric detection (LC-MS/MS)

Contents		Page
European foreword		4
Introduction		5
1 Scope		6
2 Normative references		6
3 Terms and definitions		6
4 Abbreviations		8
5 Sample preparation		9
6 Principle		9
7 Reagents		9
8 Apparatus and equipment		11
9 Procedure		12
9.1 Preparation and storage of the samples		12
9.2 Preparation of eluates		12
9.3 Sample preparation for content analysis		13
9.4 Determination		14
9.5 Test for interference and recovery		14
10 Evaluation of results		14
10.1 Identification		14
10.2 Quantification		15
10.3 Quality assurance		15
11 Calculation of results		16
11.1 Calculation of biocide concentrations without standard addition		16
11.2 Calculation of biocide concentrations with standard addition		17
12 Test performance		20
13 Test report		21
Annex A (normative) LC-UV method for content analysis		22
A.1 Extraction and clean-up		22
A.2 HPLC analysis		22
A.3 Example of chromatographic conditions		22
A.4 Calibration		23
A.4.1 General		23
A.4.2 Calibration curve		23
A.5 Calculation of biocide content in the construction product		24
Annex B (informative) Solid phase extraction of eluates (example)		25
Annex C (informative) Example conditions for suitable LC-MS/MS systems		26
Annex D (informative) Validation results for biocides in eluates from construction products		31
Bibliography		33