

DIN EN ISO 11916-3:2022-05 (E)

Soil quality - Determination of selected explosives and related compounds - Part 3: Method using liquid chromatography-tandem mass spectrometry (LC-MS/MS) (ISO 11916-3:2021)

Contents	Page
European foreword	3
Foreword	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Principle	7
5 Interferences	7
6 Reagents	7
6.1 General	7
6.2 Chemicals	7
6.3 Standard substances and solutions	8
6.3.1 Standard substances	8
6.3.2 Standard solutions	8
7 Apparatus	9
7.1 General	9
7.2 Equipment for extraction	9
7.3 Liquid chromatograph-tandem mass spectrometer (LC-MS/MS)	9
8 Procedure	10
8.1 Sample pre-treatment, sample storage and determination of water content	10
8.2 Extraction	10
8.2.1 General	10
8.2.2 Extraction using ultrasonic waves	10
8.2.3 Extraction using mechanical shaking	11
8.3 Storage of extract	11
9 Liquid chromatography tandem mass spectrometry (LC-MS/MS)	11
9.1 General	11
9.2 Identification and quantification	11
9.3 Calibration	12
10 Calculation of results	12
11 Quality assurance/quality control (QA/QC)	13
12 Expression of results	14
13 Test report	14
Annex A (informative) Conditions of high performance liquid chromatography tandem mass spectrometry (LC-MS/MS)	15
Annex B (informative) Comparison of LC-MS and LC-MS/MS application for PETN, 1,3,5-TNB and tetryl	18
Annex C (informative) Comparison of LOD and LOQ in the measurement of HPLC and LC-MS/MS	21
Annex D (informative) Comparison of extractive capability of acetonitrile and methanol when using LC-MS/MS	24
Annex E (informative) Report of interlaboratory validation study for ISO 11916-3	26
Bibliography	28