

ISO 21676:2018 (E)

Water quality — Determination of the dissolved fraction of selected active pharmaceutical ingredients, transformation products and other organic substances in water and treated waste water — Method using high performance liquid chromatography and mass spectrometric detection (HPLC-MS/MS or -HRMS) after direct injection

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Principle
5	Interferences
5.1	During sample preparation
5.2	During high performance liquid chromatography and mass spectrometry
6	Reagents
6.1	General
6.2	Preparation of solutions
7	Apparatus
8	Sampling
9	Procedure
9.1	General
9.2	Sample preparation
9.3	High performance liquid chromatography (HPLC)
9.4	Detection
9.4.1	General
9.4.2	Tandem mass spectrometry (MS/MS)
9.4.3	High-resolution mass spectrometry (HRMS)
9.5	Blank value measurements
10	Calibration
10.1	General
10.2	Calibration with external standard
10.3	Calibration with internal standard
11	Calculation of recovery
11.1	General
11.2	Calculation of analyte recovery using samples
11.3	Recovery of internal standards
12	Evaluation
12.1	Verification of individual substances
12.2	Calculation of the individual results using calibration with an external standard
12.3	Calculation of the individual results using calibration with an internal standard

13	Expression of results
14	Test report
Annex A	(informative) Performance data
Annex B	(informative) Examples of recovery
Annex C	(informative) Examples of HPLC columns and chromatograms
C.1	Chromatographic conditions for the chromatogram in Figure C.1
C.2	Chromatographic conditions for the chromatogram in Figure C.2
C.3	Chromatographic conditions for the chromatogram in Figure C.3
C.4	Chromatographic conditions for the chromatogram in Figure C.4
Annex D	(informative) Examples of detection
Annex E	(informative) Examples of extension of the method

Page count: 34