

# DIN EN 17892:2024-08 (E)

## Water quality - Determination of selected per- and polyfluoroalkyl substances in drinking water - Method using liquid chromatography/tandem-mass spectrometry (LC-MS/MS)

---

| <b>Contents</b> |  | <b>Page</b> |
|-----------------|--|-------------|
|                 | European foreword .....  | 4           |
|                 | Introduction .....   | 5           |
| 1               | Scope .....  | 6           |
| 2               | Normative references .....   | 8           |
| 3               | Terms and definitions .....  | 8           |
| 4               | Principle .....  | 9           |
| 5               | Interferences .....  | 9           |
| 5.1             | Sampling .....   | 9           |
| 5.2             | Background contamination .....   | 9           |
| 5.3             | Interferences encountered during liquid chromatography and mass spectrometry | 10          |
|                 | Reagents .....   | 10          |
| 7               | Apparatus .....  | 12          |
| 8               | Sampling .....   | 14          |
| 9               | Procedure .....  | 14          |
| 9.1             | Part A: Method using direct injection .....                                  | 14          |
| 9.1.1           | General .....  | 14          |
| 9.1.2           | Sampling .....   | 14          |
| 9.1.3           | Sample preparation .....   | 14          |
| 9.2             | Part B: Method using SPE .....   | 15          |
| 9.2.1           | General .....  | 15          |
| 9.2.2           | Sampling .....   | 15          |
| 9.2.3           | Sample preparation .....   | 15          |
| 9.2.4           | Extraction .....   | 16          |
| 9.3             | LC MS/MS operating conditions .....  | 17          |
| 9.4             | Blank determination .....  | 20          |
| 9.4.1           | General .....  | 20          |
| 9.4.2           | Method using direct injection .....  | 20          |
| 9.4.3           | Method using SPE .....   | 20          |
| 9.5             | Identification .....   | 20          |
| 9.6             | Calibration .....  | 21          |
| 9.6.1           | General requirements .....   | 21          |
| 9.6.2           | Calibration using an external standard .....                                 | 22          |
| 9.6.3           | Calibration using an internal standard .....                                 | 23          |
| 9.6.4           | Calibration check .....  | 24          |
| 10              | Calculation .....  | 24          |
| 10.1            | Use of a calibration curve to determine concentration .....                  | 24          |
| 10.2            | Calculation of concentration using calibration with external standards ..... | 24          |
| 10.3            | Calculation of concentration using calibration with internal standards ..... | 25          |
| 10.4            | Treatment of results outside the calibration range .....                     | 25          |

|      |   |    |
|------|---|----|
| 10.5 | Quantification of branched isomers .....                              | 25 |
| 11   | Determination of analyte recovery .....                               | 26 |
| 11.1 | Recovery .....  | 26 |
| 11.2 | Recovery of internal standards .....                                  | 27 |
| 12   | Expression of results .....   | 27 |
| 13   | Test report .....   | 27 |
|      | Annex A (informative) Performance data .....                          | 28 |
|      | Annex B (informative) Instrumental conditions and chromatograms ..... | 35 |
|      | Bibliography .....  | 41 |