DIN ISO 11352:2013-03 (E)

Water quality - Estimation of measurement uncertainty based on validation and quality control data (ISO 11352:2012)

Contents

Page

Foreword ... 3

Introduction ... 5

1 **Scope** ... 8

2 **Normative references** ... 8

3 **Terms and definitions** ... 8

4 **Symbols** ... 11

5 **Principle** ... 12

6 **Procedure** ... 13

7 **Preparative considerations for the estimation of measurement uncertainty** ... 13
7.1 **Specification of the measurement** ... 13
7.2 **Specification of the parametric form in which the measurement uncertainty is reported** ... 13

8 **Evaluation of available precision and bias data** ... 14
8.1 **Approach and criteria** ... 14
8.2 **Within-laboratory reproducibility** ... 15
8.3 **Method and laboratory bias** ... 17

9 **Calculation of the combined standard uncertainty** ... 21

10 **Calculation of the expanded uncertainty** ... 22

11 **Estimation of measurement uncertainty from reproducibility standard deviation** ... 22

12 **Report** ... 22

Annex A (normative) **Estimation of the standard uncertainty from range control charts** ... 23

Annex B (informative) **Examples of the estimation of measurement uncertainty** ... 24

Bibliography ... 33