

ISO 18315:2018 (E)

Nuclear energy — Guidance to the evaluation of measurement uncertainties of impurity in uranium solution by linear regression analysis

Contents

| | |
|---------|--|
| | Foreword |
| 1 | Scope |
| 2 | Normative references |
| 3 | Terms and definitions |
| 4 | Principle |
| 5 | Uncertainty evaluation |
| 5.1 | Regression line fitting |
| 5.2 | Adequacy check of fitted regression line |
| 5.3 | Combined uncertainty |
| 5.4 | Effective degrees of freedom |
| 5.5 | Expanded uncertainty |
| 6 | Reflection of reference solution uncertainties in evaluation |
| 7 | Bias correction |
| 8 | Uncertainty evaluation report |
| Annex A | (informative) Practical example of uncertainty evaluation |
| A.1 | Measurements of reference solutions and sample solution |
| A.2 | Regression line fitting and uncertainty evaluation |
| A.3 | Calibration uncertainty depending on variable x |
| Annex B | (informative) Flowchart of uncertainty evaluation process |
| Annex C | (informative) Non-uniform variances and weighting method |
| C.1 | Weighted and reversed inverse regression |
| C.2 | Estimators for variance and bias |
| C.3 | Uncertainty evaluation |