

DIN EN ISO 22036:2024-04 (E)

Environmental solid matrices - Determination of elements using inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 22036:2024)

Contents		Page
European foreword		3
Foreword		4
Introduction		5
1 Scope		6
2 Normative references		6
3 Terms and definitions		6
4 Principle		7
5 Interferences		8
5.1 General.....		8
5.2 Spectral interferences.....		8
5.3 Non-spectral interferences.....		9
6 Reagents		10
7 Apparatus		12
8 Procedure		13
8.1 Cleaning of glassware.....		13
8.2 Instrument performance parameters.....		13
8.3 Instrument optimization.....		14
8.4 Instrument set-up.....		14
8.4.1 General requirements.....		14
8.4.2 Software method development, wavelength selection.....		14
8.4.3 Inter-element correction.....		14
8.4.4 Reference element.....		14
8.4.5 Long-term stability.....		15
8.4.6 Preliminary instrument check.....		15
8.5 Calibration.....		15
8.5.1 Linear calibration function.....		15
8.5.2 Standard addition calibration.....		16
8.6 Solutions to be prepared.....		16
8.6.1 General.....		16
8.6.2 Blank calibration solution.....		16
8.6.3 Blank test solution.....		16
8.6.4 Calibration solutions.....		16
8.6.5 Test sample solutions.....		17
8.6.6 Test solutions.....		17
8.7 Measurement procedure.....		17
9 Calculation		17
10 Expression of results		18
11 Performance characteristics		18
11.1 Calibration check.....		18
11.2 Interference.....		18
11.3 Recovery.....		19
11.4 Performance data.....		19
12 Test report		19
Annex A (informative) Repeatability and reproducibility data		20
Annex B (informative) Wavelengths and estimated instrumental detection limits		26
Annex C (normative) Inter-element correction		32
Bibliography		34