

ISO 16796:2022-01 (E)

Nuclear energy - Determination of Gd₂O₃ content in gadolinium fuel blends and gadolinium fuel pellets by atomic emission spectrometry using an inductively coupled plasma source (ICP-AES)

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Principle	1
5	Apparatus	1
6	Reagents	2
7	Standard blends	2
7.1	Drying of reference materials	2
7.2	Preparing standard blends	2
7.3	Blending	3
7.4	Preparing pellets standards	3
7.5	Identification	3
8	Standard and test sample preparation	3
8.1	Preparation of standard solution from powder reference materials	3
8.2	Preparation of the powder test samples of Gd ₂ O ₃ plus UO ₂	4
8.3	Preparation of pellet standards and test samples	4
9	Calibration and analysis of test samples	4
9.1	General	4
9.2	Calibration	4
9.3	Analysis of the test samples and quality control standards	5
9.4	Measurement control program	5
10	Precision and accuracy	6
11	Test report	6
Annex A (informative)	Calibration curve	7
Annex B (informative)	Standards data	8
Bibliography		9