ISO 13465:2024-11 (E)

Nuclear energy - Nuclear fuel technology - Determination of neptunium in nitric acid solutions by spectrophotometry

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Principle 1

5 Interferences 1
5.1 Uranium (VI) 1
5.2 Acidity 2
5.3 Plutonium 2
5.4 Redox species 2
5.5 Nitrite ions 2

6 Reagents 2

7 Apparatus 4

8 Measurement 4
8.1 Calibration 4
8.2 Sample preparation 4
8.2.1 Neptunium calibration solution 4
8.2.2 Sample solution 5
8.3 Spectrophotometer setup 5
8.4 Measurement 5
8.4.1 Measurement on the calibration solution 5
8.4.2 Measurement on the sample solution 6

9 Expression of the results 6
9.1 Calculation of the neptunium concentration in the sample 6
9.2 Reproducibility 7
9.3 Detection limit 7

Bibliography 8