ISO 21339:2023-09 (E)

6Al-4V titanium alloys - Determination of aluminium and vanadium contents - Inductively coupled plasma atomic emission spectrometric method

Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Principle ... **1**

5 Reagents ... **1**
5.1 General ... 1
5.2 Hydrochloric acid solution, 1+1 ... 1
5.3 Nitric acid solution, 1+1 ... 2
5.4 Hydrofluoric acid solution, 1+1 ... 2
5.5 Titanium ... 2
5.6 Indium solution, 1 g/l ... 2
5.7 Cobalt solution, 1 g/l ... 2
5.8 Strontium solution, 1 g/l ... 2
5.9 Aluminium standard solution, 1 g/l ... 2
5.10 Vanadium standard solution, 1 g/l ... 2

6 Apparatus ... **2**
6.1 General ... 2
6.2 Volumetric glassware ... 3
6.3 Plastic beaker, volumetric plastic flask and plastic watch glass ... 3
6.4 Atomic emission spectrometer, equipped with an inductively coupled plasma (ICP-AES) ... 3

7 Sampling ... **3**

8 Procedure ... **3**
8.1 Test portion ... 3
8.2 Number of determinations ... 3
8.3 Preparation of the calibration solutions ... 3
8.4 Preparation of the test solutions ... 4
8.5 Determination ... 4
8.5.1 General ... 4
8.5.2 Spectrometric measurements of the calibration solutions ... 4
8.5.3 Spectrometric measurements of the test solutions ... 5

9 Expression of result ... **5**

10 Precision ... **6**

11 Test report ... **7**

Annex A (informative) **Additional information on the international inter-laboratory test** ... **8**

Annex B (informative) **Graphical representation of the precision data** ... **9**

Bibliography ... **11**