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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Validation of the strength of uranium reference solution,
plutonium reference solution and potassium dichromate
reference solution**

铀、钚和重铬酸钾标准溶液浓度的确认

(English Translation)

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Table of Contents

Introduction

1 Scope

2 Normative references

3 Principle

4 A standard solution

4.1 Overview

4.2 The purpose of the confirmation process

Confirm 4.3 standard concentration level

5 Secondary standard solution

5.1 OVERVIEW

Confirmed by two standard materials prepared solution of 5.2

5.3 Calibration material consisting of high purity solution prepared

5.4 Numerical Example

5.5 With two standard solution for calibration and validation

6 Results Report (Normative) Preparation of a standard solution of uranium in Appendix
A (Normative) Preparation of a standard solution of plutonium Appendix B (Normative)
Preparation of a standard solution of potassium dichromate Appendix C

Annex D (informative) risk of false alarms and undetected risk alpha beta

Examples Appendix E (Informative Appendix) n and deltam in calculated values
\\u200b\\u200b---

Annex F (informative) sample size and efficiency curve

Annex G (informative) a standard solution using two secondary standard solution

Appendix H (informative) to confirm the standard solution concentration by titration
another standard solution program

Annex I (informative) This standard and ISO 10980:1995 37 Differences

The efficiency curve

The efficiency curve

The efficiency curve

Curve

The amount of curve

The amount of curve

Lalpha Table 1 alpha and beta function and Lbeta

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard uses redrafted Law Amendment uses ISO 10980:1995 "Measurement of concentration of standard solution concentration with confirmation" (in English).

This standard and ISO 10980:1995 technical differences exist compared to the terms of these differences has been involved through its outer margin bits Opposing vertical single line (-) were indicated in Appendix I are given a list of corresponding technical differences and their causes.

This standard and ISO 10980:1995 compared to the main technical differences are as follows.

--- Standard name changed to "uranium, plutonium, and the concentration of potassium dichromate standard solution confirmation";

--- Uranium metal in Appendix A to the standard substance Triuranium reference material, and the corresponding modification of the preparation procedure;

--- Appendix B of plutonium metal reference material to plutonium dioxide plutonium reference materials, and modify the corresponding preparation procedures;

Local --- numerical example of the re-calculated, for example, a standard text (this standard) in 4.3.5, 5.4, Appendix E, Appendix F and attached Record G.

The standard proposed by China National Nuclear Corporation.

This standard by the National Standardization Technical Committee on Nuclear Energy (SAC/TC58) centralized.

This standard was drafted. Institute of Nuclear Industry Standardization.

1 Scope

This standard specifies the procedure for preparing the uranium, plutonium, and potassium dichromate standard solution and confirm its concentration program.

This standard applies to confirm the uranium, plutonium and preparation and concentration of potassium dichromate standard solution preparation and concentration of other substances in the standard solution Confirm also refer to use.

2 Normative references

The following documents for the application of this document is essential, dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

ISO 7097-1 nuclear fuel technology solutions, uranium hexafluoride and solids in the first part of the determination of uranium. iron (II) reduction/potassium dichromate Oxidation titration (Nuclearfueltechnology-Determinationofuraniuminsolutions, uraniumhexafluoride andsolids-Part 1. Iron (II) reduction/potassiumdichromateoxidationtitrimetricmethod) Determination of milligram quantities of nitric acid solution of potassium dichromate amperometric titration method after ISO 8298 fuel technology Cerium (IV) oxide (II) reduction Grade plutonium (Nuclearfueltechnology-Determinationofmiligramamountsofplutoniuminnitricacidso-lutions-PotentiometrictitrationwithpotassiumdichromateafteroxidationbyCe (IV) andreduction byFe (II)) Principle 3 Uranium, plutonium and potassium dichromate standard solution independently prepared. There are prepared using certified reference materials or high-purity uranium material, plutonium and standard potassium dichromate solution Solution. accurately weighed these substances completely dissolved, the obtained solution was accurately weighed, calculated according to the known solution composition weighing data and reference material concentration.

With analysis of these solutions can be compared with each other between the inspection accuracy of the prepared solution concentration, so that the computed Relative deviation from the average concentration between repeated measurements is less than a certain limit. The reference material according preparing solutions Level, the standard solution can be in two grades.

--- A standard solution;

--- Secondary standard solution.

4 a standard solution

4.1 Overview

Procedures for preparing uranium, plutonium, and a standard solution of potassium dichromate, respectively, see Appendix A, Appendix B and Appendix C. A standard solution can be used Calibration or confirm the concentration of secondary standard solution.

4.2 The purpose of the confirmation process the purpose of the validation process is to ensure that the error does not occur in abnormal use certified reference material solution preparation process. When a prepared Grade standard solution, the result by the standard of quality and quality of substance solution obtained is called the calculated concentration; use another one standard solution