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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GA 721.3-2007

General technical requirements for reagents of developing latent fingerprints - Part 3: 1, 8-Diazafluoren-9-one(DFO)

显现潜在手印试剂 第3部分:1,8-二氮芴-9-酮(DFO)

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents" drafting:

This document is part 3 of GA/T 721 "General Technical Requirements for Reagents to Reveal Latent Fingerprints": GA/T 721 has issued the following part:

--- Part 1: Ninhydrin (NIN);

--- Part 2: 3,3',5,5'-Tetramethylbenzidine (TMB);

--- Part 3: 1,8-diazofluoren-9-one (DFO);

--- Part 4: 7-benzylamino-4-nitrobenzofurazan (BBD);

--- Part 5: 1,2-Indandione (IDO):

This document replaces GA 721.3-2007 "Reagents for revealing latent fingerprints - Part 3: 1,8-diazofluoren-9-one (DFO)", and Compared with GA 721.3-2007, except for structural adjustment and editorial changes, the main technical changes are as follows:

--- Changed the scope (see Chapter 1, Chapter 1 of the:2007 edition);

---Deleted the molecular formula: C11H6N2O, molecular weight: 182 (see Chapter 2 of the:2007 edition);

---Changed the titles of relevant chapters (see Chapter 3~Chapter 7, Chapter 3~Chapter 5 of the:2007 edition);

--- Added the term "1,8-diazofluoren-9-one" (see Chapter 3);

--- Added general provisions (see 5.1);

--- Changed the quantitative method (see 5.2:1, 3:2:1 of the:2007 edition);

--- Changed the measurement conditions (see 5.2:2, 3:2:2 of the:2007 edition);

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--- Added sampling and acceptance rules (see Chapter 6);

--- Changed the packaging (see 7.1, 4:1 of the:2007 edition);

--- Changed the flag (see 7.2, 4:2 of the:2007 edition);

--- Added label (see 7.3);

--- Changed the transportation (see 7.4, Chapter 5 of the:2007 edition);

--- Changed the storage (see 7.5, Chapter 5 of the:2007 edition):

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

Reagent for displaying potential fingerprints is a special test for displaying and extracting potential physical evidence such as fingers and palm prints during on-site investigation and physical evidence inspection:

agent, and can improve the extraction efficiency of potential evidence on the scene: GA/T 721 consists of 5 parts:

--- Part 1: Ninhydrin (NIN): The purpose is to standardize the technique of the reagent ninhydrin in the process of visualization of latent fingerprints Require:

--- Part 2: 3,3',5,5'-Tetramethylbenzidine (TMB): The purpose is to standardize the reagent 3,3',5,5'-tetramethylbenzidine in developing Technical Requirements in Potential Mudra Process:

--- Part 3: 1,8-diazofluoren-9-one (DFO): The purpose is to standardize the use of the reagent 1,8-diazofluoren-9-one (DFO) in developing latent fingerprints technical requirements in the process:

--- Part 4: 7-benzylamino-4-nitrobenzofurazan (BBD): The purpose is to standardize the reagent 7-benzylamino-4-nitrobenzofurazan (BBD) Technical requirements in the process of visualization of latent handprints:

--- Part 5: 1,2-Indandione (IDO): The purpose is to standardize the technique of the reagent 1,2-indanedione (IDO) in the process of developing latent fingerprints:

technical requirements:

General Technical Requirements for Potential Fingerprint Reagents Part 3: 1,8-Diazofen-9-one (DFO) Warning: Some reagents and some test procedures used in this test method may lead to dangerous situations, the operator should take appropriate safety precautions measure:

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1 Scope

This document specifies the quality requirements, test methods, inspection rules, marks, labels, packaging, transportation, and storage of 1,8-diazofluoren-9-one (DFO):

storage and security:

This document applies to the production and detection of 1,8-diazofluoren-9-one, a reagent for revealing latent fingerprints:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references for documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB 190 Dangerous Goods Packaging Marking GB/T 191-2008 Packaging, storage and transportation icon marks Preparation of GB/T 601-2016 Chemical Reagent Standard Titration Solutions GB/T 602-2002 Preparation of Standard Solutions for Determination of Impurities in Chemical Reagents GB/T 603-2003 Preparation of preparations and products used in test methods for chemical reagents GB/T 9722-2006 General Rules for Chemical Reagent Gas Chromatography GB 12463 General Technical Conditions for Transport Packaging of Dangerous Goods GB 15258 Regulations on Preparation of Chemical Safety Labels GB 15603 General rules for storage of commonly used dangerous chemicals HG/T 3921 Chemical Reagent Sampling and Acceptance Rules

3 Terms and Definitions

The following terms and definitions apply to this document:

1,8-diazafluoren-9-one1,8-diazafluoren-9-one; DFO Yellow powder, soluble in methanol, ethanol, acetone; melting point (MP): 229°C~233°C; molecular formula: C11H6N2O; relative molecular mass:

182.18 (by:2016 international relative atomic mass); CASRN:54078-29-4: The structural formula is shown in Figure 1:

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