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

GB/T 24792-2009

**Processing photographic wastes -- Analysis of cyanides --
Determination of hexacyanoferrate (??) and hexacyanoferrate
(??) by spectrometry**

摄影 加工废液 氰化物分析 用光谱法测定六氰合亚铁酸盐(Ⅱ)和六氰合铁酸盐(Ⅲ)
(English Translation)

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Foreword

This standard is equivalent to ISO 7766 Implementation.2003 "photographic processing waste liquid cyanide analysis Determination of hexacyanoferrate ferrocyanide (II) and hexacyanoferrate salts (III) "(in English).

This standard is equivalent translation ISO 7766:2003.

For ease of use, this standard made the following editorial changes.

- a) "this International Standard" be replaced by "this standard";
- b) use a decimal point instead of a decimal comma " , " . " , " ;
- c) Delete ISO 7766:2003 Foreword instead of the standard "foreword"; the introduction of this standard as a direct translation of the introduction;
- d) Since the original standard ISO 7766. Most of the existing standard version of the new 2003 cited in normative references. either merge or abolished, so this standard when referring to these standards, using the latest version. Specific changes are as follows.

ISO 5667-1. 1980 Water quality - Sampling - Part 1. Sampling procedures design guidelines
ISO 5667-2:1991 Water quality - Sampling - Part 2. Sampling Techniques Guide (defunct)
ISO 5667-3:1994 Water quality - Sampling - Part 3. preservation and handling of samples guidance to. ISO 5667-1:2006 Water quality - Sampling - Part 1. Sampling procedures and sampling techniques design guidelines ISO 5667-3:2003 Water quality - Sampling - Part 3. preservation and handling of water samples Guidelines the standard proposed by China Petroleum and Chemical Industry Association.

The photosensitive material standard by the National Standardization Technical Committee (SAC/TC102) centralized.

This standard was drafted. China Lucky Film Group Corporation.

Drafters of this standard. Cao Yongli, Baoli Min.

GB/T 24792-2009/ISO 7766:2003

Introduction

This standard is dedicated to analyzing photographic processing waste; it provides for the photographic processing waste liquid discharged from the iron complexed cyanide (hexacyanoferrate Ferrite) method of analysis.

Some of the chemicals listed in the testing process corrosive, toxic or other hazards. A clear warning, caution and danger Warning After specified, regardless of any additional chemicals should be standard throughout the implementation of preventive measures requirements.

As for waste emissions, best photographic processing plants to establish rules to be managed by the appropriate chemical analysis. Sometimes the analysis chamber is it allowed, but usually require sampling and analysis outside the wash plant.

Complexed cyanide present in the usual color photography process bleaching stage, the results of the analysis of the photographic process wastewater discharge the possibility of the presence of cyanide in the report should reach the level. In sample preparation, the decomposition of cyanide complexes, such a test process Complexed cyanide forms part of the total cyanide. The purpose of this standard is to hexacyanoferrate salts present in the form of cyanide complexes mention for a reliable measurement. Since the chemical properties of complexed cyanide, it is impossible to specify a single method to quantitatively measure these waste Complexed cyanide water.

The following are the different parts of international standards related to the analysis of cyanide.

1984 Water quality Determination of cyanide - Part 1 Measurement of Total Cyanide. ISO 6703-1 Section 21984 of Measurement Quality cyanide easily released cyanide. ISO 6703-2

Note 1: The free cyanide is defined as having a cyanide group, it has a measurable vapor pressure of hydrogen cyanide substance at pH 4 at room temperature.

Note 2: pH 6, the escape of cyanide from the solution to form hydrogen cyanide (HCN) at room temperature, the cyanide-based measurement step of cyanide simple Compounds and complexes easily dissociated.

GB/T 24792-2009/ISO 7766:2003 Photographic processing waste liquid cyanide analysis by spectrometry hexacyanoferrate ferrocyanide (II) and Hexacyanoferrate salts (III)

1 Scope

This standard specifies the determination photographic processing waste liquid hexacyanoferrate ferrocyanide (II) (ferrocyanide $[\text{Fe}(\text{CN})_6]^{-4}$) and hexacyanoferrate Salt (III) (ferricyanide $[\text{Fe}(\text{CN})_6]^{-3}$) test method, then the waste will be discharged in the photographic process called $\text{Fe}(\text{CN})_6$. Results are reported as hexacyanoferrate salts, $\text{Fe}(\text{CN})_6$.

1) an amount of thiosulfate (sodium thiosulfate pentahydrate) will interfere. Waste water processing machine in a certain amount of lead iron thiosulfate (III) oxidation of thiosulfate. Produce sulfur will increase the measured absorbance. In addition, the thiosulfate may deplete iron added (III) leaving the color of the reaction can not proceed. This method is suitable for the building of waste water discharged sewage thiosulfate remaining buildings will be discharged dilute Release, thereby eliminating interference thiosulfate.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard. However, according to research encourages the parties to the agreement Study whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 20432.1-2006 Photographic-grade chemicals - Test methods - Part 1 General (ISO 10349-1:2002, IDT) ISO 5667-1:2006 Water quality - Sampling - Part 1 Sampling procedures and sampling techniques design guidelines ISO 5667-3:2003 Water quality - Sampling - Part 3 water samples preservation and handling guidelines the first part of the 1982 chemical analysis reagent 1.. ISO 6353-1 General test methods ISO 6353-2. 1983 Reagents for chemical analysis - Part 2. Specification of the first series ISO 6353-3. 1987 Reagents for chemical analysis - Part 3. Specification of the second series

3.1 Hazard warning

Some of the chemicals listed in the testing process corrosive, toxic or hazardous for other reasons. Laboratory safety practices requirements in place to properly use safety glasses or goggles, rubber gloves and other protective equipment, such as masks and aprons when working processing chemicals. For special Do not hazardous material in the text and footnotes have been detailed in the risk warnings in the implementation of any chemical operations should always perform a standard Precaution.

During the test the first time mention a dangerous material in a timely manner, the danger will pass the word "dangerous" and a heel at the rear by comprising a Letters angle brackets "" symbol to indicate the composition. Double parentheses "" "" is used to indicate

a particularly dangerous situation. In a subsequent statement contained Treatment of hazardous substances, but only marked by the danger symbols and letters in parentheses. Furthermore, for a specific material, a Within chapters danger sign only once.

Hazard warning sign is not used for an amount less than 1L of common organic solvents, unless they have a special risk.

Detail of the disposal of the chemicals and dilution warning sign is not included in the scope of this standard.

Enterprises should be required by law to provide training and health and safety information.

Hazard symbol system used in this standard only provides the user with information, not the law of symbols, it is stipulated that each country GB/T 24792-2009/ISO 7766:2003