

**SN**

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

SN/T 2004.3-2005

---

**Determination of Chromium (VI) in electrical and electronic  
equipment—  
Part 3: 1,5-Diphenylcarbohydrazide spectrophotometric method**

Issued on Jul 18, 2005

Implemented on Jan 18, 2006

---

**Issued by** General Administration of Quality Supervision, Inspection and Quarantine  
of the People's Republic of China

## Contents

<b>Foreword</b> .....	1
<b>1 Scope</b> .....	1
<b>2 Summary for the methods</b> .....	1
<b>3 Reagents and materials</b> .....	1
<b>4 Equipment</b> .....	2
<b>5 Analytical steps</b> .....	2
<b>5.1 Sample preparation</b> .....	2
<b>5.2 Sample leaching</b> .....	2
<b>5.3 Color development</b> .....	3
<b>5.4 Standard solution</b> .....	3
<b>5.5 Determination</b> .....	3
<b>5.6 Results calculation</b> .....	3

# **Determination of Chromium (VI) in electrical and electronic equipment—**

## **Part 3: 1,5-Diphenylcarbohydrazide spectrophotometric method**

### **1 Scope**

This Part regulates the diphenylcarbazine spectrophotometry of the hexavalent chromium in the electrical and electronic products.

This Part is applicable to the determination of the hexavalent chromium in the electrical and electronic products.

### **2 Summary for the methods**

The alkaline leaching solution is adopted to leach the water-soluble and non-water-soluble hexavalent chromium in the samples. The hexavalent chromium in the leaching solution generates the amaranth complex after interaction with the acidic solution and diphenylcarbazine. The spectrophotometry shall be conducted at the wavelength of 540nm.

### **3 Reagents and materials**

Unless otherwise specified, only the analytically pure reagents and distilled water or deionized water or the water with certain purity can be used in the analysis.

**3.1** Nitrate: guarantee reagent

**3.2** Sulfuric acid: guarantee reagent

**3.3** Sodium hydroxide

**3.4** Anhydrous sodium carbonate

**3.5** Dipotassium phosphate

**3.6** Potassium dihydrogen phosphate

**3.7** Potassium dichromate: reference substance.

**3.8** Diphenylcarbazine

**3.9** Acetone.

**3.10** Sulfuric acid solution (1+9)

**3.11** Sulfuric acid solution (5mol/L): measure 31mL of nitric acid (3.1) and add it to 69mL of water and mix them. It is forbidden to prepare with the nitric acid with brown fumes.

---

---

## 完整版本请在线下单

或咨询：

TEL: 400-678-1309

QQ: 19315219

Email: [info@lancarver.com](mailto:info@lancarver.com)

<http://www.lancarver.com>

---

---

## 线下付款方式：

### 1. 对公账户：

单位名称：北京文心雕语翻译有限公司

开户行：中国工商银行北京清河镇支行

账 号：0200 1486 0900 0006 131

---

---

### 2. 支付宝账户：[info@lancarver.com](mailto:info@lancarver.com)

---

---

注：付款成功后，请预留电邮，完整版本将在一个工作日内通过电子 PDF 或 Word 形式发送至您的预留邮箱，如需索取发票，下单成功后的三个工作日内安排开具并寄出，预祝合作愉快！

---