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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3127-2012

Determination of organic peroxides in organic peroxide preparation. Liquid chromatography

有机过氧化物配制品中有机过氧化物的测定 液相色谱法

(English Translation)

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Foreword

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

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

This standard was drafted. People's Republic of China Ningbo Exit Inspection and Quarantine.

1 Scope

This standard specifies the method of liquid chromatography detection of organic peroxide formulations of organic peroxides.

This standard applies to the content of less than 50% of peracetic acid, dicumyl peroxide, cumene hydroperoxide and benzoyl peroxide four kinds Determination of organic peroxide with the corresponding products of organic peroxides.

2 Normative references

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

Laboratory use specifications and test methods GB/T 6682 Analysis

3 Method summary

Sample organic peroxide methanol - phosphoric acid solution to dissolve after filtration, after HPLC column separated by column derivatization reactions, in Hemin as a catalyst in the ammonium chloride/ammonia buffer solution system, the organic peroxide will hydroxyphenylacetic acid oxidation to produce Fluorescent 2,2'-dihydroxy - 5,5'-biphenyl acetic acid using fluorescence detector, external standard.

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4 Reagents and materials

Unless otherwise indicated, all reagents were of analytical grade water to comply with two water GB/T 6682 regulations.

4.1
ammonium chloride.

4.2
phosphoric acid.

4.3
Methanol, HPLC grade.

4.4
Aqueous ammonia (25% - 28%).

4.5
phosphoric acid aqueous solution (0.001mol/L). Weigh accurately 0.22g (accurate to 0.001g) phosphoric acid dissolved in a little water, water volume to 500mL.

4.6
Mixed solution. an aqueous solution of phosphoric acid (4.5) - methanol (2080, volume ratio).

4.7
pairs hydroxyphenyl acetic acid. purity >=98%, CAS. 156-38-7.

4.8
Hemin. Purity >=98%, CAS. 16009-13-5.

4.9
ammonium chloride/ammonia buffer solution. Accurately weigh 2.68g (accurate to 0.001g) ammonium chloride (4.1) was dissolved in a small amount of water was added 30mL Ammonia (4.4) were mixed water volume to 500mL.

4.10
derivatized reagents. Weigh were taken 0.0122g (accurate to 0.0001g) p-hydroxyphenyl acetic acid (4.7), 0.0052g (accurate to 0.0001g) hemin (4.8) was dissolved in 1L of ammonium chloride/ammonia buffer solution (4.9) to prepare a chloride containing 8 x 10-6mol/L of Heme and 8 x 10-5mol/p-hydroxyphenyl acetic acid chloride/ammonia buffer solution of L.

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4.11

Typical organic peroxides Standard. peracetic acid, dicumyl peroxide, cumene hydroperoxide, benzoyl peroxide, purity >=98%.

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