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SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 2910.3-2012

Identification method of irradiated food for export. Part 3: GC/MS

出口辐照食品的鉴别方法 第3部分：气相色谱-质谱法

(English Translation)

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Foreword

SN/T 2910 "Identification of irradiated food outlet" is divided into three parts.

--- Part 1. electron spin resonance spectroscopy;

--- Part 2. single cell gel electrophoresis (screening);

--- Part 3. Gas Chromatography - Mass Spectrometry.

This section SN/T 2910 Part 3.

This section drafted in accordance with the rules of GB/T 1.1 is given.

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

1 Scope

This section SN/T 2910 provisions of the lipid irradiated foods by GC/MS methods of 2-dodecyl cyclobutanone contained.

This section applies to the identification of irradiated food containing lipids chicken, pork, fish and the like.

2.1 Method summary

Using ethyl acetate as solvent extraction 2-dodecyl cyclobutanone, frozen fat by accelerated solvent extraction method, the SPE over a silica gel column Purification eluent was concentrated and dissolved constant volume, with the GC/MS instrument measured internal standard.

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2.2 Reagents and materials

All reagents unless otherwise specified, were of analytical grade, water re-distilled water.

2.2.1
ethyl acetate.

2.2.2
ether.

2.2.3
n-hexane.

2.2.4
acetonitrile.

2.2.5
diatomaceous earth.

2.2.6
Silicone LC-Si SPE column. 1g, 6mL or equivalent person.

2.2.7 2-cyclohexyl-cyclohexanone standards (2-cyclohexylcyclohexanone, C12H20O, CASN o.90-42-6). purity >=98%.

2.2.8 2-dodecyl cyclobutanone standard (2-dodecylcyclobutanone, C16H30O, CASN o.35493-46-0). purity >=98%.

2.2.9
eluent. diethyl ether/n-hexane solution (298, volume ratio).

2.2.10
internal standard stock solution. weigh the amount of 2-cyclohexyl-cyclohexanone standards, formulated with n-hexane at a concentration of 1mg/mL standard Stock solution, set -18 °C refrigerator.

2.2.11 2-dodecyl cyclobutanone standard stock solution. Weigh the appropriate amount of 2-dodecyl-butanone standards, formulated in a concentration of n-hexane Standard stock solution 1mg/mL, and set -18 °C refrigerator.

2.2.12
internal standard working solution. Apply the internal standard stock solution was diluted with n-hexane was 0.5μg/mL of 2-cyclohexyl-cyclohexanone working fluid, Set -18 °C refrigerator.

2.2.13 2-dodecyl cyclobutanone standard working solution. take the appropriate amount of

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2-alkyl cyclobutanone stock solution was diluted with n-hexane was 1.0μg/mL work for liquid, set -18 °C refrigerator.

3 Instruments and equipment

3.1
Gas chromatography - mass spectrometry. equipped with electronic bombardment source (EI).

3.2
homogenizer.

3.3
Accelerated Solvent Extraction System.

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