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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

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Determination of squalene in animals and vegetables

动植物中角鲨烯含量的测定

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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.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed and coordinated by the National Technical Committee for Biochemical Testing Standardization (SAC/TC387).

This document was drafted by: Shenzhen Institute of Metrology and Quality Inspection, Gansu Zhongshang Food Quality Inspection and Testing Co., Ltd., Henan Shunxin Inspection Shenzhen Agricultural Product Quality and Safety Inspection and Testing Center, Huizhou Food and Drug Inspection Institute, Sichuan Academy of Agricultural Sciences Analysis and Testing Center.

The main drafters of this document are: Li Bifang, Zhang Xieguang, Peng Zumao, Dan Kun, Zhu Li, Xiao Weimin, Lan Xiong, Deng Mengya, Yan Yuyu, Huang Xiuli, Wen Lan, Gai Zhengyan, Yuan Caixia, Li Haihua, Liu Qi, Yang Jun, Yang Xiaofeng, and Yang Guowu.

Determination of Squalene Content in Animals and Plants

1 Scope

This document specifies the method for the determination of squalene content in plants and animals.

This document applies to the content of squalene in samples such as fruits, tea, fish, shellfish, cereals, beans, nuts and seeds, and extracted oils. Determination.

2 Normative references

GB/T 6682

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Principle

Non-grease samples (grease samples were directly saponified and methylated) were hydrolyzed, extracted with ether-petroleum ether mixed solution, saponified and methylated, The product was extracted with n-hexane and determined by gas chromatography (GC) and external standard method.

5 Reagents or materials

Unless otherwise specified, all reagents used were of analytical grade and the water used was grade 1 water as specified in GB/T 6682.

5.1 Potassium hydroxide (KOH). 5.2 Sodium chloride (NaCl).

5.3 Anhydrous sodium sulfate (Na2SO4). 5.4 Hydrochloric acid (HCl). 5.5 Ether (C4H10O).

5.6 Petroleum ether. boiling range 30°C~60°C.

5.7 Methanol (CH3OH). chromatographically pure. 5.8 Ethanol (C2H6O) (95%).

5.9 n-Hexane (C6H14). chromatographically pure.

5.10 Squalene (C30H50), CAS No.. 111-02-4, purity >= 99.0%.

5.11 Hydrochloric acid solution (8.3 mol/L). Measure 250 mL of hydrochloric acid, dilute with 110 mL of water, mix well, and place at room temperature for 2 months.

5.12 Potassium hydroxide-methanol solution (1 mol/L). Dissolve 5.6 g potassium hydroxide in 100 mL methanol and mix well.

5.13 Saturated sodium chloride solution. weigh 360 g of sodium chloride and dissolve it in 1.0 L of water. Stir to dissolve and clarify for later use.