

ICS 67.120
CCS B 51



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

GB/T 44742-2024

**Determination of sea cucumber polysaccharides in sea
cucumber and its products-High performance liquid
chromatography**

海参及其制品中海参多糖的测定 高效液相色谱法

Issued on: October 26, 2024

Implemented on: May 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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.

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This document is proposed and coordinated by the China National Institute of Standardization.

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Determination of sea cucumber polysaccharides in sea cucumber and its products
High-performance liquid chromatography

1 Scope

This document describes a method for the determination of sea cucumber polysaccharides in sea cucumbers and their products using high performance liquid chromatography.

This document is applicable to the determination of sea cucumber polysaccharides in sea cucumbers and sea cucumber powder.

2 Normative references

GB/T 6682

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

A type of polysaccharide composed of sea cucumber fucoidan sulfate and sea cucumber chondroitin sulfate.

Note. Sea cucumber fucoidan sulfate is a linear sulfated polysaccharide formed by the polymerization of L-fucose; sea cucumber chondroitin sulfate is a type of polysaccharide with fucose side chains.

The substituted sulfated polysaccharide is mainly composed of D-acetylgalactosamine, D-glucuronic acid and L-fucose.

4 Principles

The sample was enzymatically hydrolyzed, potassium acetate precipitated, and acid hydrolyzed to obtain sea cucumber polysaccharide hydrolyzate. The fucose in the hydrolyzate was mixed with 1-phenyl-3-methyl-5-pyridinium chloride.

The product was separated by C18 column and determined by high performance liquid chromatography equipped with UV detector.

The content of sea cucumber polysaccharides in the sample was identified by the fucose content.

5.1 Reagents

5.1.1 Water. GB/T 6682, Grade 1.

5.1.2 Papain. Food grade, enzyme activity $\geq 100,000$ U/g.

5.1.3 Ethylenediaminetetraacetic acid (C₁₀H₁₆N₂O₈).

5.1.4 Cysteine hydrochloride (H-Cys-OHHCl).

5.1.5 Potassium acetate (CH_3COOK). 5.1.6 Chloroform (CHCl_3).

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