



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

GB 1886.312-2020

National food safety standard - Food additive - Chitin

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1 Scope

This Standard is applicable to the food additive chitin that uses shrimp shells, crab shells, horseshoe crab shells, squid bones, mullet bones as main raw materials and is processed through decalcification and deproteinization.

2.1 Molecular formula

$(C_8H_{13}NO_5)_n$ n: degree of polymerization, 1000~3000

3.1 Sensory requirements

Sensory requirements shall meet the requirements of Table 1.

Annex A Inspection methods

A.1 General Unless otherwise specified in this Standard, the purity of the reagents used shall be above the analytical purity. The standard titration solution used, standard solution for impurity determination, preparations and products shall be prepared in accordance with the provisions of GB/T 601, GB/T 602, and GB/T 603. The test water shall meet the requirements of grade 3 water in GB/T 6682.

The solution used in the test refers to an aqueous solution when it is not specified which solvent is used for preparation.

A.2 Identification test A.2.1 Reagents and materials A.2.1.1 1% acetic acid solution: Measure 1.0mL of acetic acid. Use water to set volume to 100mL.

A.2.1.2 Sulfuric acid.

A.2.1.3 Hydrochloric acid.

A.2.1.4 0.2% anthrone sulfuric acid solution: Weigh 0.2g of anthrone, to the nearest of 0.01g. Dissolve in 100mL of sulfuric acid. Prepare when it is required.

A.2.1.5 Sodium hydroxide solution: 1mol/L.

A.2.1.6 Citric acid solution: 0.1mol/L.

A.2.1.7 Trisodium citrate solution: 0.1mol/L.

A.2.1.8 Citric acid-trisodium citrate buffer (pH 5.0): Respectively measure 16.4mL of citric acid solution (0.1mol/L) and 23.6mL of trisodium citrate solution (0.1mol/L). Mix well. If the pH of the solution deviates, it needs to be adjusted to pH 5.0.

A.2.1.9 Ethylene glycol monomethyl ether.

A.2.1.10 Ninhydrin solution: Weigh 1.0g of ninhydrin, to the nearest of 0.01g.

Add 25mL of ethylene glycol monomethyl ether and 25mL of citric acid-trisodium citrate buffer. Mix well.

A.2.2 Identification method