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NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

GB 31645-2018

National Food Safety Standard - Collagen Peptide

食品安全国家标准

胶原蛋白肽

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State Administration for Market Regulation.

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National Food Safety Standard - Collagen Peptide

1 Scope

This Standard is applicable to collagen peptide products for the purpose of food processing.

2 Terms and Definitions

2.1 Collagen Peptide

Collagen peptide is a product that takes fresh animal tissues (including skin, bone, muscle, tendon and scale, etc.) that contain sufficient collagen as the raw material. It is produced through extraction, hydrolysis and refining; its molecular mass is lower than 10,000.

3 Technical Requirements

3.1 Raw Material Requirements

3.1.1 Raw materials that can be adopted:

- a) Fresh skins, bones, muscles, tendons and scales of cows, pigs, sheep and fish that are provided by slaughter houses, meat processing factories, canning factories and vegetable markets, and pass the quarantine inspection;
- b) Sheared flaw pieces or peeled off inner skins before the technique of leather tanning;
- c) Clean skeletal grains and naturally air-dried aggregates that are processed by skeletal grain processing factories;
- d) Edible aquatic fish gills, edible echinoderms, jellyfish, etc.

3.1.2 Raw materials that are prohibited:

- a) Any scraps after the technique of leather tanning;
- b) Skins, bones, muscles, tendons and scales of cows, pigs, sheep and fish that do not have a certificate of quarantine inspection;
- c) Animals' skins, bones, muscles, tendons and scales that have received

Appendix A

Test Method of Proportion of Collagen Peptide with Relative Molecular Mass Less Than 10,000

(High-performance size exclusion chromatography)

A.1 Method Summary

High-performance size exclusion chromatography shall be adopted in determination. Specifically speaking, adopt porous filler as the stationary phase; separate in accordance with the difference in molecular volume of the sample components; test under the condition of 220 nm ultraviolet absorption wavelength of peptide bond. Adopt exclusive data processing software (namely, GPC software) for the determination of relative molecular mass distribution; process the chromatogram and the data of standard substance and the sample. In accordance with relative molecular mass correction curve equation, calculate the relative molecular mass and distribution range of collagen peptide.

A.2 Reagents

A.2.1 Acetonitrile: chromatographic purity.

A.2.2 Trifluoroacetate: analytical purity.

A.2.3 Water: Grade-1 water stipulated in GB/T 6682.

A.2.4 Standard substances applied in relative molecular mass correction curve:

- a) Cytochrome C, MW12384;
- b) Aprotinin, MW6512;
- c) Bacitracin, MW1423;
- d) Amino acetic acid - amino acetic acid - tyrosine - arginine (MW451);
- e) Amino acetic acid - amino acetic acid - amino acetic acid (MW189).

A.3 Instruments and Equipment

A.3.1 High-performance liquid chromatograph: equipped with UV detector and chromatography workstation that contains GPC data processing software.

A.3.2 Mobile phase vacuum filtration degasser.

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