The Preparation and Application of Hyaluronic Acid

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ABSTRACT

Hyaluronic acid is a high-molecular-weight linear polysaccharide composed of repeating disaccharide units of D-glucuronic acid and N-acetylglucosamine linkaged by β(1-3) and β(1-4) glycosidic bonds. The average molecular weight is typically in the range 105 to 107 dalton. Hyaluronic acid is obtained usually from the solvent extraction of animal soft tissues that posses problems of quality and source instability. Traditionally, most hyaluronic acid has been produced by extraction of cock''s combs, although in recent years, attention has turned to Streptococcus fermentation due to the complexity of animal tissue sources and the consideration of production costs. The most important biological functions of hyaluronic acid. Ubiquitously distributed in the extracellular matrix and biological fluid .It provide cellular support , regulate cell adhesion , cell aggregation migration , proliferation and differentiation etc. Hyaluronic acid solution has special viscoelastic properties and can supply many physical functions in animal body, such as protection, lubrication and support. Because of hyaluronic acid special biocompatibility, extraordinary rheological property and moister-holding function, it has been used as biomedical, medical, health care food, cosmetic industry and else relevance field.

Keywords : hyaluronic acid ; biocompatibility ; preparation ; application

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