

〈原著〉

ムコ多糖多硫酸エステルの保湿能に関する研究 ——物理化学的試験——

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Studies on Water-Holding Function of Mucopolysaccharide Polysulfate — Test by Physico-Chemical Techniques —

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Abstract

It is expected that mucopolysaccharide polysulfate (MPS-PS) would have water-holding function because of its high sulfate content. We have investigated the water-holding function of this polysaccharide by physico-chemical techniques and compared it to other water-holding materials now used in cosmetics.

1. MPS-PS and hyaluronate (HA) have less water-absorbing capacity than glycerine, urea and D-sorbitol at high relative humidity but have more moisture-absorbing activities than urea and D-sorbitol at intermediate and low relative humidities.

The water-holding capacity of MPS-PS was less than that of glycerine, but the capacity was more than that of HA, urea and D-sorbitol at intermediate relative humidity and in silicagel desiccator.

These results suggest that MPS-PS was a more effective water-holding material than the other materials tested since its moisture-holding function was not influenced by changes in outside atmospheric humidity.

2. The water-holding function of hydrophilic ointments containing MPS-PS increased with increasing concentrations of MPS-PS in the range 0.1 to 1.0%.