

〈原 著〉

“市販ワセリンの特性値の変動とその軟膏剤の品質に対する影響について”

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Variation of Characteristics of Petrolatum Available on the Market and its Influence on the Quality of Ointments

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Abstract

To know the variation of characteristics of Petrolatum available on the market and its influence on the quality of topical pharmaceuticals, some kinds of physical measurements were performed. Drop point, bleeding value which evaluates the amount of low molecular fraction in Petrolatum, viscosity by Ferranti-Shirley viscometer, viscoelastic parameters by oscillation viscometer and yield value by spreadmeter were measured for 12 brands in all 35 lots. From the measurement values, the variation of each property and the extent of mutual correlation between properties were evaluated.

Three typical brands of high, moderate and low viscosity were chosen among the above brands and some ointments by model formulation were prepared. The model formulations of the ointments were composed of Petrolatum, propylene glycol (PG) dissolving Brilliant blue in place of a drug, and a surfactant in some cases.

For these ointments such pharmaceutical properties as bleeding value, viscosity, and extent of content uniformity were measured and the results were discussed comparing with the characteristics of Petrolatum used as pharmaceutical ingredients.

The dispersion of the pigment was generally better in the case where a surfactant was contained in the formulation than in the case where no surfactant was contained. Without any surfactant, the dispersion was better by use of the low viscosity Petrolatum at the lower weight percentage of PG in the formulation, whereas it became better by use of the high viscosity Petrolatum as the weight percentage of PG was increased.