

水素添加大豆リン脂質・水・エタノールゲルに対する プロピレングリコール及び他の添加物の影響^{1,2)}

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Effect of Propylene Glycol and Other Additives on Water-ethanol Gel Formed by Hydrogenated Soybean Phospholipids

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Summary

We have reported the preparation method of water-ethanol gel formed by hydrogenated soybean phospholipids. This time, the effect of additives was investigated with the gel which formula was phosphatidylcholine 3% and water:ethanol = 6:4. Propylene glycol (PG) could be added as third solvent of the gel if the ratio of water:ethanol was constant as 6:4, and improve the solubility of drug or change of spread touch. Glycerin brought the decrease of consistency of gel. 1 mM NaCl decreased the consistency of gel and 5 mM NaCl prevented forming gel. Also CaCl₂ destroyed gels, but glucose, non-electrolytes showed no effect on gel. The drugs for external use, thymol (1%), camphor (1%), prednisolone (0.1%) and ethyl aminobenzoate (1%) could be added in gel. The release of prednisolone to silicone rubber with isopropyl myristate was equivalent or superior to carboxyvinyl polymer gel. 1-Menthol (10%) and ketoprofen (1%) could be added when PG was present. But the gel with indomethacin separated with time.

Key words: gel; phosphatidylcholine; propylene glycol; glycerin; prednisolone; release test