

hand, the swelling ratio of films were smaller than hydrogels. Sod. alginate/ polycarbophil 974p film (sod. alginate : polycarbophil 974p = 7 : 3) containing rhEGF showed 1.80 times of the curative ratio compared with poloxamer sol/gel system. Conclusions : Hydrogel/film was evaluated as optimal when the mixing ratio of sod. alginate:polycarbophil 974p was 7:3. Film was better than hydrogel in ulcer healing effect. Accordingly, film (sod. alginate : polycarbophil 974p = 7:3) containing rhEGF might be applicable for the convenient treatment of buccal mucosal ulcers. Acknowledgement : This work was supported by Korean Research Foundation Grant (KRF-2001-005-F20014).

[PE1-29] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Evaluation of solid surface properties by analysis of liquid penetration rate into powder bed - Examination of surface free energy -

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Evaluation of solid surface properties is very important for formulation of solid dosage form, specially insoluble drugs. The contact angle of insoluble drugs was measured by the penetration rate into powder bed using Washburn equation and wicking method. From the measured contact angle data, the surface free energy value of pharmaceutical powders γ_s was divided and analyzed into the polar component, γ_s^p and the dispersion component, γ_s^d . Furthermore, the data was interpreted for acid part, γ_s^+ and base part, γ_s^- of surface free energy. The pharmaceutical powders such as DDB, UDCA and Phenytoin were used as model test samples of insoluble drugs. Octane, CCl₄, CH₂Cl₂, C₂H₅NO₂, DMF, ethylene glycol, formamide, and water were used as the test liquids.

[PE1-30] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Skin Permeation and Crosslinking of a Biological Tissue with Hydrolyzed Product of Gardeniae Fructus

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For the purpose to treatment of skin disease geniposide and hydrolyzed product of Gardeniae Fructus were studied on skin permeation and crosslinking of a biological tissue. Geniposide was hydrolyzed to genipin by β -glucosidase and the rate of hydrolysis was rapid on the condition of high temperature of medium and high concentration of β -glucosidase. The permeation enhancing effects of geniposide and genipin under cream and gel preparations were tested using Franz type diffusion cell and the skin of hairless mouse. Genipin was showed more lipophilic property and increased absorption ratio through the skin of hairless mouse than geniposide. The crosslinking of keratinous, epidermic and endodermic tissue with genipin under cream and gel preparation were observed using light microscopy. The remaining proportion of geniposide and genipin crosslinked with keratinous, epidermic and endodermic tissue were measured in the cream and gel preparations

[PE1-31] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Micronization of water-soluble pharmaceuticals with a low-temperature Bubble Dryer²

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Fine particles of water-soluble pharmaceuticals were prepared using a new micronization method, Carbon Dioxide Assisted Nebulization in a Bubble Dryer² (CAN-BD). The process utilized mixtures of CO₂ in aqueous solution at supercritical conditions to form an emulsion. The aerosols were dried with pre-heated nitrogen, and the