

drying chamber was operated at near atmospheric pressure. The dry particles were collected on membrane filter at the bottom of the drying chamber. Several processing parameters such as flow rate, temperature, pressure, solid concentration and processing scale were accessed using NaCl, human serum albumin, and granulocyte-colony stimulating factor as model pharmaceuticals. Free flowing micronized particles were obtained with high production yield. These particles can be used in the medical fields such as the effective pulmonary administration of pharmaceuticals and drug formulation research. ["This study was supported by a grant of the Korea Health 21 R&D Project, Ministry of Health & Welfare, Republic of Korea (02-PJ1-PG11-VN01-SV01-0036)."]

[PE1-32] [ 2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function ]

### **Anti-gelling Effect of Poly(methacrylic acid, methyl methacrylate) on Cefuroxime Axetil Composition**

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Cefuroxime axetil, a broad spectrum antibiotic, has been known to form a gelatinous mass in contact with aqueous media, which could lead to poor dissolution. Therefore, this study was conducted for removing the gelling phenomenon and thereby obtaining a favorable dissolution profile. We have found that the addition of poly (methacrylic acid, methyl methacrylate) could not only inhibit the tendency of cefuroxime axetil to form a gel but also showed the good dissolution profile compared to the formula without poly (methacrylic acid, methyl methacrylate). This effect can be obtained in the range of 15% to 100% based upon the amount of cefuroxime axetil. It is assumed that the anti-gelling effect of poly (methacrylic acid, methyl methacrylate) could be due to preventing cefuroxime axetil particles from bridging each other.

[PE1-33] [ 2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function ]

### **Enhanced Thermal Stability of a Novel Human Thrombopoietin Mutein under the Various Temperature Conditions**

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DWP40458 is a novel human thrombopoietin mutein with two additional N-linked glycosylation site. The thermal stability of DWP40458 in both solution and lyophilized form was studied in the temperature range of 4 - 50°C, compared with recombinant human TPO (rhTPO). When the aggregation or degradation pattern of DWP40458 and rhTPO solution was characterized by using SDS-PAGE, gel permeation chromatography (GPC) and reverse phase HPLC, it was found that thermostability of DWP40458 was significantly different to rhTPO in the temperature at 25, 30, 40, 50°C. For example, rhTPO was dropped by 2.9%, compared to DWP40458 of 65.0% after 16 days at 40°C. Furthermore, the difference of thermostability between DWP40458 and rhTPO was also observed in lyophilized form with the similar pattern of solution. However, the potency difference between DWP40458 and rhTPO at 50°C was not significant compared to physical instability in the normal mouse model. SDS-PAGE and GPC analysis have demonstrated that DWP40458 and rhTPO show different aggregation and degradation kinetic. Taken together, the results suggest that DWP40458 has enhanced physical thermostability compared with rhTPO.

[PE1-34] [ 2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function ]

### **Fibrous composite matrix of chitosan/PLGA for tissue regeneration**

**Shim In Kvong**<sup>o</sup>, Hwang Jung Hyo, Lee Sang Young, Cho Hyun Chul, Lee Myung Chul, Lee Seung Jin  
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Tissue engineering may be adequately defined as the science of persuading the body to regenerate or repair tissue that fail to regenerate or heal spontaneously. In the various techniques of cartilage tissue engineering, the