changed in the processing of large-scale production. Especially, their change has been caused by shearing stress rather than other factors. **Objective:** In this study, the effects of shearing stress on the physical properties of hydrophilic polymer solutions were investigated. **Methods:** Each concentration of hydrophilic polymers was determined within the range of the preparation of suspension. Hydrophilic polymer solutions were sheared with homogenizer. After shearing, viscosity, molecular weight and thixotropic area were measured with Brookfield digital viscometer, gel permeation chromatography (GPC), and rheometer. **Results:** As the shearing stress was increased, the viscosity of polymer solutions were decreased, but their molecular weights were not changed significantly except for 1% carbomer 971P solution. It indicated that the degradation of polymer might be promoted in proportion to the shearing stress and cause its viscosity and molecular weight decrease. In case of hydrophilic polymer solutions, the molecular aggregates may be broken down to reduce the viscosity of polymer solutions but the decrease of viscosity of 1% carbomer 971P solution may result from molecular weight. Additionally, the resistance of these polymers to shearing may be attributed to molecular rigidity.

[PE3-3] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

Preparation of WGA lectin-conjugated ellagitannin and its application

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Ellagitannins(ET), which are polyhydric phenol compounds found in plants, possess a variety of biological activities such as DNA-breaking effect, antibacterial effect, and especially antitumor activity to melanoma. The present study was performed to investigate the usefulness of wheat germ agglutinin(WGA), which specifically binds to the human melanoma cell, as a targeting protein. WGA lectin-conjugated ellagitannin(LET) and physical mixture of WGA-ellagitannin(PM) were prepared with zero-length method and non-specific binding, respectively. The binding ratio of both LET and PM with the molar ratio of 1:10 were about 70-80%, however it was significantly decreased after 24hrs except LET. In hemagglutination test and ELLA method, LET maintained its property as a lectin at room temperature. The IC_{50} value for topoisomerase II-DNA complexes induced by LET was 20㎍/㎖. The in vivo release of ET from LET as well as the binding capacity of LET to melanoma cell are underway in our lab.

[PE3-4] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

Charge Transfer Complexes Photosensitize the Activation of Molecular Oxygen.

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In this laboratory, it was found that simple aromatic compounds such as salicylic acid, p-aminobonzoic acid and many other drug molecules showed strong photosensitization reaction oxidizing potassium iodide or p-phenylenediamine dihydrochloride on irradiation with UVA in the presence of electron acceptor such as menadione, anthraquinone, benzoquinone and chloranil. Test with the continuous variation method revealed that the 1:1 complex between the electron donor and acceptor should be ascribed to the photosensitization reaction. The presence of 5mM DABCO, a singlet oxygen quencher completely blocked this reaction. These results suggest that the photosensitization reaction follows the Type II mechanism.

[PF1-1] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Dissolution test to compare omeprazole liquid formulations of tablet and capsule

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Omeprazole is usually administered as enteric-coated granules or tablets because of acid-labile characteristic. For children and adult patients who can not swallow, it can be mixed with water or other liquids after capsule is opened or tablet is grinded. This study performed to compare omeprazole liquid formulations of tablet and capsule. Omeprazole 20mg enteric coated granule in capsule were opened and 20mg enteric-coated tablets were grinded to be mixed with sodium bicarbonate solution, orange juice or water. Each liquid formulation was poured into dissolution tester, mixed with first solution(artificial gastric juice; pH 1.2) for two hours, then with second solution(artificial enteric juice; pH 6.8) for thirty minutes. pH was measured at different time for two and half hours. Sample aliquots were mixed with lansoprazole, internal standard, and injected to HPLC system.
As results, pH of sodium bicarbonate solution of omeprazole was significantly higher than that of orange juice or water in first solution (6.15-7.47 vs 1.16-1.23, $p<0.005$). Concentration of omeprazole granule or powder in sodium bicarbonate solution sustained significantly higher than powder in other solution (15.20-19.28 vs 0.30-0.82, $p<0.015$).
In conclusion, water or orange juice should be avoided as diluents because omeprazole is not stable at low pH. Granules from enteric-coated granules from capsule and powder from tablet in sodium bicarbonate solution was stable during dissolution test, which would be appropriate and recommended for patient who can not swallow solid preparations.

[PF1-2] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Levodopa response after unilateral Pallidotomy in advanced Parkinson 's disease

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In recent years, unilateral pallidotomy has been used in the symptomatic treatment of patients with advanced Parkinson's disease and motor complications. However, the procedure is being performed in the absence of follow-up data on its retained effects and levodopa response. The purpose of this study was to investigate the levodopa response after unilateral pallidotomy in advanced Parkinson's disease. Fifty patients who had had unilateral pallidotomy for advanced Parkinson's disease were investigated, retrospectively. The study consisted of 23 men and 27 women with a mean age of 58.6 years with mean disease duration of 7.22 years. Clinical evaluation of levodopa response was measured by means of the total levodopa equivalents. There was no statistically significant change in the total dose of levodopa equivalents. The mean total levodopa equivalents decreased from 728.86 mg/day to 611.12 mg/day after the surgery ($p > 0.05$, 95% CI). However, There was no need to increase the levodopa dosage to maintain improvement after pallidotomy in those patients who had previously required increased dosages due to loss of effectiveness of the drug. Also, patients were able to tolerate larger doses because of reduced parkinsonian symptoms. A set of rating scales (Hoehn and Yahr and Unified Parkinson's Disease Rating Scale), and timed tests improved significantly for whom medical therapy has failed ($p < 0.001$, 95% CI). In conclusion, pallidotomy provides a stable levodopa response and is a symptomatic treatment of patients with advanced Parkinson's disease.

[PF1-3] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Pneumonia and wound infection following renal transplantation