qualitative and quantitative analysis. This system includes a tungsten halogen lamp for light source, a fiber optics connected a light source, and a sample module to the microspectrometer. The size of spectrometer can be as small as 2.5 cm x 1.5 cm x 0.1 cm. Wavelength ranges can be chosen as 360-800 nm, 800-1100nm and 1100-1900 nm depending on the type of detector. The software consists of various tools for multivariate analysis and pattern recognition techniques. To evaluate the system, long and short-term stability, wavelength accuracy, and stray light have been investigated compared with conventional scanning type NIR spectrometer. This developed system can be sufficiently used for quantitative and qualitative analysis for various samples such as agricultural product, herbal medicine, food, petroleum, and pharmaceuticals, etc.

Poster Presentations - Field E1. Pharmaceutics

[PE1-1] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Possibility of Enteric Polymer to Sustain Absorption of Drug with Narrow Absorption Window

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Enteric polymers were used as a modulator for release of cefatrizine (CFT), which reported to be absorbed at the region of upper small intestine. Among those polymers, hydroxypropylmethylcellulose acetate succinate (HPMCAS) was chosen owing to the better formation of matrix tablet upon the simple physical pressure. In this tablet CFT was released wholly after about 2 hours in gastric fluid and more rapidly released when the tablet was transferred into intestinal fluid due to the faster erosion of enteric polymer.
As a result of in vivo absorption study using beagle dogs it was strikingly evident that there was no difference of total absorption of drug between the enteric matrix tablet and plain immediate-release capsule. They showed a little but significant difference in Tmax and insignificant Cmax. These results suggest that this enteric matrix tablet could displace the present immediate-release dosage form into sustained-release one with relatively prolonged action.

[PE1-2] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Development of Liposomal Formulations of a Camptothecin Derivative

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Camptothecin derivative, a synthetic and water-soluble analogue of topoisomerase I inhibitor, can be used in treatment of various solid tumors. To develop liposomal formulations of a camptothecin derivative, we prepared DPPC(dipalmitoylphosphatidylcholine) and DSPE-PEG2000(distearoyl-N-monoethoxy poly(ethyleneglycol) succinylphosphatidylethanolamine) liposome with a camptothecin derivative entrapped. DPPC liposome composed of DPPC/Chol (2:1 molar ratio) and PEGylated liposome composed of DPPC:Chol:DSPE-PEG2000 (22:11:2 molar ratio) were prepared by reverse-phase evaporation method. Formed liposome was characterized in terms of morphology, size and encapsulation efficiency. To elucidate steric stability of PEGylated liposome, the PEGylated liposome