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**Multicomponent Analysis of Urine of Dogs with Liver Diseases  
by High-performance Liquid Chromatography\***

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High-performance liquid chromatography (HPLC) on macroreticular anion-exchange resin has allowed the simultaneous and rapid analysis of multicomponent materials such as urine. We have analyzed urine samples of dogs with hepatic failure, in order to obtain information on the correlation between the components of urine and hepatic disorder and to establish a routine analytical method of urine, applicable to the diagnosis of hepatic diseases.

The dogs with liver diseases were experimentally prepared through one of the following treatments ; (1) Eck fistula by portal-caval anastomosis, (2) dimethylnitrosoamine-induced liver failure, and (3) total hepatectomy by operation. Eighteen peaks were numbered in chromatograms and the cross correlation coefficients of the intensities of every pair of the peaks were computed. The results indicate that the cross-correlation coefficients of HPLC peaks are quite different in the samples of experimental hepatic failures from those of the control group. These show that HPLC analysis of urine is useful in the diagnosis of the physiological state in liver dysfunction.

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