

[Jpn. J. Toxicol. Environ. Health, 40, 55-60 (1994)]

[Lab. of Hygienic Chemistry]

Determination of Blending Ratio of Cotton and Polyester Blended Yarn by Mean of Multivariate Analysis of Acid-Catalyzed Pyrolysis Gas Chromatography.

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Blended yarns composed of cotton and polyester were pyrolyzed with 10% HCl by Curie-point pyrolyzer, and the pyrolysates were subjected to gas chromatograph. The data were used for the multivariate analysis. Subsequently the accurate blending ratios of blended yarns were calculated from the principal score. This method made it possible to determine the blending ratios of very small amount of blended yarns, and made it easy to perform the forensic discrimination of the blended yarns.

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[Lab. of Hygienic Chemistry]

**Preparation and Antitumor Activities of Mitomycin C -
(1→6)-Branched (1→3)-β-D-Glucan Conjugate.**

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The conjugate of mitomycin C (MMC) with carboxymethylated schizophyllan (CMSPG) was synthesized by using 1-ethyl-3-(3-dimethylaminopropyl)-carbodiimide. The locations of carboxymethyl groups in CMSPG (DS of carboxymethyl groups: about 0.87) were predominantly determined at O-4, O-6, and O-4,6 positions in glucose. The conjugate showed successive monoexponential liberation, with a half-life of 7.2 h. The reduction in the number of leukocytes in the peripheral blood was suppressed by the intermittent administration of the conjugate. The conjugate maintained the ability to induce the tumor regressing factor and the neutrophil chemotactic factor in the serum.

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[Lab. of Pharmaceutics]

The alkaline phosphatase in human plexus chorioideus.

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The content of alkaline phosphatase isozymes in various brain regions was determined by monoclonal immunocatalytic assays. Plexus chorioideus in the brain, however, was found to express significant amounts of alkaline phosphatase activity. The purified isozyme from human plexus chorioideus demonstrated a single 70 kDa protein band on SDS-polyacrylamide gel which coincides with that of tissue-unspecific alkaline phosphatase from human liver. The isozyme expressed in the plexus was confirmed to be the tissue-unspecific alkaline phosphatase isozyme with regard to its reactivity with monoclonal antibodies specific for liver alkaline phosphatase, heat stability, and the inhibition by amino acids. This finding adds new dimensions to the functional role this isozyme may play.