

## Purification and Characterization of fibrinolytic enzymes from Vegetable worms

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A thrombus is a mass formed from the constituents of the blood within the vessels or the heart during life. The process of formation is known as thrombosis. A vegetable worm producing fibrinolytic enzyme was isolated from Chinese traditional medicinal mushrooms, *Cordyceps militaris* and *Paecilomyces tenuipes*. The fibrinolytic enzyme of *Cordyceps militaris* and *Paecilomyces tenuipes* was purified from fruiting body by -70 prechilled ethanol precipitation, ion-exchange chromatography, gel filtration. The purified fibrinolytic enzyme isolated, showed a molecular mass of 52 kDa and 46 kDa on SDS-PAGE and fibrin zymography. Analysis of fibrinolysis and fibrinogenolysis by SDS-PAGE have high substrate specificity. The hydrolysis rate of fibrinogen subunit was A, B and chain in order.

The optimum pH and temperature for the enzyme activity were pH 8.0 and 42, respectively. The enzyme activity was highly inhibited by Cu<sup>2+</sup>, Co<sup>2+</sup>, and

PMSF, indicating that the enzyme is a serine protease. The purified fibrinolytic enzyme activity is about 1.5 folds higher than that 1.0 unit of plasmin. These might be developed as a therapeutic agent for the treatment of thrombotic disease.

### Poster Presentations – Field D4. Analytical Chemistry

[PD4-1] [ 10/18/2002 (Fri) 13:30 – 16:30 / Hall C ]

#### Quantitative determination of pseudoephedrine in human plasma by reversed-phase liquid chromatography-electrospray ionization mass spectrometry

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A sensitive and selective reversed-phase LC-ESI-MS method to quantitate pseudoephedrine in human plasma was developed and validated. Phenacetin was used as an internal standard. Samples were prepared simply by acetonitrile precipitation without an evaporation step. Chromatographic separation was achieved on a XTerra MS C18 column (150 x 2.1 mm I.D., 3.5 μm particles), using gradient elution with 0.5% (v/v) trifluoroacetic acid (TFA) in water and 0.5% (v/v) TFA in methanol at a flow-rate of 0.1 ml/min. The detection utilized selected ion monitoring in the positive-mode at m/z 166.3 and 180.2 for the protonated molecular ions of pseudoephedrine and internal standard, respectively. The lower limit of quantitation of pseudoephedrine in human plasma was 10 ng/ml and good linearity was observed in the concentration range of 10-500 ng/ml. The reversed-phase LC-ESI-MS method was successfully applied for the quantitation of pseudoephedrine in human plasma from healthy volunteers dosed with pseudoephedrine hydrochloride tablets.

[PD4-2] [ 10/18/2002 (Fri) 13:30 – 16:30 / Hall C ]

#### Concentrations of Dextromethorphan in Urine and Blood of Two Crime Suspects

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Dextromethorphan (Romilar, DEX) is a synthetic analogue of codeine, is not classified as a narcotic and is used only for its antitussive effects in Korea. The daily intake by adults range up to 120mg. Usually in the case of