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## **Purification and Some Properties of Metallo Proteinase Essential for the Growth of *Pileus* and Basidiospore Fruit Body of *Flammulina velutipes***

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In order to explore the relationship between proteinase and fruit body basidiospore formation in mushrooms, the metallo proteinase from the fruit bodies of Enokitake (*Flammulina velutipes*) was purified and characterized. The proteinase was highly purified (194-fold) with a recovery of 5.90% and was most active at pH 6.5 toward casein, and stable only within the narrow range of pH 7.0-8.0 even under mild temperature (37°C, 30 min). The molecular weight and pI were found to be 18,000 and pI 6.0, respectively. The enzyme activity was inhibited by MK-I or synthetic metallo proteinase inhibitors such as ethylene diamine and *o*-phenanthroline. These characteristics were compared with those of

proteinases, and the possible roles of the enzyme are discussed.

**Keywords:** [Flammulina velutipes](#), [metallo proteinase](#), [protease](#), [basidiospore formation](#), [mushroom](#)

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