

## **Purification and Characterization of Antioxidative Peptides from the Sauce of Fermented Blue Mussel (*Mytilus edulis*)**

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### **ABSTRACT**

The use of antioxidants is one of the most effective methods of protecting unsaturated fatty acids against oxidation. Peptides and amino acids have been identified as natural and safe antioxidative substances in a range of applications. Mussel was autolyzed with 25% NaCl (w/w) for a period of six months at 20°C. Separation of the autolysate utilized different chromatographic techniques, ion-exchange chromatography on SP Sephadex C-25 column, gel filtration chromatography on Sephadex G-25 column and high performance liquid chromatography on C18 column. Antioxidative activity was tested using the degree of lipid peroxidation and the scavenging of 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical. The antioxidative activity of purified peptides was significantly higher than that of most commonly used natural antioxidant  $\alpha$ -tocopherol. Finally the N-terminal amino acid sequence was determined. Purified peptides exhibited the potency of scavenging of hydroxyl and DPPH radicals further ratifying it a potent natural antioxidant.