

Functional Properties of Dioscorin, a Soluble Viscous Protein from Japanese Yam (*Dioscorea opposita* Thunb.) Tuber Mucilage *Tororo*

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A soluble viscous protein was purified from yam (*Dioscorea opposita* Thunb.) tuber mucilage *tororo* by chromatographic steps, and its functional properties were estimated. The purified dioscorin having the molecular weight of about 200 kDa exhibited high scavenging activities against hydroxyl radicals ($IC_{50} = 195.1 \mu\text{g/ml}$) and superoxide anion radicals ($IC_{50} = 92.7 \mu\text{g/ml}$). Moreover, it showed extremely high angiotensin I-converting enzyme inhibitory activity ($IC_{50} = 41.1 \mu\text{g/ml}$). The results suggested that yam *D. opposita* tuber has a wide spectrum of strong antioxidative and antihypertensive activities and it could be utilized as a source of natural antioxidant.

Key words: Japanese Yam Tuber Mucilage, Viscous Protein, Functional Property