

P-134 **Immunological Approachment for Monitoring the Conformational Changes of Bovine Myosin Molecules by Heating in the Different pH Conditions**

Juwoon Lee\*, Jongheum Park, Cheonjei Kim and Heuynkil Shin<sup>1</sup>

Dept. of Animal Product Processing, Konkuk Univ.

<sup>1</sup>School of Biocience and Food Technology, Handong Univ.

**ABSTRACT**

pH in raw meat material affects to water binding capacity and emulsifying ability products. So, there have been usages of hot-boned meat or addition of some kinds of ph In this research, we studied that how myosin molecules did structurally change under pH conditions, 5.5, 6.0 and 6.5 by Ci-ELISA formatted with three polyclonal antibodies bovine myosin whole molecules (MWM), heavy meromyosin S-1 (S-1) and light meromyosin (LM) as antigens (Ags). Myosin solution (1 mg/ml) in high salt buffer, 0.6 M NaCl, Na-phosphate buffer, pH 5.5, 6.0 or 6.5, was heated from 25 to 80°C. When pH dependent Immunoreactivities (IRs) between all Abs with myosin molecules heated at 70°C also determined. However, compared with results from pH 7.0 (Lee et al., 1997), IRs from treatments at pH 5.5 and 6.5 heated at 30°C did not appear many differences except for that from pH 5.5. In the lower pH condition, calibration curves from all treatments heated at 50°C appeared more decrease of IR. Conclusively, We decided that myosin molecules are denatured by treatment under pH 6.0 below more easily and thermal denaturation with conformational change is progressed lower at temperature than at 30°C.

**Key words :** Thermal treatment, conformational change, bovine myosin, pH, and Ci