

## E307

### Bioluminescent Assay Method to Determine Lipid Autooxidation

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A new luminescence based, highly sensitive, rapid, and easy assay method of measuring autooxidation of lipids was developed using bacterial luciferase reaction. Fatty acid hydroperoxide formed from autooxidation of fatty acid was digested into alkyl aldehyde with transition metal ion ( $\text{Co}^{2+}$ ,  $\text{Mn}^{2+}$ , or  $\text{Fe}^{2+}$ ) in alkaline condition, and then quantize the released aldehyde (especially nonanal and its derivatives) with bacterial bioluminescence reaction of *Vibrio harveyi* luciferase. This method was compared with the peroxide value determination using sodium thiosulfate titration.

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### Production of Monoclonal Antibodies to *Chlamydia trachomatis* and Its Properties

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Hybrid cell lines that produce monoclonal antibodies to *Chlamydia trachomatis* were prepared by the fusion of mouse myeloma cells (SP2/0-AG14) with lymphocytes of Balb/C mice which were immunized with *C. trachomatis* serotype F, H, and K, respectively. From these hybrid cell lines, we identified five distinct MAbs by using the methods of enzyme-linked immunosorbent assay and immunoblot assay. These MAbs were commonly reacted with epitopes on the major outer membrane protein, and produce of each of the chlamydial antigens with molecular mass of 10-, 29-, and 70 KDa, approximately. Also, these MAbs showed species and genus specificity in an immunoblot assay.