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Antioxidation Effect of *Platycodon grandiflorum* fractions on the Liposomal Phospholipid Membrane
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The effect of antioxidant activity of *Platycodon grandiflorum*(PG) on the liposomal phospholipid membrane was investigated by spectrophotometry. Membrane oxidation causes damage to the membrane fluidity and permeability. It brings further destruction of the sustenance of biological homeostasis. In addition to, it was related to several disease, ageing and carcinogenesis. The sample PG was extracted and fractionated to five different types, butanol(PGMB), ethylacetate(PGMEA), ethylether(PGMEE), hexane (PGMH) and methanol(PGM) fractions. The oxidation index of PGM extract and PGMH, PGMB fractions exhibited weaker antioxidant activity compared with α -tocopherol in oxidized dilinoleoylphosphatidylcholine(DLPC) liposomes. The oxidation index of PGMEA and PGMEE fractions exhibited stronger antioxidant activity than those of the other fractions. The oxidation index of PGMEA and PGMEE showed the stronger antioxidant activity than that of α -tocopherol in oxidized DLPC liposomes, However, showing similar antioxidant activity compared with butylated hydroxytoluene(BHT) which has well known as a potent antioxidant. These results indicate that potentially bioactive substances in PGMEA and PGMEE fractions have a kind of function as potent antioxidants against phospholipid membrane oxidation.

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***Bacillus* sp. 유래 효소 System에 의한 Xanthan gum 가수분해 올리고당 조제**
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본 연구실에서는 *Bacillus* sp. 유래 β -Mannanase 생산을 위한 배지의 최적화조건, 정제법, 정제효소의 효소화학적 성질 규명 및 Galactomannan에 대한 기질특이성을 규명하여 발표하였다. 본 연구에서는 기질농도별 Xanthan gum에 대한 가수분해 pattern을 Thin Layer Chromatography법으로 확인한 결과 중합도 2, 3, 4, 5, 7의 올리고당의 주요 spot를 확인하였고, Activated carbon column chromatography법 및 Sephadex G-15 column chromatography법에 의해 분리하여 FACE(Fluorophore Assisted Carbohydrate Electrophoresis)법에 의해 동정하고 각 중합도별 올리고당에 대한 활용기술에 대하여 검토하였다.