content was not significantly different, pH of Doenjang made with *P. japonica* was lower than control group and decreased continuously according to the fermentation time. Amino nitrogen continuously increased till 60 days and decreased slightly on 90 days. Value of L, a, b in Color decreased with proportion to fermentation period and L, a, b value of Doenjang made with *P. japonica* was lower and in particular that of Doenjang made with *P. japonica* powder was lowest. From the result of sensory evaluation test, the color of control group was similar to “yellow” but that of Doenjang made with powder of *P. japonica* was close to “dark brown” and that of Doenjang made with extract of *P. japonica* was darker than that of control group and the preference of dark color was low. Texture was “glossy and smooth” in all and preference was high. In salty taste, Doenjang by *P. japonica* addition was stronger and Doenjang made with extract was stronger than that made with powder. Doenjang made with powder of *P. japonica* was weaker than other groups in sweet taste. In flavor and overall preference, Doenjang made with *P. japonica* was scored lower slightly in than control group and Doenjang made with powder of *P. japonica* was the lowest in score.

**Key words**: Paecilomyces japonica, Doenjang, Quality Characteristics, Extraction, Sensory evaluation

[P-103]

누에 동충하초(Paecilomyces japonica)를 참가하여 제조한 고추장의 품질특성 변화에 관한 연구

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Change in quality properties of the Kochujang prepared with the powder of *Paecilomyces japonica* and extract of *P. japonica* by different solvents were investigated during 90 days of fermentation at 20°C. The moisture content was not significantly different, pH of Kochujang made with *P. japonica* was lower than control group and decreased continuously according to the fermentation time. Amino nitrogen continuously increased till 60 days and decreased slightly on 90 days. Amino nitrogen of Kochujang made with *P. japonica* was higher than control group and was highest on 30 days and 60 days by 179.2mg% and 282.2mg% respectively. Value of L, a, b in Color decreased with proportion to fermentation period and L, a, b value of Kochujang made with *P. japonica* was lower and in particular that of Kochujang made with *P. japonica* powder was lowest. From the result of sensory evaluation test, the color of control group was similar to “clear red” but that of Kochujang made with powder of *P. japonica* was close to “dark reddish brown” and that of Kochujang made with extract of *P. japonica* was darker than that of control group and the preference of dark color was low. Texture was “glossy and smooth” in all and preference was high. In salty taste, the Kochujang by *P. japonica* addition was stronger and Kochujang made with extract was stronger than that made with powder. In hot taste, the Kochujang made with *P. japonica* was weaker than control group and the Kochujang made with *P. japonica* was scored higher in flavor than control group and Kochujang made with powder of *P. japonica* was the highest in score. In overall preference, the Kochujang made with *P. japonica* was better than control group like the result of flavor but especially Kochujang made
with water extract of P. japonica among the extract was best one unlike the result of flavor.

Key words : Paecilomyces japonica, Kochujang, Quality Characteristics, Extraction, Sensory evaluation

[P-104]
유동셀의 품질유지를 위한 포장기술에 관한 연구

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본 연구는 국내 유동셀의 포장재로 널리 이용되고 있는 저배포장재와 합성수지계열의 PE 및 AL포장재의 저장기간에 따른 품질특성을 구분하고, 포장재의 투습도 5~700g/m²범위의 4수준에 대하여 함수율, 중량 및 지방산가의 변화를 측정하여 포장재의 적정 투습도를 결정하는데 목적이 있다.

저배, PE 및 AL포장재의 저장 4주 후의 중량은 7.8, 0.1 및 1.5%감소하였으며, 함수율은 저배포장의 경우 3.7%(w.b.)감소하였다. 지방산가는 저장 4주 후에 저배포장은 9.4, PE포장재는 42.0, AL포장재는 16.8(mg KOH/100g)로 나타났다. 저장온도 20 및 30°C에서의 포장재 투습도에 따른 중량, 함수율 및 지방산가의 변화를 고려했을 때 130~210g/m²가 적정한 것으로 나타났다.

[P-105]
가정용 냉각법을 이용한 쌀의 저온저장특성

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가정에서는 쌀을 소비할 때 긴기 조건 특이, 하절기와 같이 긴기 온도가 높을 경우 함수율 감소, 저장시간 증가 및 해충발생 등 품질 손상이 급격히 발생한다. 따라서, 가정에서 쌀을 소비할 때 쌀의 품

본 연구는 가정용 냉각법을 이용하여 저온에서 쌀을 저장하면서 저장기간 중 품질변화를 측정하게 되는 저온저장특성을 구명하는데 목적이 있다. 가정용 냉각법은 매직 쓰당고(MRH-2501, Tongyang)를 이용하였으며, 대조구로 상온(25°C)에서 쌀을 14주간 저장하면서1주일 간격으로 시료를 채취하여 함수율, 저장시간, 색도 및 표면변화를 측정하였다. 저장기간이 경과함에 따라 쌀의 함수율은 냉각법통의 경우 1.5%(w.b.), 상온저장의 경우 2.1%(w.b.)가 감소하였다. 지방산기는 냉각법에서 저장 14주 후 15.1(mg KOH/100g)로 나타났고, 상온저장에서는 8주 후 24.2, 14주 후에는 40.9(mg KOH/100g)로 급격히 증가하였다. 색의 색도는 저장기간이 경과함에 따라 증가하는 경향으로 나타났으며, 상온저장이 냉각법에 비해 현저히 높게 증가하였으며, 저장 8주 후부터는 유의적인 차이를 나타내었다. 쌀의 표면에 세포벽은 냉각법에 비해 상온저장에서 저장기간이 경과함에 따라 두려하게 나타났다.