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| Thesis Title    | Effect of Storage Temperature and Time on Lipid Content and Physico-Chemical Properties of Brown Rice cv. Khao Dawk Mali 105 |
| Thesis Credit   | 12                                                                                                                           |
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| Department      | Postharvest Technology                                                                                                       |
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#### Abstract

The moisture content of newly harvested paddy cv. Khao Dawk Mali 105 was reduced to 15.12% and packed in polypropylene bags (70 micrometer thickness). The bags were stored at 25 and 37 °C for 7 months. The results showed that the moisture content of paddy stored at 37 °C dramatically decreased to 12.12 % whereas the rice stored at 25 °C remained stable. The percentage of the head brown rice increased at both storage temperatures in which the paddy stored at 37 °C provided a higher percentage of head brown rice than that of 25 °C. High temperature (37 °C) storage could enhance color described as a *b* value, on hull and brown rice than low temperature storage (25 °C). Total lipid content of brown rice did not differ when subjected to both storage temperatures. Total free fatty acids content of brown rice stored at both storage temperature decreased lower the percentage of free fatty acids at 25 °C was higher than 37 °C. Although gel consistency of paddy kept at 37 °C was lower than that at 25 °C, peak viscosity of paddy stored at 25 °C was slightly increased for the whole period. The peak viscosity of paddy stored at 37 °C increased at the first month before gradually declined during the rest of the storage. High storage temperature gave higher final viscosity and setback values than those of the low storage temperature. In addition, pasting temperature of brown rice stored at 37 °C was higher than at 25 °C.

**Keywords :** Rice/ Quality/ Storage/ Lipid/ Free fatty acids