

**STUDY OF THE ANTIOXIDANT ACTIVITY AND STABILITY
IN LOCAL PURPLE EGGPLANT AND JAPANESE PURPLE
EGGPLANT (*Solanum melongena* L.)**

(xiii + 69 pages, 8 figures, 5 tables, 14 appendixes)

Eggplant (Solanum melongena L.) is one of the fruits that contain antioxidant. The varieties that are commonly consumed in Indonesia are the local purple eggplant and Japanese purple eggplant. Studies on the antioxidant in eggplants are still limited. Basic for this research is the activity study and the stability of the antioxidant from the two varieties of eggplants towards temperature and heating time. Both varieties were disintegrated through an extraction process. The extraction took place in a shaker for 24 hours with the ratio of sample to solvent 1:4. The best extract from local purple eggplant has the IC_{50} value of 117,67 mg of extract/100 gram of sample. The phenolic content 2,76 mg QE/100 gram sample. The best extract from Japanese purple eggplants has the value IC_{50} 221,91 mg extract/100 gram sample, phenolic content 20.48 mg GAE/100 gram sample, and flavonoid content 1,39 mg QE/100 gram sample. The antioxidants activities from local and Japanese purple eggplants were influenced by temperature and heating time. Antioxidant activities, phenolic content, and flavonoid content would increase with the increase of the heating temperature on local purple eggplant and decrease with longer heating time. Antioxidants activities on Japanese purple eggplant increase with the increase of the heating temperature but the flavonoid content decrease. The phenolic content on Japanese purple eggplant will increase until the temperature hits 70 °C and decrease on 90 °C. The heating time has no influence on the antioxidant activities, phenolic content and the flavonoid content.

Keywords : purple eggplant, local purple eggplant, Japanese purple eggplant, antioxidant, heat treatment.

References : 25 (1989 – 2012)