Contribution ID: **74** Contribution code: **S3 Accelerators and Synchrotron Radiations** Type: **Poster Presentation**

Development of a 6 MeV Electron Beam Energy Linac for Fruit Sterilization

Treatment on fresh fruits, meet and food with ionizing radiation has been frequently chosen to destroy harmful pathogenic microorganism and oriental fruit flies. Electron beam linear accelerator (Linac) is commonly used as the source of irradiation to produce photon and electron in megavolt energy. A 6 MeV Linac designed for medical therapy has been developed for fresh fruit sterilization at Synchrotron Light Research Institute (SLRI). Physical design, fabrication, testing, and installation of the 6 MeV Linac with major auxiliary systems will be described in this paper. It is the first system designed, fabricates, and tested in-house for the fruit sterilization application at SLRI. This paper will also present results of beam dynamics in the standing wave Linac structure. Measurement results of electron beam after subassemblies are presented.

Author: Dr CHUNJAREAN, Somjai (Synchrotron Light Research Institute, SLRI)

Co-authors: Dr YACHUM, Nattawat (Synchrotron Light Research Institute, SLRI); Mr PHACHEERAK, Wiwek (Synchrotron Light Research Institute , SLRI); Dr KOKKRATHOKE, Surapong (Synchrotron Light Research Institute, SLRI); Mr PONGAMPAI, Surachai (Synchrotron Light Research Institute, SLRI); Mr KULTHANASOMBOON, Preecha (Synchrotron Light Research Institute, SLRI); Dr JUMMUNT , Siriwan (Synchrotron Light Research Institute, SLRI); Dr KLINKHIEO, Supat (Synchrotron Light Research Institute, SLRI); Mr MANASATITPONG, Keerati (Synchrotron Light Research Institute)

Presenter: Dr CHUNJAREAN, Somjai (Synchrotron Light Research Institute, SLRI)

Session Classification: S3 Accelerators and Synchrotron Radiations

Track Classification: Accelerators and Synchrotron Radiations