

## Proceedings 2015 International Conference on Science and Technology

Faculty of Science and Technology, Rajamangala University of Technology Thanyaburi, Thailand

November 4-6, 2015

IEEE Xplore

The International Conference on Science and Technology

The main topics of TICST2015 include:

Physics, Earth Science, and Applied Physics

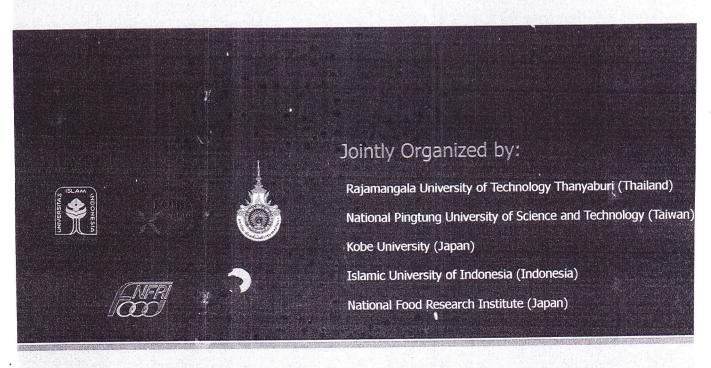
Mathematics and Statistics

Chemistry and Chemical Technology

Computer Science and Information Technology

Biology and Biotechnology

Applied Science and other related topics









## Effect of Cooking Methods on Gamma-Aminobutyric Acid (GABA) and Anthocyanin Content of Germinated Brown Rice (Leumpua Purple Ssticky Rice)

Saowapa Chumanee
Division of Chemistry, Faculty of Science and
Technology,
Phetchabun Rajabhat University, Mueang,
Phetchabun 67000, Thailand,
saowapa@pcru.ac.th

Ruchira Khoomsab Chanai Munkalaratanasri Division of Chemistry, Faculty of Science and Technology, Phetchabun Rajabhat University, Mueang, Phetchabun 67000, Thailand, chanai001@hotmail.com
Division of Chemistry, Faculty of Science and
Technology,
Phetchabun Rajabhat University, Mueang,
Phetchabun 67000, Thailand,
saowapa@pcru.ac.th

Sompong Sansenya
Department of Chemistry, Faculty of Science,
Rajamangala University of Technology,
Thanyaburi, Pathum Thani 12110, Thailand,
sompong biochem@yahoo.co.th

Abstract—The germinated brown rice"Lampua Purple Sticky Rice" is a normal rice type of that rich in GABA and anthocyanin content. This study was investigated the GABA and anthocyanin content of different cooking methods of germinated Lampua Purple Sticky Rice from community economic Phetchabun Province, which used as ingredient of Flake rice and Chinese tamale (Bacang). Two different cooking methods of germinated brown rice were evaluated, (First): Flake rice, the sample was soaked in water, steamed, sun dried and finally roasted, (Second) Chinese tamale (Bacang), the sample was soaked in water, fried, and finallyboiled and the control was native rice sample (mean not pass through cooking method). The GABA content was 116.46 52.17 and 46.23 mg/kg of rice sample of Native rice, Flake rice and Chinese tamale respectively and while the content of anthocyanin was 657.50 155.80 and 16.97 mg/kg of rice sample of Native rice, Flake rice and Chinese tamale respectively. The result indicated that the lost of GABA and anthicyanin content were shown of two cooking methods when compared to Native rice sample but highest decreased in the Chinese tamale method which presented decreased of 60.31% and 97.42 % of GABA and anthocyanin content respectively.

Keywords—Gamma-Aminobutyric Acid (GABA), Anthocyanin, Germinated brown rice, Thai Purple Sticky Rice.

## ACKNOWLEDGMENT

This project was supported by the Office of the National Research Council Thailand (2014), **Phetchabun**Rajabhat University and Rajamangala University of Technology, Thanyaburi.





Date: August, 31 2015

Dear Sompong Sansenya,

We are pleased to announce that your abstract has been accepted for a poster presentation at The International Conference on Science and Technology (TICST2015).

Paper ID: 142-231-1 (Poster Session)

Title: Effect of Cooking Methods on Gamma-Aminobutyric Acid (GABA) and Anthocyanin Content of Germinated Brown Rice (Leumpua Purple Ssticky Rice)

Author(s): Saowapa Chumanee, Ruchira Khoomsab, Chanai Munkalaratanasri, Sompong Sansenya

The Rajamangala University of Technology Thanyaburi (Thailand) has the pleasure of

The Rajamangala University of Technology Thanyaburi (Thailand) has the pleasure of inviting you as poster presenter delegate to TICST 2015: The International Conference on Science and Technology 2015 to be held in Pathum Thani on November 4-6, 2015.

We look forward to your participation in the TICST 2015: The International Conference on Science and Technology 2015.

Sincerely,

Nipat J.

Dr. Nipat Jongsawat
Technical Program Chair &
Organizing Committee member
TICST 2015 Conference

## Contact:

Conference Organizer: Faculty of Science and Technology, RMUTT

E-Mail: ticst@rmutt.ac.th

Call: (662) 549-4164, 549-4152; Fax: (662) 549-4164

Faculty of Science and Technology, RMUTT, 39 Moo 1, Rangsit- Nakhonnayok Road, Thanyaburi, Pathum Thani 12110.