

รายงานสรุปผล
การเข้าร่วมนำเสนอผลงานทางวิชาการระดับชาติ
เสนอต่อ
กองทุนคณะเกษตร หมวตวิชัย

.....

ชื่องานประชุม: The 15th ASEAN FOOD Conference– Vietnam 2017

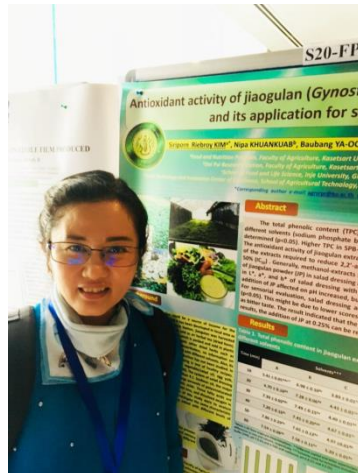
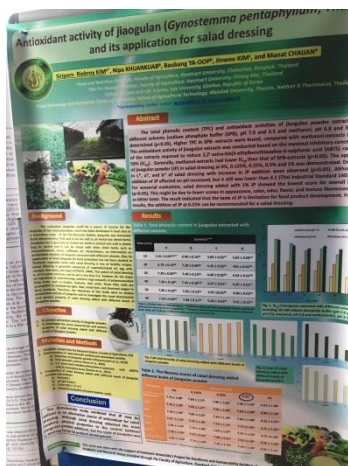
ระยะเวลาที่ประชุม: วันที่ ๑๔-๑๗ พฤศจิกายน ๒๕๖๐

ประเทศที่จัดประชุม: เมืองโฮจิมินห์ ประเทศสาธารณรัฐสังคมนิยมเวียดนาม

ชื่อผลงานวิชาการ: Antioxidant activity of jiaogulan (*Gynostemma pentaphyllum*, Thunb.)
ที่นำเสนอ: and its application for salad dressing

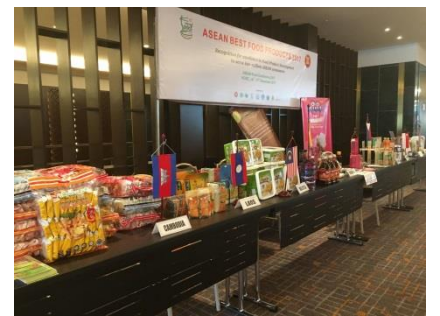
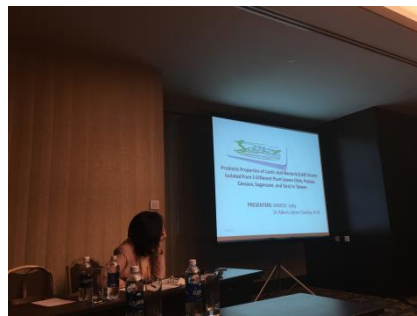
ผู้นำเสนอผลงาน: ผศ.ดร.ศิริพร เรียบร้อย คิม

ภาพแสดงการนำเสนอผลงาน

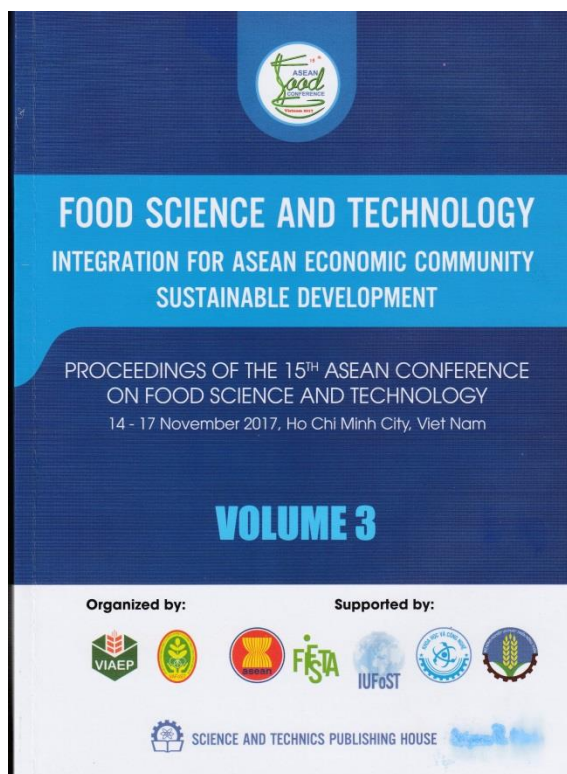


นำเสนอผลงานวิจัยภาคโปสเตอร์

ภาพแสดงการเข้าร่วมกิจกรรมในงานประชุม



เอกสารประชุมวิชาการ (Proceedings)



Proceedings of the 15th ASEAN Conference on Food Science and Technology xi

Characterization of Pectin from Pomelo (<i>Citrus maxima</i>) Peel Using Microwave Assisted Extraction	174
Noriessa L. Guillermo, Renz Michael R. Valdez, Shane D.C. Fernandez, Nolan Joseph B. De Los Santos	
A Comparative Study of Batch and Continuous Drying of Hydrothermally Treated Glutinous Rice Flour-Xanthan Gum as a Functional Additive in Gluten-Free Noodles	182
Yun Yun Xu, Jingwen Cai, Mann Na Loong	
The Ultrasonic-Assisted Extraction of Fucoxanthin from <i>Sargassum Polycystum</i>	192
Nguyen Duc Tien, Pham Anh Tuan, Nguyen Thi Thanh Huyen, Nguyen Thi Dung	
Ultrasonic Osmotic Dehydration Properties of Courgette	198
Mohsen Mokhtarian, Hamid Tavakolpour, Falemeih Koushki	
Introducing New Design of Dragon Fruit Washer: RT14.0	205
Lam Tran Vu, Le Minh Hung	
Ultrasonic Extraction of Star Gooseberry (<i>Phyllanthus acidus</i>) Juice with High Antioxidant Level	211
Dao Thi Tuong Vy, Tran Thi Thu Tra, Ton Nu Minh Nguyet, Le Van Viet Man	
Ultrasound-Assisted Extraction of Protein from Brackish-Water Algae <i>Chaetomorpha</i> sp.	217
Nguyen Minh Hai, Hoang Kim Anh, Le Van Viet Man	
Determining Optimum Working Conditions of the VBS-16 Cassava Waste Pulp Press Machine	225
Lam Tran Vu, Dao Vinh Hung	
Session 20. FOOD PRODUCT DEVELOPMENT	
The Onion Extract Fortified into Herbal Tea Drink and Its Properties	237
Panida Banjonginsiri, Nowwapan Noojuy, Supaporn Lekhavit, Wipaporn Phatvoj, Tuanta Sematong, Jirawat Saliangkomsorakrai, Patnaree Sirinukulwatana, Kritalak Pasakawee	
Making Instant Cendol (Traditional Food) Using Sage, Tapioca and Hunkwe (Mungbean) Flour with Rosella as Dye	244
Mulyati M.Tahir, Amran Laga, Milda Nugrahaeni Pernalasari	
Development of Cooked, Chilled, Irradiated Vacuum-Packaged Pancitbilon	253
Alyssa Erika L. Borras, Maria Leonora d. Francisco	
Flour Characteristics and Bread Qualities with Turmeric Root (<i>Curcuma longa</i> L.) Powder Substitution	260
Nguyen Thi Cam Lien, Nguyen Ngoc Thanh Tien, Pham Van Hung	
Antioxidant Activity of Jaegeria (<i>Gynostemma pentaphyllum</i>, Thunb.) and Its Application for Salad Dressing	267
Siriporn Riebroy Kim, Nipa Khuanub, Baubang Ya-oop, Jinwoo Kim, Manat Chaijan	
Comparative Study on Characteristics of Moo-som, a Thai Style Fermented Slice-Pork, Added with Rice and Glutinous Rice	274
Prassanee Tubbiyam, Siriporn Riebroy Kim, Jinwoo Kim, Manat Chaijan	



**FOOD SCIENCE AND TECHNOLOGY: INTEGRATION FOR ASEAN
ECONOMIC COMMUNITY SUSTAINABLE DEVELOPMENT**

Proceedings of the 15th ASEAN Conference on Food Science and Technology
November 14-17, 2012 Ho Chi Minh City, Vietnam



**Antioxidant Activity of Jiaogulan (*Gynostemma pentaphyllum*,
Thunb.) and Its Application for Salad Dressing**

Siriporn Riebroy Kim^{a*}, Nipa Khuankuab^b, Baubang Ya-oop^b,
Jinwoo Kim^c, Manat Chaijan^d

^aFood and Nutrition Program, Faculty of Agriculture, Kasetsart University, Bangkok, Thailand

^bDoiPui Research Station, Faculty of Agriculture, Kasetsart University, Chiang Mai, Thailand

^cSchool of Food and Life Science, Inje University, Gimhae, Republic of Korea

^dFood Technology and Innovation Center of Excellence, Department of Agro-Industry,
School of Agricultural Technology, Walailak University, Thasala, Nakhon Si Thammarat, Thailand

*Corresponding author e-mail address: siriporn.r@ku.th

Abstract

The total phenolic content (TPC) and antioxidant activities of jiaogulan powder extracted with different solvents (sodium phosphate buffer (SPB), pH 7.0 and 3.5 and methanol, pH 6.8 and 3.5) were determined ($p < 0.05$). Higher TPC in SPB-extracts were found, compared with methanol-extracts ($p < 0.05$). The antioxidant activity of jiaogulan extracts was conducted based on the maximal inhibitory concentration of the extracts required to reduce 2,2'-azino-bis (3-ethylbenzthiazoline-6-sulphonic acid (ABTS) radicals to 50% (IC_{50}). Generally, methanol-extracts had lower IC_{50} than that of SPB-extracts ($p < 0.05$). The application of jiaogulan powder (JP) in salad dressing at 0%, 0.125%, 0.25%, 0.5% and 1% was demonstrated. Decreases in L^* , a^* , and b^* of salad dressing with increase in JP addition were observed ($p < 0.05$). Although the addition of JP affected on pH increased, but it still was lower than 4.1 (Thai Industrial Standard 1402-2540). For sensorial evaluation, salad dressing added with 1% JP showed the lowest score for overall likeness ($p < 0.05$). This might be due to lower scores in appearance, color, odor, flavor, and texture likenesses as well as bitter taste. The result indicated that the taste of JP is limitation for food product development. From the results, the addition of JP at 0.25% can be recommended for a salad dressing.

Keywords: Antioxidant activity, *Gynostemma pentaphyllum*, IC_{50} , jiaogulan, salad dressing

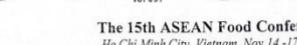
1. Introduction

Jiaogulan (*Gynostemma pentaphyllum*, Thunb.) has been traditionally used as a food and tea in the United States, China, and many other Asia countries (Wang and Luo, 2007; Xie et al., 2012; Bai et al., 2009). The consumption of jiaogulan has been increased due to evidence from research indicating that jiaogulan may potentially reduce the risk of cardiovascular disease (Tanner et al., 1999), and may have hypoglycemic (Yeo et al., 2008), anti-inflammatory (Lin, Huang, & Lin, 1993), anticancer (Chen et al., 2009; Lu et al., 2008) and hepatoprotective activities (Chen et al., 2009b), with little toxic effects (Attawish et al., 2004; Schild et al., 2010). Also, polysaccharide obtained from jiaogulan has attracted great attention owing to its antitumor activities (Zhou et al., 2001), anti-gastric ulcer effect (Rujjanawate et al., 2004), immune-modulatory effect (Qian et al., 1998), antioxidant properties (Cai et al., 2005; Chi et al., 2012) and treating hyperlipidemia (Biregitte et al., 1995). Jiaogulan has been consumed as a food and tea in Thailand. Several researches have reported that the consumption of jiaogulan may reduce the risk of cardiovascular disease, and may have hypoglycaemic, anti-inflammatory, anticancer and hepatoprotective activities.

หมวดที่ขอรับการสนับสนุน: ค่าลงทะเบียน

๑๐,๕๐๐ บาท

(ทั้งนี้จำนวนเงินค่าลงทะเบียนโดยการโอนเงินผ่านธนาคารกรุงเทพ เท่ากับ ๑๑,๓๕๒ บาท)



The 15th ASEAN Food Conference
Ho Chi Minh City, Vietnam, Nov 14-17, 2017

Debit Note/Receipt Set

Ref. No: 016170000014100

Date: 13/06/2017 TM:016136

Time: 13/06/2017 09:56:06

RECEIPT

Issued Date: /11/2017

Received from: Mrs. Siriporn Riebrooy Kim

Registration No: AFC2017- 9797

Address: Faculty of Agriculture Ratsart University, Chatuchak, Bangkok 10900, Thailand.

For payment of AFC 2017 registration fee

Registration Fee for ASEAN Food Conference 2017 (SIRIPORN RIEBROOY)

DESCRIPTION	Amount
THB *****10,242.00	
CABLE	300.00
COM REN.	750.00
COM REC.	100.00
STAMP	0.00
Total	THB *****11,392.00

Net Amount THB *****11,392.00

DESCRIPTION	FEE (USD)
Regular (Early bird)	283 USD.
Banking transfer fee	17 USD.
TOTAL	300 USD

ĐÃ THU TIỀN PAID

This is to acknowledge that the amount of USD 300.00 has been paid by: Bank transfer.

On behalf of Organizing Committee

(Signature)

No: HBG _____

๒
ผู้รายงาน

(ผศ.ดร.ศิริพร เรียบร้อย คิม)

วันที่