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-Innovation in Research based on Environmental
Insight and Entrepreneurship-

BOOK OF ABSTRACTS

International Conference on
Innovation In Research

Grand Inna Beach Hotel

Bali, Indonesia

August 28-29, 2018



Keynote Speaker:

Prof. Dr. Ocky Karna Radjasa, M.Sc.
(Director of Research and Community Services Kemenristekdikti)

Invited Speaker:

- 1 Prof. Bambang Sumintono, Ph.D. (Lecturer in Malaya University, Malaysia);
- 2 Prof. Dr. Julio Cabral Teehankee (Dean of College of Liberal Arts, De La Salle University, Philippines);
- 3 Athiqah Nur Alami, S.IP, Ph.D. (National University of Singapore, Singapore);
- 4 Prof. Dr. Ismanto Hadi Santoso, MS. (Lecturer in Universitas Wijaya Kusuma Surabaya, Indonesia);
- 5 Evangelos Angelou Afendras, Ph.D (A former lecturer of Indian Institute of Management)
- 6 Dr. Pranav Kumar (Consultant, Edu Train International Bahrain)
- 7 Dr. Ir. Hary Sastrya Wanto, MS. (Lecturer in Universitas Wijaya Kusuma Surabaya, Indonesia);
- 8 Ir. Endang Noerhartati, MP. (Lecturer in Universitas Wijaya Kusuma Surabaya, Indonesia).

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Rector of Universitas Wijaya Kusuma Surabaya

To honorable Prof. Dr. Ocky Karna Radjasa, M.Sc. The Director of Research and Community Service. (Ministry of Research, Technology and Higher Education Republic of Indonesia); Prof. Bambang Sumintono, Ph.D. Lecturer of Malaysia University, Malaysia; Prof. Dr. Julio Cabral Teehankee, Dean of College of Liberal Arts, De La Salle University, Philippines; Athiqah Nur Alami, Ph.D National University of Singapore, Singapore; Dr. Pranav Kumar, Consultant of Edu Train International, Bahrain; Evangelos Angelou Afendras, Ph.D Former lecturer of Indian Institute of Management Kashpur, Uttarakhan; The Wijaya Kusuma Foundation

Universitas Pendidikan Indonesia, Universitas Andalas, Universitas PGRI Adi Buana, STIE Malangkuçewara, Universitas Muhammadiyah Gresik, Universitas Hindu Indonesia Bali, Stikom Indonesia Bali.

The speakers and the committee of The 1st International Conference on Innovation in Research 2018”.

Praise be to Allah SWT for his love and compassion that today we all gather for The 1st International Conference on Innovation in Research 2018”.

I would like to thank you for coming to this scholarly forum, especially I would like to express my deepest gratitude to the Keynote speaker Prof. Dr. Ocky Karna Radjasa, M.Sc. who has spent time to attend and support this event. I wish to extend sincere gratitude to all respected delegates, invited speakers, presenters and participants for attending this seminar and for becoming our esteemed guests on this occasion. It is indeed as great honor for us to have you all at the seminar.

As we know, the theme “Innovation in Research based on Environmental Insight and Entrepreneurship” is timely in order to address the issues and concerns about ICIIR 2018. Indonesia includes one of the countries which own biggest natural wealth in the world.

The International Seminars is the event of discussion on ideas, problems, and solutions about Innovation in Research as well as the information result of current research for scientists, observers, entrepreneurs, industrialists and policy makers. Thus, it will create the harmony between the research activities with the problems and the real needs.

In the same time of this event, it is also held directly MoU among all Higher Education supporting the first ICIIR 2018 and it will be established

Characteristics of Physico-chemical and Functional Properties of starch extracts from Tubers

Fauzan Azima^{1,*}, Novizar Nazir¹, and Hendra Cahya Efendi¹

¹Department of Agricultural Product Technology
Faculty of Agricultural Technology, Andalas University, Padang 25163, Indonesia

Abstract. This research was aimed to determine the physico-chemical and functional properties of tubers starches and find out a suitable application in food products. Starch from tubers that analyzed were sweet cassava, bitter cassava, white sweet potato, red sweet potato, yellow sweet potato, purple sweet potato, cocoyam, yellow potato, red potato and yam bean. The results of the physical analysis of Tubers starches were yield (6,90-17,57%), fineness (89,05-92,28%), whiteness (90,05-97,26), the shape of granules starch (oval, round, truncated and polygonal). The results of chemical analysis of Tubers starches were water content (6,36-8,70%), ash content (0,20- 0,48%), fat content (0,16-0,37%), protein content (0,14-0,16%), starch content (85,7-89,05 %), amylose content (13,28-20,30%), degree of acid (0,97-1,50 ml NaOH 1N/100g) and residual sulphite (31,44-45,61 ppm). The results of the functional properties analysis of tubers starches were water absorption capacity (0,870-1,231), oil absorption capacity (0,820-1,185), Freeze-Thaw Stability (18,85-47,45%), swelling power at 950C (12,18-24,01 g/g), solubility at 950C (8,40 to 23,10%), the beginning temperature of gelatinization (32,7-740C), maximum viscosity (340-3884 BU), setback (30-810 BU) breakdown (70-2420 BU), the stability of pasta (-60- (-635) BU).

Keywords : Tubers, starches, physico-chemical properties, functional properties

*Corresponding author: fauzanazima@ae.unand.ac.id and fauzandes@yahoo.com