

SURAT TUGAS


Nomor : 00210/A.1.5/ST.FTP/11/2020

Dekan Fakultas Teknologi Pertanian Universitas Katolik Soegijapranata, Semarang dengan ini memberikan tugas kepada:

- Nama : **Dr. Laksmi Hartayanie, MP.**
- Status : Dosen Fakultas Teknologi Pertanian Universitas Katolik Soegijapranata, Semarang.
- Tugas : Sebagai Presenter (Poster Presentation) ICSAF 2020 "**Okra As LAB's Growth Stimulator In Yoghurt**" dalam kegiatan 4th International Conference on Sustainable Global Agriculture and Food (ICSAF) in Taiwan via online conference.
- Tempat : Online.
- Hari/Tanggal : Jumat, 06 November 2020
- Lain-lain : Harap melaksanakan tugas dengan sebaik-baiknya dan penuh tanggung jawab, serta memberikan laporan setelah selesai melaksanakan tugas.

Semarang, 06 November 2020

Dekan,


Dr. R. Probo Y. Nugrahedhi, M. Sc.

NPP: 0581 2001 144

SURAT KETERANGAN
No. 00412/A.1.5/FTP/02/2021

Nama-nama dosen Fakultas Teknologi Pertanian Universitas Katolik Soegijapranata, Semarang berikut ini :

1. Dr. R. Probo Y. Nugrahedi STP, Msc.
2. Meiliana, S.Gz., MS.
3. Mellia Harumi, S.Si., M.Sc
4. Dr. Ir. Christiana Retnaningsih, MP.
5. Dea Nathania Hendryanti, S.TP., M.S
6. Dr. Alberta Rika Pratiwi, MSi.
7. Dr. Ir. Bernadeta Soedarini, MP.
8. Dr. Victoria Kristina Ananingsih, MSc.
9. Inneke Hantoro, STP, MSc.
10. Prof. Dr. Ir. Budi Widianarko, MSc.
11. Dr. Ir. Lindayani, MP.
12. Dr. Laksmi Hartayanie, MP.

Adalah benar-benar telah mengikuti the 4th International Conference on Sustainable Global Agriculture and Food pada 06 November 2020 sebagai Presenter oral maupun Poster yang diselenggarakan oleh Fu Jen Catholic University Taiwan secara daring.

Demikian surat keterangan ini dibuat sebagai pengganti sementara sertifikat yang belum diterbitkan oleh panitia.

Semarang, 09 Februari 2021

Dekan,



Dr. R. Probo Y. Nugrahedi, M. Sc.

NPP. : 0581 2001 244

Paper ID	ID	Zoom_Name	Last_name	First_name
Taiwan FJCU				
ICSAF-P001 [AS]	138	F-P-A\$1-Yeh	YEH	Yi-Ming
ICSAF-P001 [FM]	40	F-P-FM1-Liao	LIAO	CHIA-WEI
ICSAF-P002 [FM]	109	F-P-FM2-Hung	HUNG	MAN-CHIA
ICSAF-P001 [NB]	34	F-P-NB1-Lin	Lin	I-Chen
ICSAF-P001 [FC]	86	F-P-FC1-Huang	Huang	Yi-Hsuan
ICSAF-P002 [FC]	87	F-P-FC2-Chang	Chang	Hsiu Yu
ICSAF-P003 [FC]	90	F-P-FC3-Tsaur	Tsaur	wen-hsuan
ICSAF-P004 [FC]	126	F-P-FC4-Jen	Jen	Chen Te
ICSAF-P007 [FC]	153	F-P-FC7-Yang	Yang	Yun Chen
ICSAF-P008 [FC]	156	F-P-FC8-Lee	LEE	YUNG-YUAN
ICSAF-P001 [FP]	10	F-P-FP1-Wang	Wang	Wen Hui
ICSAF-P002 [FP]	26	F-P-FP2-Hsieh	HSIEH	JUNG-FENG
ICSAF-P003 [FP]	26	F-P-FP3-Hsieh	HSIEH	JUNG-FENG
ICSAF-P004 [FP]	26	F-P-FP4-Hsieh	HSIEH	JUNG-FENG
ICSAF-P008 [FP]	148	F-P-FP8-Tsai	Tsai	Wen-Shan
Thailand AU				
ICSAF-P007 [FP]	146	T-P-FP7-Panjapiyakul	Panjapiyakul	Pompen
ICSAF-P002 [RF]	105	T-P-RF2-Sha	Sha	Ramin
ICSAF-P007 [RF]	141	T-P-RF7-Kunathigan	Kunathigan	Viyada
Vietnam STU				
ICSAF-P006 [FC]	142	V-P-FC6-Quynh	Quynh	Doan
ICSAF-P009 [FC]	164	V-P-FC9-Pham	Pham	Phuong
ICSAF-P008 [FP]	136	V-P-FP6-Nguyen	Nguyen	Quynh Dao
ICSAF-P009 [FP]	150	V-P-FP9-Ta Le	Ta Le	Quoc An
ICSAF-P010 [FP]	158	V-P-FP10-Nguyen Minh	Nguyen Minh	Hai
ICSAF-P011 [FP]	160	V-P-FP11-Tran	Tran	Quang Hieu
Indonesia SCU				
ICSAF-P003 [FM]	154	I-P-FM3-Lindayani	Lindayani	Lindayani
ICSAF-P004 [FM]	211 (L	I-P-FM4-Hartajanie	Hartajanie	Laksmi
ICSAF-P005 [FM]	211 (L	I-P-FM5-Hartajanie	Hartajanie	Laksmi
ICSAF-P005 [FC]	127	I-P-FC5-Wijaya Putri	Wijaya Putri	Selvi
ICSAF-P005 [FP]	125	I-P-FP5-Retraningasih	Retraningsih	Christiana / Ch
ICSAF-P001 [RF]	9	I-P-RF1-Wijaya	Wijaya	Florenzia
ICSAF-P003 [RF]	131	I-P-RF3-Hwiendarjo Dartagnan	Hwiendarjo Dartagnan	Christian Nathaniel
ICSAF-P004 [RF]	134	I-P-RF4-Devita	Devita	Elvina
ICSAF-P005 [RF]	5	I-P-RF5-Soedarini	Soedarini	Bernadeta
ICSAF-P006 [RF]	101	I-P-RF6-Meliana		Meliana

ICSAF
2020
November 6th to 7th
TAIWAN

ICSAF²⁰

FUTURE TRENDS IN FOOD SCIENCE AND TECHNOLOGY

4th International Conference on Sustainable
Global Agriculture and Food (ICSAF 2020)

Acceptance Letter

November 01, 2020

Dear Dr. Laksmi Hartajanie,

We are very pleased to confirm that your submission entitled below has been accepted for the 4th ICSAF in New Taipei City, Taiwan, November 6-7, 2020.

Okra as LAB's growth stimulator in yoghurt

Paper ID: ICSAF-P005 [FM]

Presentation Type: Poster

Authors: Laksmi Hartajanie, Lindayani, Cindy Agustine

Affiliation: Soegijapranata Catholic University

Session/Topic: Food microbiology and safety

Please check the conference information given on the ICSAF 2020 in Taiwan website (<https://icsaf.org/>) for the details of registration and paper upload process. The presentation guideline and format was shown in the conference website. You can check the session you will be presenting from the conference program to be announced on the website soon.

We look forward to your presentation and participation in ICSAF 2020. Please do not hesitate to contact us should you require further information and/or guidance.

Yours Sincerely,



Prof. Bing-Huei Chen

Chairman of the Organizing Committee

ICSAF



Okra as LAB's growth stimulator in yoghurt

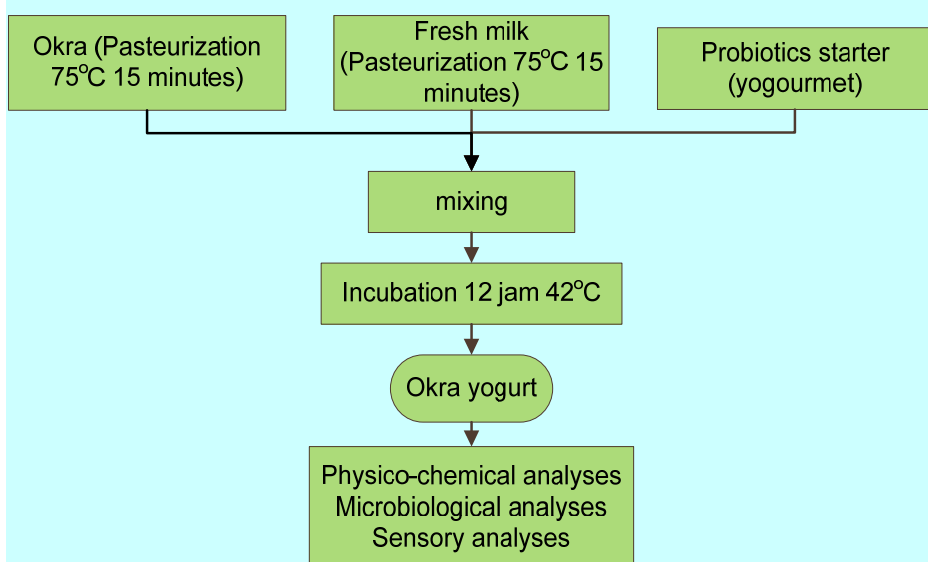
Laksmi Hartajanie^{1,2}, Lindayani¹, Cindy Agustine¹
¹Soegijapranata Catholic University, Semarang - Indonesia
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ABSTRACT

Functional food is important for our health because it can reduce the risk of diseases. One type of functional food is fermented milk products. Yoghurt is a milk-based fermentation product by lactic acid bacteria (LAB). Okra is a tropical plant that has an antioxidant activity around 32% and has mucus that acts as a stabilizing agent. Okra mucus also acts as a prebiotics that can accelerate the growth of probiotics bacteria in yogurt. The study was aimed to analyse the effect of okra as LAB's growth stimulator. The formulas are formula A (375 ml milk + 25 ml okra + 2 g starter), formula B (350 ml milk + 50 ml okra + 2 g starter) and the control (400 ml milk + 2 g starter). Yoghurt products were analyzed by physicochemical (viscosity, percentage of syneresis, antioxidant activity, pH) and microbiology (Total Plate Count). Data were analyzed using ANOVA and Duncan for post hoc analysis. Level of significance was set at 0.05. Okra can stimulate LAB's growth and improve the physico-chemical characteristics of yoghurt. The higher okra addition. The higher value of viscosity, antioxidant activity, and viability of LAB and the lower percentage of syneresis.

Keywords: lactic acid bacteria, okra, prebiotic, yoghurt

Green okra has mucus that can be functioned as a natural stabilizing agent when added to yogurt products and also acts as a prebiotic that can accelerate the growth of lactic acid bacteria in yogurt. Yogurt is a milk-based fermentation product by lactic acid bacteria.

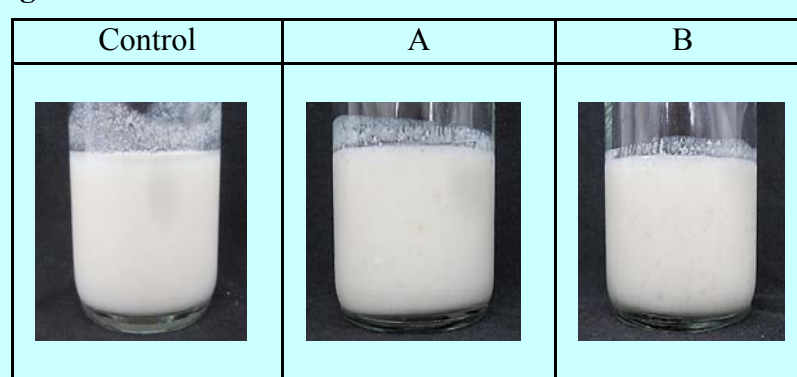


Research Flow Chart

Yoghurt Formula

Treatments	Milk (ml)	Okra (ml)	Total (ml)	Starter (g)
A	375	25	400	2
B	350	50	400	2
Control	400	-	400	2

Yoghurt



Psycho-chemical Characteristics

Sample	Parameter	Storage (days)		
		0	7	14
Control	Viscosity	484,1±8,59 ^{a2}	245,9±7,81 ^{a1}	228,5±23,83 ^{a1}
A		815,7±21,28 ^{ab2}	422,5±12,94 ^{ab1}	369,7±74,56 ^{ab1}
B		941,5±12,23 ^{b2}	614,4±21,25 ^{b1}	478,8±191,71 ^{b1}
Control	% Sineresis	40,4±0,06 ^{b1}	46,2±0,70 ^{b2}	50,1±0,62 ^{b2}
A		31,2±0,06 ^{b1}	44,3±0,26 ^{b2}	45,5±0,24 ^{b2}
B		21,2±0,34 ^{a1}	35,7±0,45 ^{a2}	38,7±0,79 ^{a2}
Control	Antioxidant activity	5,0±0,53 ^{a2}	3,4±0,35 ^{a1}	3,2±0,20 ^{a1}
A		7,2±0,40 ^{a2}	4,6±0,06 ^{a1}	4,3±0,16 ^{a1}
B		12,9±0,99 ^{b2}	6,4±0,34 ^{b1}	6,2±0,24 ^{b1}
Control	pH	4,6±0,05 ^{a1}	4,6±0,06 ^{a1}	4,8±0,01 ^{a2}
A		4,5±0,00 ^{a1}	4,6±0,03 ^{a1}	4,7±0,03 ^{a2}
B		4,6±0,03 ^{a1}	4,7±0,02 ^{a1}	4,8±0,01 ^{a2}

Means within the same column carrying different letter superscripts are significant at $p < 0.05$. Means within the same row carrying different numeric superscripts are significant at $p < 0.05$.

Viability

Sample	Storage (days)		
	0	7	14
Control (CFU/ml)	9,225 x 10 ^{6(a1)}	6,35 x 10 ^{6(a1)}	4,35 x 10 ^{6(a1)}
A (CFU/ml)	1,22 x 10 ^{7(b1)}	1,035 x 10 ^{7(b1)}	8,625 x 10 ^{6(b1)}
B (CFU/ml)	1,71 x 10 ^{7(c1)}	1,4975 x 10 ^{7(c1)}	1,34 x 10 ^{7(c1)}

Means within the same column carrying different letter superscripts are significant at $p < 0.05$. Means within the same row carrying different numeric superscripts are significant at $p < 0.05$.

Conclusion

Okra can stimulate LAB's growth and improve physico-chemical characteristics. The higher okra addition. The higher value of viscosity, antioxidant activity, and viability of LAB and the lower percentage of syneresis.

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