February 20-21, 2020

The 6th International Union of Microbiological Societies

IUMS outreach programme

on Food Safety and Microbial Toxins

Organized by:

IUMS
International Union of Microbiological Societies (IUMS)

PUSAT STUDI PANGAN DAN GIZI UNIVERSITAS GADJAH MADA
Center for Food and Nutrition Studies

In Collaboration with:

APKEPI
Asosiasi Profesi Keamanan Pangan Indonesia

Patpi
Indonesian Association of Food Technologist

PERMI
Indonesian Society for Microbiology

Faculty of Agricultural Technology

6th IUMS
Outreach Program on Food Safety and Microbial Toxins

CERTIFICATE

This is to certify that

Isti Handayani

has participated as

ORAL PRESENTER

in **The 6th International Union of Microbiological Societies**
Outreach Program on Food Safety and Microbial Toxins
Gadjah Mada University Club
Center for Food and Nutrition Studies
Yogyakarta, February 20th - 21st 2020

Secretary General of International Union of Microbiological Societies	Chairperson of Organizing Committee of 6th IUMS Outreach Programme on Food Safety and Microbial Toxins	Chairman of Center for Food and Nutrition Studies Universitas Gadjah Mada
Prof. Dr. Dr.(HC) Robert A. Samson	Dr. Ir. Tyas Utami, M.Sc	Prof. Dr. Endang S. Rahayu, MS

The 6th IUMS Outreach Program on Food Safety and Microbial Toxins
20 – 21 February 2020, Yogyakarta – Indonesia
The Center for Food and Nutrition Studies, Universitas Gadjah Mada
Ph: +62 821 35299855, email: foodsafety.cfns@gmail.com

January 15, 2020

ABSTRACT ACCEPTANCE LETTER

This is the confirmation that the abstract entitled:

"Inhibition of *Escherichia coli* FNCC 0097 by *Lactobacillus plantarum* Mut 7 FNCC 250 in Probiotic Okara Drinks During Storage"

Authors: **Isti Handayani**

Has been accepted as oral presentation in The 6th IUMS Outreach Program on Food Safety and Microbial Toxins.

We look forward to your presentation.

Warm regards,
Organizing Committee

Inhibition of *Escherichia coli* FNCC 0097 by Lactobacillus plantarum Mut 7 FNCC 250 in Probiotic Okara Drinks During Storage

Isti Handayani
Department of Food Technology, Faculty of Agriculture, Universitas Jenderal Soedirman. Jl. Dr.Soeparno, Karangwangkal Purwokerto, 53123, Central Java, Indonesia
Email: isti_handayaniunsoed@yahoo.co.id

Okara is the side product of making tofu which still has some nutrition value. This study aims to study the ability of okara probiotic drinks to inhibit *Escherichia coli* FNCC 0097 during storage. The probiotic agent used was *Lactobacillus plantarum* Mut 7 FNCC 250. Fermentation of okara probiotik drink is carried out at 37°C for 48 hours. The study was conducted using a randomized block design with a storage time of 0, 2; and 4 weeks in the refrigerator (6°C). Variables observed included viability of lactic acid bacteria, inhibition of *E. coli* FNCC 0097, pH, total titrated acid and dissolved protein. The result show that *L. plantarum* Mut 7 FNCC 250 could inhibited *E. coli* FNCC 0097 equal to 1.37 log cycle during 4 weeks of storage. Viability of lactic acid bacteria also decreased by 2.33 log cycles, while decreasing of *L. plantarum* Mut 7 FNCC 250 in control (okara probiotic drink without the addition of *E. coli* FNCC 0097 was equal to 1.8 log cycle. Cold storage causes a decrease in total titrated acid and an increase in pH value, but has no effect on dissolved protein levels. Total titrated acid, pH and dissolved protein of okara probiotic drink after 4 weeks of storage were 0.4%, 5.27 and 0.67% respectively.

Key word: okara, probiotik, storage, inhibit, *E. coli*

Dear Committee of The 6th IUMS Outreach Program on Food Safety

Herewith, I send an abstract for my participation in Food Safety CFNS

Thank you.

Best Regard,
Isti Handayani
Universitas Jenderal Soedirman Purwokerto
Hasil dan pembahasan

Inhibition of *Escherichia coli* FNCC 0097 by *Lactobacillus plantarum* Mut 7 FNCC 250 in Probiotic Okara Drinks During Storage

Isti Handayani
Department of Agricultural Technology, Faculty of Agriculture, Universitas JenderalSoedirman

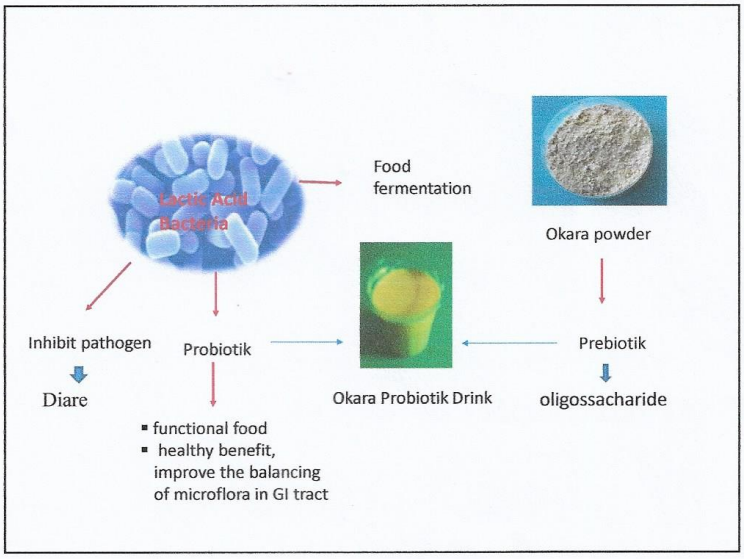
Introduction

Tofu processing

- Low economic value
- Can be used for making food products
- Oligosacharide & fiber

Side product of tofu

Okara powder



Aims of this research

- Evaluation the potential of *L. plantarum* Mut 7 inhibiting *E. coli* in the okara probiotic drink during storage
- The effect of storage on the pH, TAT, soluble protein

Method

Pasteurisation (80°C, 15 min)

Cooling, 37°C

5% *L. plantarum* → inoculation

1 % *E. coli* →

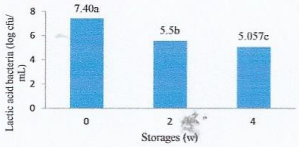
Fermentation (37°C, 48h)

Storage (7°C, 0; 2; 4 w)

Analysis:
- Viabilitas LAB
- Viabilitas *E. coli*
- pH
- TAT
- Soluble protein

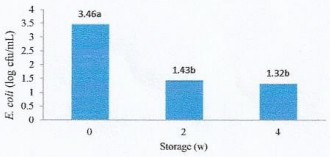
Result

Lactic acid bacteria



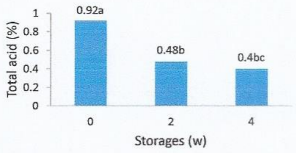
- During 4 weeks of storage there was a decrease in lactic acid bacteria by 2.35 log cycles, greater than control (without *E.coli*) : 1.80 log cycles

E. coli



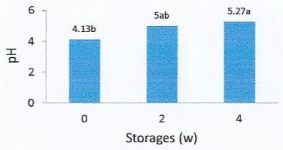
- During 4 weeks of storage there was a decrease in *E. coli* by 2.14 log cycles

Total acid titration



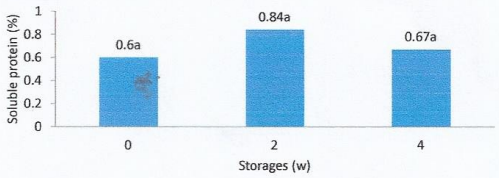
- A large decrease in total titrated acid occurs at 2 weeks of storage, then a decrease in total titrated acid is not significant. thought to be caused by lactic acid is altered into CO_2 & H_2O

pH



- The increase in pH is thought to lactic acid is altered into CO_2 & H_2O

Soluble protein



- Soluble protein levels are not significantly different , thought to low proteolytic activity

DAY TWO – FEBRUARY, 21 2020
6TH IUMS OUTREACH PROGRAMME ON FOOD SAFETY AND MICROBIAL TOXINS

Parallel Session Program

ROOM 1

Indun Dewi Puspita

Growth Rate, Histamine Production, and Biofilm Formation of Histamine Producing Bacteria Isolated from Skipjack Tuna

Tuna had a high preferences dan nutrition. The handling of tuna can made this fish produced histamine from bacteria. This study aimed to isolate histamine-producing bacteria (HPB) from skipjack tuna landed in Sadeng Fisheries Port, Yogyakarta, and to measure the bacterial growth rate and histamine production at various incubation temperatures. The positive HPB obtained from the fresh and spoiled sample was 29 and 30 isolates, respectively. Most of HPB positive isolates were Gram-positive bacteria (46 isolates). However, only 6 isolates from spoiled sample showed positive histamine formation in culture medium detected by TLC. All 6 isolates, namely CK01, CK02, CK03, CK04, CK05, and CK06, belonged to *Enterobacteriaceae* group as confirmed by biochemical test and partial 16srRNA gene identification. The highest growth rate at 20 and 37°C were showed by isolate CK04, while the growth of all isolates at 5°C were inhibited. The highest histamine production was shown by isolate CK06 at 37°C, meanwhile the strongest biofilm producer was shown by isolate CK01.

Isti Handayani

Inhibition of *Escherichia coli* FNCC 0097 by *Lactobacillus plantarum* Mut 7 FNCC 250 in Probiotic Okara Drinks During Storage

Okara is the side product of making tofu which still has some nutrition value. To made okara probiotic drink, the probiotic agent used was *Lactobacillus plantarum* Mut 7 FNCC 250. *L. plantarum* Mut 7 FNCC 250 could inhibited *E. coli* FNCC 0097 equal to 1.37 log cycle during 4 weeks of storage. Viability of lactic acid bacteria also decreased by 2.33 log cycles, while decreasing of *L. plantarum* Mut 7 FNCC 250 in control (okara probiotic drink without the addition of *E. coli* FNCC 0097 was equal to 1.8 log cycle. Cold storage causes a decrease in total titrated acid and an increase in pH value, but has no effect on dissolved protein levels. Total titrated acid, pH and dissolved protein of okara probiotic drink after 4 weeks of storage were 0.4%, 5.27 and 0.67% respectively.

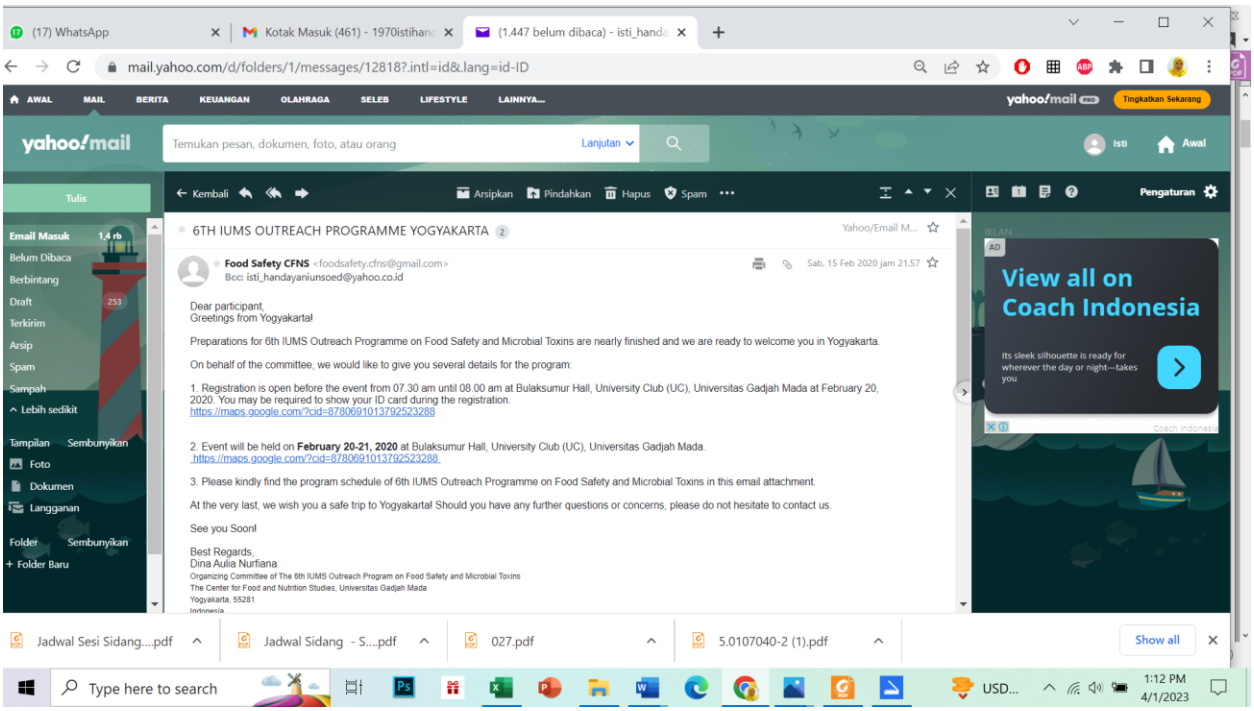
Conclusions

- *L. plantarum* Mut 7 inhibited E. *coli* in the okara probiotic drink
- Viability of lactic acid bacteria and *E. coli* decreased during storared , while decreasing of lactic acid bacteria in okara probiotic drinks is greater than control (without *E. coli*)
- Cold storage causes a decrease in total titrated acid and an increased in pH but has no effect on soluble protein levels

Thanks you

PROGRAM
6th IUMS OUTREACH PROGRAMME
ON FOOD SAFETY AND MICROBIAL TOXINS
DAY TWO– FEBRUARY, 21 2020

07.30 - 08.00	**Registration**
	Parallel Session
08.00 – 09.40	**Room 1**
	Indun Dewi Pupita - Growth rate, Histamine Production, and Biofilm Formation of Histamine-producing Bacteria Isolated from Skipjack Tuna
	Isti Handayani - Inhibition of *Escherichia coli* FNCC 0097 by *Lactobacillus plantarum* Mut 7 FNCC 250 in Probiotic Okara Drinks During Storage
	Thanapoom Maneeboon - Potential of Patulin Production of Heat Resistant Mold (HRM) from Plantation Soils in Thailand
	Devita Safitri - Influence of Giving Extract and Basil Leaf Powder (*Ocimum basilicum*) to Decrease in Cholesterol Levels in Squid (*Loligo sp.*) and Vaname Shrimp (*Litepenaeus vannamei*)
	Sponsorship Session
	Room 2
	Utami Sri Hastuti - Contaminant Mold Identification and Aflatoxin Analysis in Damaged Coriander (*Coriandrum sativum L.*)
	Deli Lilia - Mycotoxins Exploration and Ochratoxin Quantity in Coffee Beans during the Drying Process using the LC-MS method in South Sumatra
	Slamet Fauzi - Hot Water Treatment as Effort to Inhibits the Anthracnose Disease and Maintain the Quality of Situbondo Mango Fruit
	Retno Tri Astuti - Screening, Isolation and Identification of Potential Bacteria Producing Cold-Adapted Lipase from Fish Cold Storage
	Sponsorship Session
09.40 – 10.05	***Coffee Break and Poster Session***
	Parallel Session
10.05 – 11.45	**Room 1**
	MMA Retno Rosariastuti - Rice Absorption of Lead (Pb) in Remediation of Land Contaminated by Lead (Pb) Using Agent Bioremediation and Inorganic Fertilizers
	Karseno - Antimicrobial Activity of Coconut Shell and Fiber and its Potential to be Used as Natural Preservatives for Coconut Sap
	Osfar Sjofjan - Effect of Red Ginger (*Zingiber Officinale* Var. Rubrum) as Feed Additive on Hybrid Duck Performance and Intestinal Microflora
	Anggie - Safety of Functional Drink of Coffee, Gambir and Ginseng Based on Microbe Test
	Nurhayati - Microbiology Safety and Halal Investigation of "Cilok" Meatball at UNEJ Campus Surrounding
	Room 2
	Rahmawi Annis Setiawati - Effect of Activated Carbon Adsorbent from Variations of Raw Material to Acid and Peroxide Number of Waste Cooking Oil
	Adi Saputrayadi - Ratio the Addition of Soursop Fruit Extracts to Several Components of The Quality Sweet Corn Milk Yoghurt
	Agus Wijaya – The Loss of Antibacterial Activity in Kinang Prepared with Extraction and Pulverization Method
	Syerina - Safety of Functional Drink of Coffee and Gambir Based on Microbe Test
	Distari Agustini - Safety of Functional Drink Green Coffee and Gambir Based on Microbe Test
11.45 – 13.30	***Lunch Break***


(17) WhatsApp
Kotak Masuk (461) - 1970istihan
(1.447 belum dibaca) - isti_hand
mail.yahoo.com/d/folders/1/messages/12818?.intl=id&.lang=id-ID
AWAL
MAIL
BERITA
KEUANGAN
OLAHRAGA
SELEB
LIFESTYLE
LAINNYA...
yahoo!mail
Tingkatkan Sekarang
Temukan pesan, dokumen, foto, atau orang
Lanjutan
Isti
Awal
Tulis
Email Masuk 1,4 rb
Belum Dibaca
Berbintang
Draft 253
Terkirim
Arsip
Spam
Sampah
Lebih sedikit
Tampilan Sembunyikan
Foto
Dokumen
Langganan
Folder Sembunyikan
+ Folder Baru
Kembali
Arsipkan
Pindahkan
Hapus
Spam
Pengaturan
6TH IUMS OUTREACH PROGRAMME YOGYAKARTA
Yahoo/Email M...
Food Safety CFNS <foodsafety.cfns@gmail.com>
Bcc: isti_handayaniunsoed@yahoo.co.id
Sab, 15 Feb 2020 jam 21.57
Dear participant,
Greetings from Yogyakarta!
Preparations for 6th IUMS Outreach Programme on Food Safety and Microbial Toxins are nearly finished and we are ready to welcome you in Yogyakarta.
On behalf of the committee, we would like to give you several details for the program:
1. Registration is open before the event from 07.30 am until 08.00 am at Bulaksumur Hall, University Club (UC), Universitas Gadjah Mada at February 20, 2020. You may be required to show your ID card during the registration.
https://maps.google.com/?cid=8780691013792523288
2. Event will be held on February 20-21, 2020 at Bulaksumur Hall, University Club (UC), Universitas Gadjah Mada.
https://maps.google.com/?cid=8780691013792523288
3. Please kindly find the program schedule of 6th IUMS Outreach Programme on Food Safety and Microbial Toxins in this email attachment.
At the very last, we wish you a safe trip to Yogyakarta! Should you have any further questions or concerns, please do not hesitate to contact us.
See you Soon!
Best Regards,
Dina Aulia Nurfiana
Organizing Committee of The 6th IUMS Outreach Program on Food Safety and Microbial Toxins
The Center for Food and Nutrition Studies, Universitas Gadjah Mada
Yogyakarta, 55281
Indonesia
IKLAN
AD
View all on Coach Indonesia
Its sleek silhouette is ready for wherever the day or night—takes you
Jadwal Sesi Sidang....pdf
Jadwal Sidang - S....pdf
027.pdf
5.0107040-2 (1).pdf
Show all
Type here to search
USD...
1:12 PM
4/1/2023