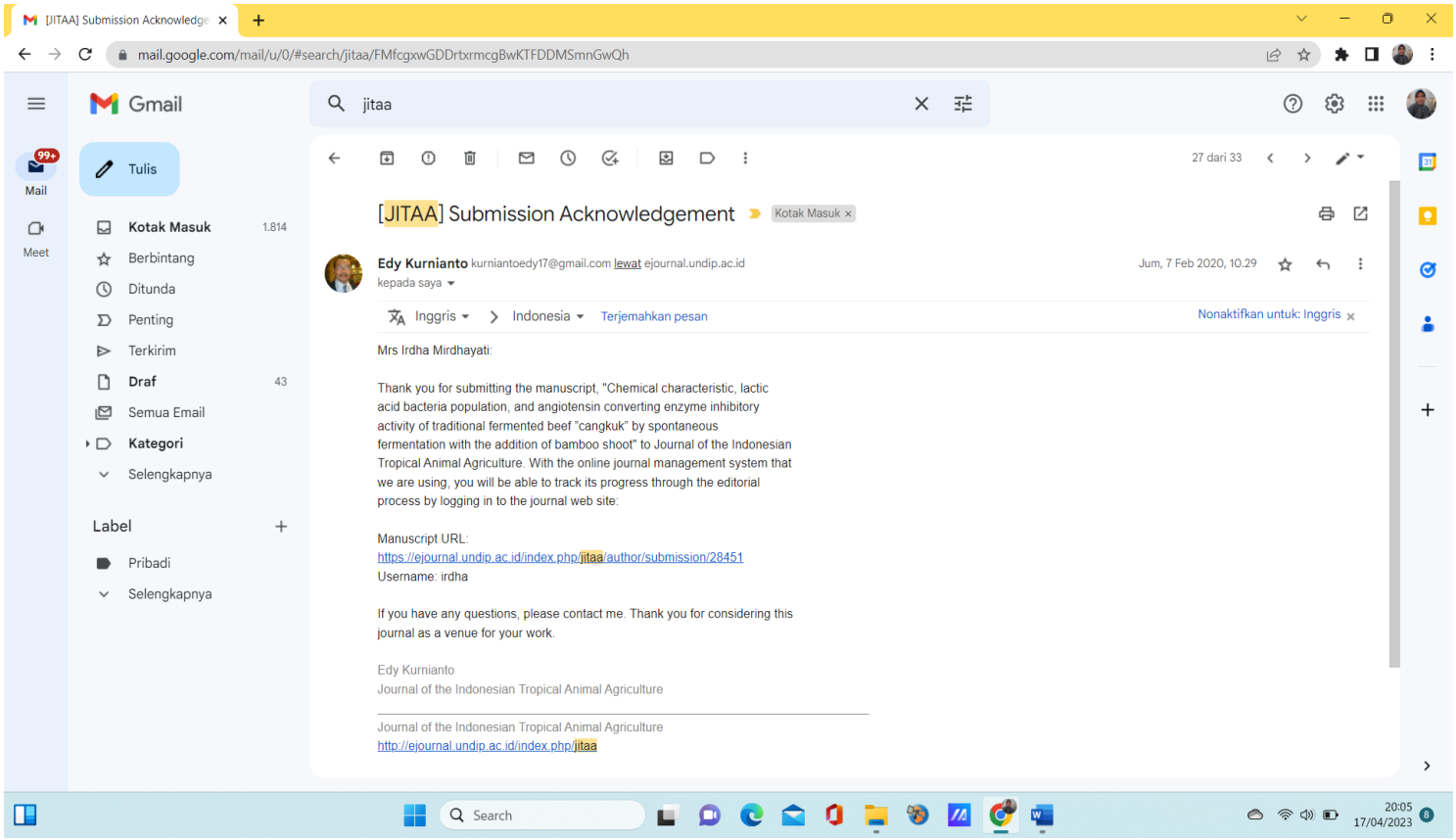
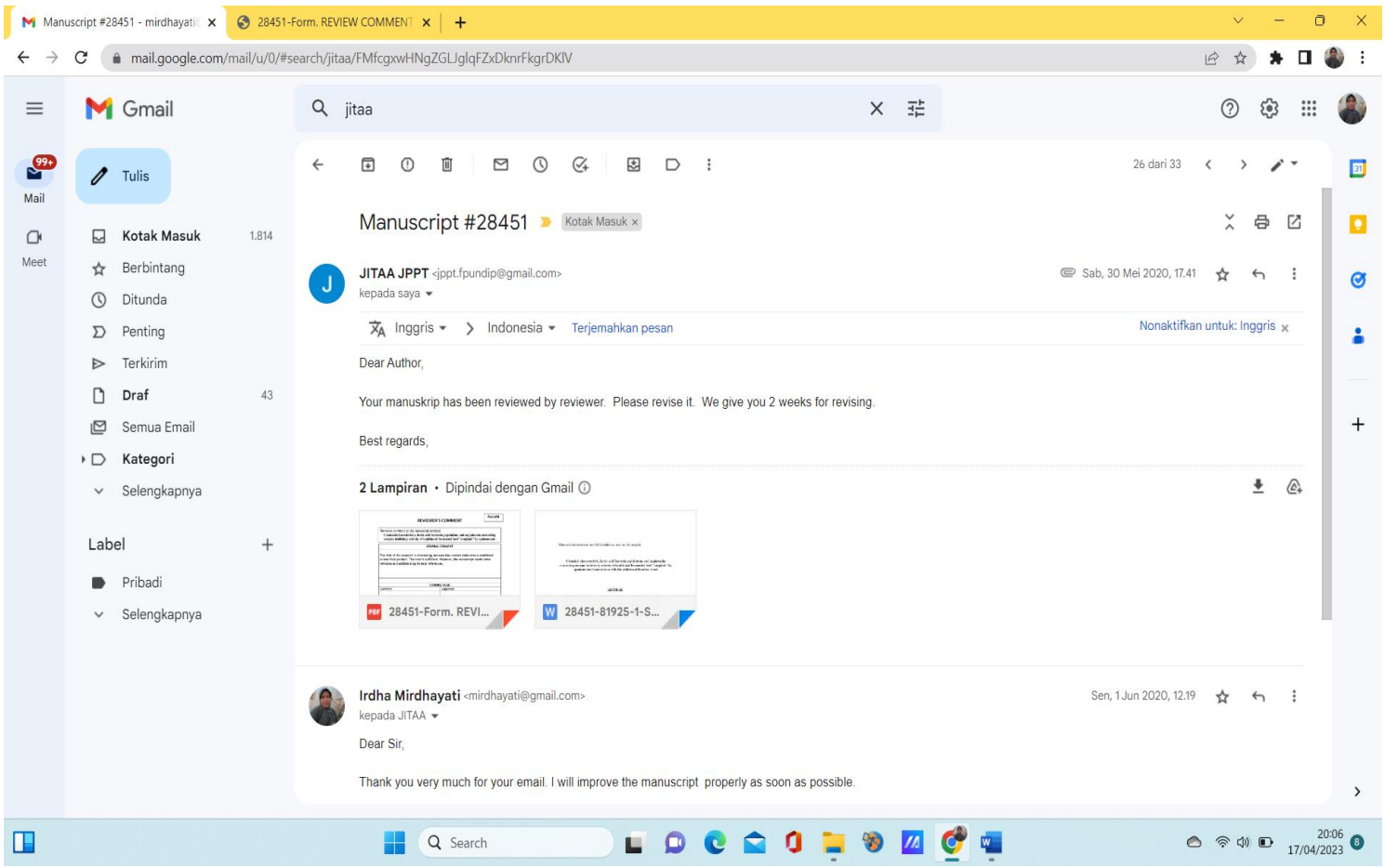

[JITAA] Submission Acknowledge
mail.google.com/mail/u/0/#search/jitaa/FMfcgxwGDDrtxrmcgBwKTFDDMSmnGwQh
Gmail
jitaa
Tulis
Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya
Label
Pribadi
Selengkapnya
27 dari 33
[JITAA] Submission Acknowledgement
Kotak Masuk
Edy Kurnianto kurniantoedy17@gmail.com lewat ejournal.undip.ac.id
kepada saya
Jum, 7 Feb 2020, 10.29
Inggris
Indonesia
Terjemahkan pesan
Nonaktifkan untuk: Inggris
Mrs Irdha Mirdhayati:
Thank you for submitting the manuscript, "Chemical characteristic, lactic acid bacteria population, and angiotensin converting enzyme inhibitory activity of traditional fermented beef "cangkuk" by spontaneous fermentation with the addition of bamboo shoot" to Journal of the Indonesian Tropical Animal Agriculture. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:
Manuscript URL:
https://ejournal.undip.ac.id/index.php/jitaa/author/submission/28451
Username: irdha
If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.
Edy Kurnianto
Journal of the Indonesian Tropical Animal Agriculture
Journal of the Indonesian Tropical Animal Agriculture
http://ejournal.undip.ac.id/index.php/jitaa
Search
20:05
17/04/2023


Manuscript #28451 - mirdhayati
28451-Form. REVIEW COMMENT
mail.google.com/mail/u/0/#search/jitaa/FMfcgxwHNgZGLJglqFZxDknrFkgrDKlV
Gmail
jitaa
Tulis
Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya
Label
Pribadi
Selengkapnya
26 dari 33
Manuscript #28451
Kotak Masuk
JITAA JPPT <jppt.fpundip@gmail.com>
kepada saya
Sab, 30 Mei 2020, 17.41
Inggris
Indonesia
Terjemahkan pesan
Nonaktifkan untuk: Inggris
Dear Author,
Your manuskrip has been reviewed by reviewer. Please revise it. We give you 2 weeks for revising.
Best regards,
2 Lampiran • Dipindai dengan Gmail
28451-Form. REVI...
28451-81925-1-S...
Irdha Mirdhayati <mirdhayati@gmail.com>
kepada JITAA
Sen, 1 Jun 2020, 12.19
Dear Sir,
Thank you very much for your email. I will improve the manuscript properly as soon as possible.
Search
20:06
17/04/2023

Form#9

REVIEWER'S COMMENT

Reviewer comment to the manuscript entitled:

Chemical characteristic, lactic acid bacteria population, and angiotensin converting enzyme inhibitory activity of traditional fermented beef "cangkuk" by spontaneous

GENERAL COMMENT	
The title of the research is interesting, because the content elaborates a traditional animal food product. The data is sufficient. However, the manuscript needs some revisions and additional up to date references.	
RUNNING HEAD	
Comment:	Suggestion:
Good	
TITLE	
Comment :	Suggestion :
Good	
ABSTRACT AND KEYWORDS	
Comment :	Suggestion :
Good	
INTRODUCTION	
Comment : Need revisions.	Suggestion : State of the art of this research is not clearly written yet in the Introduction. Please add the new paragraph that explain about the importance of ACE inhibitory and some other parameters. Why these parameters must be evaluated? Please add supporting references in this paragraph. Needs additional references.

Editorial Address Faculty of Animal and Agricultural Sciences, Diponegoro University, Tembalang Campus- Semarang 50275, Central Java - INDONESIA
Phone/Fax. 024-7474750
Website http://ejournal.undip.ac.id/index.php/jitaa
E-mail jppt.fpundip@gmail.com

REVIEWER'S COMMENT

MATERIALS AND METHODS	
Comment :	Suggestion :
Good enough, but need revisions	Please add reference in this processing method. Please give more explanation about the process of fermentation
RESULTS AND DISCUSSION	
Comment :	Suggestion :
Need revisions	The Results and Discussions much better to be divided into some groups, for example: chemical characteristics, total LAB, and ACE inhibitory activity. This suggestion is accordance with the title of the research. Please add some references.
CONCLUSIONS	
Comment :	Suggestion :
Good enough.	

Eligibility to Publish
(Use √)

Based on the comment above, this manuscript is:

A. eligible to publish in JITAA without revision.
B. eligible to publish in JITAA with minor revision.
C. eligible to publish in JITAA with major revision. √
D. No eligible to publish with reason:
   1. duplication of other article .....
   2. no suitble among the title, hypothesis and conclusions.
   3. weak in methodology :
      .....
      .....
   4. **Miscelenaous**:
      .....
      .....

COMMENT DOCUMENTATION

Editorial Address Faculty of Animal and Agricultural Sciences, Diponegoro University, Tembalang Campus- Semarang 50275, Central Java - INDONESIA
Phone/Fax. 024-7474750
Website http://ejournal.undip.ac.id/index.php/jitaa
E-mail jppt.fpundip@gmail.com

Form#9

REVIEWER'S COMMENT

(THIS DOCUMENT IS SAVED FOR MANAGEMENT OF JITAA)

Date of received manuscript	:	
Date of completed review	:	
Name Reviewer	:	
Institution	:	
University		
Signature	:	

Editorial Address Faculty of Animal and Agricultural Sciences, Diponegoro University, Tembalang Campus- Semarang 50275, Central Java - INDONESIA
Phone/Fax. 024-7474750
Website http://ejournal.undip.ac.id/index.php/jitaa
E-mail jppt.fpundip@gmail.com

Chemical characteristic, lactic acid bacteria population, and angiotensin converting enzyme inhibitory activity of traditional fermented beef ”cangkuk” by spontaneous fermentation with the addition of bamboo shoot

ABSTRAK

Penelitian ini bertujuan untuk menguji sifat kimia, populasi bakteri asam laktat (BAL) dan aktivitas inhibitor *angiotensin converting enzyme* (ACE) daging sapi yang difermentasi dengan penambahan rebung bambu. Penelitian menggunakan Rancangan Acak Lengkap Faktorial dua faktor. Faktor A yakni metode preparasi rebung : dicacah, digiling, dan diekstrak. Faktor B adalah rasio daging dan rebung (B) yakni 1;0,75 ; 1:1, 1:1,25. Parameter kimia yang diamati adalah protein total, protein terlarut, derajat hidrolisis, pH, total asam tertitrasi. Data kimia dan jumlah BAL dianalisis dengan sidik ragam, sedangkan aktivitas inhibitor ACE dianalisis deskriptif. Hasil penelitian menunjukkan bahwa metode preparasi rebung dengan cara digiling dan diekstrak mampu menurunkan total protein dan nilai pH. Rasio daging sapi dan rebung 1:0,75 dan 1:1 mampu menurunkan protein total dan meningkatkan total asam tertitrasi. Interaksi faktor A dan faktor B hanya terjadi pada peningkatan derajat hidrolisis. Faktor A dan B tidak nyata terhadap jumlah bakteri asam laktat. Aktivitas inhibitor ACE yang dihasilkan berkisar 36,5-79,6%. Dapat disimpulkan bahwa metode preparasi rebung bambu dengan cara digiling dan rasio daging : rebung 1:0,75 dan 1:1 dapat meningkatkan derajat hidrolisis dan memiliki aktivitas inhibitor ACE yang tinggi.

Kata Kunci : *cangkuk, daging fermentasi, rebung, sifat kimia, inhibitor ACE*

ABSTRACT

This research was conducted to examine the chemical properties, lactic acid bacteria (LAB) population and Angiotensin Converting Enzyme (ACE) inhibitory activity of fermented beef meat by the addition of bamboo shoots. This research used factorial completely randomized design. Factor A was the preparation method of bamboo shoots: chopped, ground, and extracted. Factor B was the ratio of meat and bamboo shoots (B) which was 1:0.75, 1:1, 1:1,25 ratios. The chemical properties observed were total protein, soluble protein, hydrolysis degree, pH and titratable acidity value. The results showed that bamboo shoot preparation method by ground and extracted were able to reduce total protein, and pH value. The ratio of meat and bamboo shoot (1:0.75 and 1:1) were able to decreased total protein but increased total titratable acidity. The interaction of the factors A and factor B only occured in increasing hydrolysis degree. Both of two factors (A and B) couldnot significantly effect to the number of LAB. The ACE inhibitory activity ranged from 36.5 to 79.6%. It can be concluded that the preparation methods of bamboo shoots by ground and 1: 0.75 and 1: 1 of beef : bamboo shoot ratio could increased hydrolysis degree and had high ACE inhibitory activity.

Keywords: *cangkuk, fermented meat, bamboo shoot,chemical properties, ACE inhibitory activity*

INTRODUCTION

Commented [U1]: State of the art of this research is not clearly written yet in the Introduction.

Fermented food products have long been known to Indonesian people. These foods made from various sources such as vegetable, grain, milk and meat. The traditional types of fermented products from buffalo milk known as “dadih” originally from West Sumatra and danke from South Sulawesi (Soenarno *et al.,* 2013). Indonesian local fermented products derived from meat are not widely known. One of the traditional fermented meat products is “cangkuk”.

According to Salahuddin (2004), ”cangkuk” is a traditional fermented product derived from buffalo meat added with *betung* bamboo shoot (*Dendrocalamus asper*) and salt, originally from Sorolangun District, Jambi Province. ”Cangkuk” was made for special events such as in the holy month of Ramadan, a family celebration and feast days. Cangkuk is also known by the people in Kuantan Singingi District, Riau Province. With the same designation, cangkuk was processed using meat, particularly beef. The processing and basic materials used are also similar to those in Sorolangun District, Jambi.

Bamboo shoot was prepared by people in Riau Province before consumed in two types of processing methods, namely boiling and fermentation. Bamboo shoot was fermented by using indigenous microbe of its self and added salt at 1-5 % w/w. In processing cangkuk, both of bamboo shoot and beef meat were fermented together with added rice and salt in certain concentrations. Bamboo shoot and rice contribute in supply nutrient for indigenous microbe during fermentation hence they had high carbohydrate. Salt in lower concentration contributes in supply mineral. Choudhury *et al*., (2012), said that bamboo shoot had high moisture and carbohydrate content, protein and mineral.

Bamboo shoot had an active material such as vitamin, amino acids, antioxidant and steroids.

Recent research on fermented meat products has been widely reported. Dry-cured ham is a type of fermented pork, seasoned and followed by spontaneous fermentation for 10-11 months. Fermented meat products named according to the country or place of origin, such as Spanish dry-cured ham originating from Spain (Escudero *et al*., 2012), Jinhua Ham (Li *et al*., 2003) and Xuanwei Ham from China (Zhou and Zhao, 2007). Fermented sausage known as salami, such as salami Milano from Itali (Ruiz *et al*., 2014), Chorizo (Broncano *et al*., 2012) and Sremska sausage from Serbia (Zivkovic *et al*., 2012).

Based on these studies, it can be seen that fermented meat has the advantage as a source of bioactive peptides, free amino acids with a unique flavor, do not contain pathogenic bacteria, and better sensory properties. The two physiological functions shown are as antioxidants and antihypertensive (Escudero *et al*., 2012; Albenzio *et al*., 2017).

In Southeast Asia, fermented meat products are known as sour meat which is processed to increase consumers' needs in choosing the variety of foods they want. Meat products are inoculated with microbes at controlled time and processing conditions to produce the desired properties. Local producers generally use natural fermentation without inoculation or controlled conditions. The microorganisms found in products come from the meat itself or the environment (Singh *et al*., 2012). A number of active components physiologically including bioactive peptides have been found in traditional fermented food. Therefore, traditional fermented meat is an interesting target for a new functional meat product (Arihara, 2006).

Based on a direct survey in the field conducted recently, ”cangkuk” remain produced and consumed by the community in certain age groups (> 50 years) in Riau Province. The presumption of the community consuming ”cangkuk” is in accordance with the tastes of the elderly, a tender texture, a specific aroma and taste is a little sour that is preferred. Meanwhile, there has been no scientific evidence that has been studied and reported in bioactivity of ”cangkuk”. Furthermore, research on Indonesian traditional fermented meat products is very limited. ”Cangkuk” that produced by spontaneous fermentation of beef meat with addition of bambeoo shoot could generated new source of bioactive peptide.

Commented [U2]: Please add the reference that relate to this statement.

Commented [U3]: After this paragraph, please add the new paragraph that explain about the importance of ACE inhibitory and some other parameters. Why these parameters must be evaluated? Please add supporting references in this paragraph.

MATERIALS AND METHODS

The materials used in processing beef meat fermented “cangkuk” were fresh beef meat (brisket) from male Bali cattle with 2.5-3 years old, green bamboo shoot, distilled water, rice and salt. The chemical used were sulphuric acid, hydrogen chloride, sodium hydroxide, boric acid, catalyst selenium, trichloroacetic acid, Lowry reagent, Bovine Serum Albumin (BSA), Folin-ciocalteau, angiotensin converting enzyme from rabbit lung (Sigma), hippuryl-hystidyl-leucyne substrate (Sigma), sodium chloride, sodium borate buffer pH 8,3, ethyl acetat and MRSA (*de Man Rogosa Sharpe agar*), (Merck). All of chemical and reagent were analytical grade.

Commented [U4]: Please write the places where meat and bamboo shoot were obtained?

Commented [U5]: Is this ACE which was used in the determination of ACE inhibitory activity? Please its confirmed in the determination procedures.

The equipmet that used to prepare bamboo shoot were knife, plastic ware, analytical balance, blender, glassware, volumetric flask, tube centrifuge, and high speed centrifuge. The instrument that used for analysis of ”cangkuk” were mortar, pH meter,

Kjeltec set, burette flask, spectrophotometer UV-Vis, waterbath, magnetic stirrer, micropippet, oven, petri dish, autoclave and colony counter.

Preparation of Bamboo Shoot

Bamboo shoots were harvested from local farms in Kampar Regency and were brought to the laboratory in order to remove their skin and smooth hair. Bamboo shoot washed and drained, followed by thinly sliced. There were three preparation method of bamboo shoot (factor A) in this experiment, namely : chopped (A1), ground (A2) and extracted (A3). A1 was prepared with this following: bamboo shoot was chopped into small pieces by using a knife. A2 was prepared by mixed the bamboo shoot and distilled water in 1:1 ratio, homogenized within blender during 3 minutes. A3 was prepared by mixed bamboo shoot and distilled water with 1 : 3 ratio, homogenized within blender for 3 minutes. Then, water soluble extracts were obtained by centrifugation at a speed 6000 rpm for 30 minutes. Supernatant was taken as a water soluble extract. Factor B was prepared by weighing bamboo shoot based on their ratio of meat weight, 1:0.75; 1:1 and 1:1.25, respectively.

Preparation of Beef Meat

The fresh beef meat, part of the brisket, was purchased from Animal Slaughtering House in Pekanbaru city which was put in the ice box and brought to the laboratory in the cold condition. Further processing conducted by separating the fat and connective tissue of the meat and washed with distilled water and then drained at room temperature. The meat was cut into small piece with size 5 x 5 x 2 cm^3.

Processing of the Cangkuk

This stage was aimed to conduct fermentation of ”cangkuk” according to the general method in Riau society. Fermented beef meat ”cangkuk” was initially by prepared 300 g of small cut of beef meat for each experimental unit. Then, bamboo shoot was prepared based on their preparation methods (chopped, ground, a water soluble extract) and ratios to meat weight, i.e: 1:0.75; 1:1 and 1:1.25 (225 g, 300 g and 375 g). All of the ingredients were put into each of polypropylene plastic boxes based on their treatments. Bamboo shoot based on their treatments was mixed with beef meat, salt and rice. Salt and rice were added at 1% from total weight beef meat and bamboo shoot. All of the ingredient was mixed homogeneously and prior to an aerobic fermentation during seven days in a room temperature. After the fermentation process, fermented beef meat was separated from another ingredient and was packed in aluminium-plastic laminated , then kept in freezer at-20^{o}C until analyzed.

Commented [U6]: Is this ACE that was used for determination of ACE inhibitory activity? Please add reference in this processing method.

Commented [U7]: Please give more explanation about the process of fermentation in this research.

Analysis of Total Protein by Micro Kjeldahl Method

Analysis total protein of the sample was conducted by micro-Kjeldahl method (AOAC 960.52). The samples analyzed consisted of fresh beef before fermentation, and the fermented beef meat (”cangkuk”) from each treatment.

Analysis of Soluble Nitrogen (Protein) in Trichloroacetic Acid (SN-TCA)

An amount of 20 mL of fermented beef meat was added with 20% TCA (w/v) of 20 mL. The mixture is then allowed to stand for 30 minutes for sedimentation and then centrifuged (speed of 7,800 x g, for 15 minutes). The supernatant was then analyzed for nitrogen content using the Lowry method (Waterborg, 2002). An aliquot of 0.5 mL of the

sample was mixed with 5.5 mL of an alkaline-copper reagent and incubated for 20 min at room temperature. The mixture was added to 0.5 mL Folin-Ciocalcetau's phenol reagent at 8-fold dilution with distilled water and allowed to stand for 30 min. Absorbance was measured at 750 nm using spectrophotometer. Bovine serum albumin (BSA) was used as standard.

Degree of Hydrolysis

The degree of hydrolysis measured according to procedures of Hasnaliza *et al*., (2010), which is calculated based on the percentage ratio of soluble protein in trichloroacetic acid (TCA) to total protein content of the fermented beef meat. The degree of hydrolysis can be calculated by the following formula:

% Degree of Hidrolysis =[Soluble Nitrogen in TCA 20% (w/v)] / Total protein x 100 %

pH analysis

An amount of five grams of finely ground sample of fresh beef meat before fermentation, and fermented beef meat from each treatment were prepared. Then, add the distilled water 10 ml and stir until evenly distributed. The pH value is measured using a pH meter that has been calibrated with a buffer of pH 4.0 and pH 7.0.

Total Titratable Acidity

Total titratable acidity was measured using the principle of lactic acid base. Amount of ten mg sample was put into the Erlenmeyer flask, then added 2-3 drops of 1% phenolphtalein indicator. Samples were titrated with 0.1 N NaOH solution until they

formed a pink color and did not disappear within 30 seconds (Rahman *et al*., 1992). The total titratable acidity calculated by the formula:

$$\text{Total titratable acid (\%)} = \frac{\text{V NaOH} \times \text{N NaOH} \times (\frac{90}{1000})}{\text{sample volume}} \times 100\%$$

The Number of Lactic Acid Bacteria

The number of lactic acid bacteria colonies was determined by pour plate method and analyze using the Standard Plate Count (SPC). The deMan Rogosa Sharpe Agar (MRSA) used as the propagation medium of lactic acid bacteria. A sample of 1 mg of inoculant pipetted into a sterile Petri dish and then the MRSA medium which has cooled (temperature about 37ºC) is poured into sterile Petri dish as much as 12-15 mL. The mixture is homogeneous by moving the Petri dish. Petri dishes were incubated upside down after hardening, at 37°C for 24-48 hours. All analyses were done in duplo. The number of colonies per gram (as log10 of CFU/g for each sample) is calculated using the formula:

$$\text{Number of colonies / g} = \text{Number of colonies per Petri dish} \times \frac{1}{\text{dillution factor}}$$

Measurement of ACE inhibitory activity

The ACE inhibitory activity was measured according to the method of Chusman and Cheung (1971) with modification by Arihara *et al*., (2001). This assay based on the liberation of hippuric acid from Hip-His-Leu catalyzed by ACE. A sample solution (15 µL) was mixed with 125 µL of 100 mM sodium borate buffer (pH 8.3) containing 7.6 mM Hyp-Hys-Leu and 608 mM NaCl and then pre incubated for 5 min at 37ºC. The

reaction was initiated by the addition of 50 µL of ACE dissolved in distilled water and the mixture was incubated for 30 min at 37°C. For the blank, distilled water was used about 50 µL. The reaction was stopped by adding 125 µL of 1 N HCl. The hippuric acid liberated by ACE was extracted by adding 750 µL ethyl acetate to the mixture with vigorous shaking. After centrifugation at 12,000 rpm for 10 min, 500 µL of the upper layer was collected and then dried at 90°C for 60 min. Hippuric acid was dissolved with 1 mL distilled water and photometrically was determined at 228 nm. ACE inhibitory activity was calculated using the equation:

$$\text{Inhibitory activity (\%)} = [(C-A) / (C-B)] \times 100$$

where A : absorbance of sample reaction, B : absorbance of blank , C: absorbance of control (distilled water for sample).

Data Analysis

Analysis of total protein, soluble protein, degree of hydrolysis, pH value, total titratable acidity, and the number of lactic acid bacteria were statistically analyzed by analysis of variance with completely randomized factorial with 3 replications. Factor A is the preparation method of bamboo shoots: chopped, ground, and extracted. Factor B is the ratio of meat and bamboo shoots (B) which is 1, 0.75; 1: 1, 1: 1,25 ratios. Post hoc analysis was carried out by the Duncan Multiple Range Test (DMRT) to see the difference between treatments (Steel and Torrie, 1993). Bioactivity data of ACE inhibitory activity were analyzed by calculating the mean and standard deviation.

RESULTS AND DISCUSSIONS

Commented [U8]: The Results and Discussions much better to be divided into some groups, for example: chemical characteristics, total LAB, and ACE inhibitory activity. This suggestion is accordance with the title of the research.

Total protein of ”cangkuk” were presented in Table 1. Total protein of raw beef meat before fermentation process was 18.95±0.30 (g/100 g). This research showed that preparation methods of bamboo shoot (factor A) by ground and extracted could decrease the total protein of ”cangkuk” greater than by chooped during spontaneous fermentation for one week (P<0.01). In term of the ratio of meat and bamboo shoot (factor B), 1:0.75 and 1:1 ratios could decrease the total protein greater than 1:1 and 1:1.25 ratios (P<0.01). There were no interaction between factor A and factor B to decrease the total protein. This research showed that addition of bamboo shoot with different preparation method on spontaneous fermentation beef meat contribute in change total protein value after fermentation. This phenomenon similar with Zhou *et al* 2017, studied on fermentation of solid beef inoculated with two starter cultures (*Lactobacillus curvatus* and *Pediococcus pentosaceus*) in different inoculums concentration, fermentation time, and fermentation temperature. An increase of inoculums concentration, fermentation times and fermentation temperatures could decrease protein compossition in term water-soluble protein and salt soluble protein after fermentation, while insoluble protein increased.

Commented [U9]: What the meaning spontaneous fermentation?

Bamboo shoot became nutrient source for indigenous microbe during spontaneus fermentation in this research due to had high content of moisture, carbohydrate, protein and mineral. Bamboo shoot had an active material such as vitamin, amino acids, and steroids (Choudhury *et al*., (2012). According to Table 1, both of the preparation method of bamboo shoot and bamboo shoot ratios could decrease the total protein in the different way. It is shown that the preparation method by using ground and extracted could decrease total protein greater than by chopped. The size reduction of bamboo shoot using blender facilitated fermentation progress more compared to the chopped method.

Furthermore, meat and bamboo shoot ratios showed that decreased the total protein was greater at 1:0,75 and 1: 1 than 1:1 and 1:1.25. This finding showed that the bamboo shoot ratio must be lower and similar with than beef meat, at the high ratio 1,25 the total protein decreased more smaller due to fermentation progress was lower.

The main component of meat is a protein (range from 15-22 g/100 g) which consist of high essential amino acid percentage. Beef protein composition of red meat with adipose tissues is about 18%. During “cangkuk” processing, the fermentation occurs spontaneously with the help of mix salt and rice as additional ingredients on anaerobic condition. Fermented meat according to Hui (2006) is a fermentation process which consists in the growth and development of the microbial flora. This process naturally present in the meat during spontaneous fermentation or by the addition of starter culture. During the fermentation process, protein of beef meat was hydrolyzed by indigenous proteolytic enzymes from spontaneous microbe within the meat and bamboo shoot generated low molecular weight of protein (i.e:water-soluble protein), bioactive peptides and free amino acid (Steinkraus, 2002; Ockerman and Basu, 2017).

The preparation method of bamboo shoot by ground indicated that decreased of total protein during fermentation in line with increasing the soluble protein and percentage of hydrolysis degree. Since peptide is a lower molecular weight protein, it could be the one of the components of soluble protein which was measured by SN-TCA methods. The soluble protein of fermented beef ”cangkuk” with different preparation methods and a ratio between meat and bamboo shoot was shown in Table 1.

Based on the analysis of variance, the differences of preparation method of fermented beef “cangkuk” has a very significant effect to increase the soluble protein

Commented [U10]: Is any comparable references?

277 value (P<0.01), while the ratio of meat and bamboo shoot has no significant effect on the
278 value of soluble protein (P>0.05) of fermented beef ”cangkuk”. And also, there were no
279 interactions between preparation methods and ratio of meat and bamboo shoot to soluble
280 protein value.

281 The preparation methods of bamboo shoot by using chopped and blended produced
282 the soluble protein content higher than by using extraction methods. The lower soluble
283 protein content in extraction method was caused by water soluble extracts had reduction
284 in the nutritional components of bamboo shoots due to some carbohydrate (starch, fiber)
285 and water-insoluble compound (lipid) were wasted on the separation of water insoluble
286 bamboo shoot components at centrifugation process. This directly caused the lower
287 progress of fermentation as evidenced by the low level of hydrolysis degree, low content
288 of soluble protein, but total protein still high. Starch, fiber and lipid were important
289 nutrient for the microbe during fermentation (Kampen, 2014).

290 Degree of hydrolysis describes the percentage of peptide bond that cleaved during
291 hydrolysis by the proteolytic enzyme of microbe indigenous on fermentation of beef
292 meat. Degree of hydrolysis of fermented beef with different preparation method and ratio
293 between meat and bamboo was shown in Table 1. Analysis of variance showed that the
294 interaction of preparation method and ratio of meat and bamboo shoot had a significant
295 effect to increase the degree of hydrolysis of fermented beef. The combination of
296 treatment A2B2 (ground method and ratio meat : bamboo shoot 1:1) had the highest
297 degree of hydrolysis. The increasing of hydrolysis degree in line with the decreasing of
298 total protein and increasing the soluble protein. In this research, ground method of
299 bamboo shoot and 1:1 ratio in ”cangkuk” processing could decrease higher in total protein

and increase soluble protein more greater, consequently the degree of hydrolysis became higher (3.38 %).

Degree of hydrolysis is a key parameter of hydrolysis reaction and used for monitoring progress of hydrolysis, describes the percentage of peptide bond that cleaved during hydrolysis, then generated smaller peptide with lower molecular weight (Nielsen *et al.*, 2001). Soluble protein measured in this research based on soluble nitrogen compound that in trichloro acetic acid 20%, they could be smaller peptide (Rutherfurd, 2010). During hydrolysis, a wide variety smaller peptide and free amino acid were generated, depending on enzyme specificity (Faithong *et al*., 2010).

Degree of hydrolysis from fermented beef meat in this research had lower (2.0 - 3.3%) percentage than the degree of hydrolysis of fermented egg shell membrane by using lactic acid bacteria culture starter (25.1%) (Jain and Anal, 2017). According to Faithong *et al*., (2010), degree of hydrolysis of Thailand traditional fermented shrimp and krill product, *Jalo, Kong-shom* and *Kapi* were 25%, 25-40% and 20-22%, respectively. The degree of hydrolysis of local fermented food was varied according producer, raw material, ingredien additive, fermentation time and type proteolytic microbial enzyme.

Variance analysis resulted that different preparation methods of bamboo shoot was significantly effect ($P<0.05$) to decrease the pH of fermented beef ”cangkuk”, meanwhile the different ratio of meat and bamboo shoot and interactions between the two factors showed a non significant effect ($P>0.05$) to pH value.

Fermented beef ”cangkuk” prepared by addition of water soluble extract of bamboo shoot had lower pH value than the ”cangkuk” that produced by addition of ground and chopped bamboo shoot, 4.40 contrasted with 4.57 and 4.67, respectively. The

successive growth of microorganisms during meat fermentation was dominated by lactic acid bacteria which play an important role in the process. The lactic acid bacteria consume sugar primarily and carbohydrates and convert it into lactic acid, which lowers the pH (Ockerman and Basu, 2017). This psycho-chemical change called acidification, which has a preservative effect because its ability to inhibit spoilage and pathogenic microorganism (Bover-Cid *et al*. 2000).

Owens (2015) reported an indigenous fermented pork sausage from Thailand called *Nham* which fermented at room temperature for 3 - 4 days reached ultimate pH 4.6. In comparison to fermented meat cangkuk with different preparation methods of bamboo shoot, the pH value range from 4.40 - 4.67. The same studies indicated that the primary microorganism during fermentation were associated to *Lactobacilli* and *pediococci*. These certain *lactobacilli* identified as *Lactobacillus plantarum*, *Lactobacillus pentosus* and *Lactobacillus sakei*. While the *pediococci* observed as *Pediococcus acidilactici* and *Pediococcus pentosaceus*.

Another acidification process can be conducted by measuring the titratable acidity in fermented beef ”cangkuk”. The data in Table 1. showed that the titratable acidity calculated as a lactic acid percentage. Variance analysis resulted that different ratio of meat and bamboo shoot was very significantly effect ($P<0.01$) decreasing the titratable acidity of fermented beef ”cangkuk”, as different preparation methods and interactions between the two factors showed a non significant effect ($P>0.05$).

The titratable acidity in this study was expressed as lactic acid because it is assumed that the bacteria were dominantly from lactic acid bacteria which perform the metabolic product of the carbohydrate breakdown into lactic acid. Related to pH of

346 fermented beef ”cangkuk” which indicated decrease value in line with the increasement
347 of the titratable acidity.
348 Fermented beef ”cangkuk” made with different ratio between meat and bamboo
349 shoot was significantly decreased the titratable acidity percentage, which range from,
350 1.03%; 0.84% and 0.70%, respectively. Fermented beef ”cangkuk” having the 1.25
351 bamboo shoot ratio was significantly decreased compared to 0.75 ratio of bamboo shoot.
352 This probably addressed by the presence of lactic acid.
353 Ockerman and Basu (2017) adduced the characteristics of different types of semi-
354 dry fermented sausages has reduced pH to 4.7 - 5.3 (lactic acid 0.5 - 1.3%, total acidity
355 1%), with a processing period of 1 - 4 week. This finding has the same result with the
356 titratable acidity of fermented beef ”cangkuk” as shown in Table 1.
357 Lactic acid bacteria play important role of lactic acid food fermentation, especially
358 the lactic acid fermentation type of food. Variance analysis resulted that either the
359 preparation method differences and different ratio of meat and bamboo shoot did not
360 significantly affect ($P>0.05$) the lactic acid bacteria cell count.
361 The average cell count of lactic acid bacteria of fermented beef ”cangkuk” in this
362 research was 7 $\log_{10}$ cfu/g. It means that about 10 million of lactic acid bacteria were
363 assumed to be present in the product. According to Kameník *et al*. (2013) the preliminary
364 population of 6.5 log cfu/g showed an increasement to 8.0–9.0 log cfu/g of the lactic acid
365 bacteria population until the peaking day of the 7 days of dry fermented sausage samples.
366 Although the fermentation process of fermented beef ”cangkuk” was conducted
367 spontaneously, it reaches a high cell count of lactic acid bacteria.

Angiotensin converting enzyme (ACE) inhibitory activity of fermented beef ”cangkuk” from combination of preparation method and different ratio of bamboo shoot was seen in Figure 1. The combination of A2B1 had highest angiotensin converting enzyme activity (80%).

Commented [U11]: Is any comparable references for other products?

This research emphasized that addition bamboo shoot as an ingredien additive in spontaneous fermentation of beef meat to produce ”cangkuk” which had potent ACE inhibitory activity. This indicated that local fermented product from Indonesia also had a functional effect as well as meat fermentation products typical of other countries.

The ACE inhibitory activity was influenced by peptide sequence derived from hydrolysis process during fermentation and ability to bind the active site of ACE (Ryan *et al*., 2011; Choe *et al*., 2019). The inhibitory activity of ACE peptide is thought to be due to the high residual hydrophobic amino acids such as proline, alanine and aliphatic amino acids such as glycine. According to Manoharan *et al*. (2006) peptides that have proline or aromatic residues at the C-terminal end and hydrophobic amino acid residues at the N-terminal end have potential ACE inhibitory activity. The same author stated that ACE has an important role in regulating the blood pressure. While in this research, high ACE inhibitory activity in A2B1 treatment is the basis for the second phase of this research to study the antihypertensive activity in Spontaneous Hypertensive Rats.

CONCLUSION

The results of this study show that bamboo shoot prepare through the ground process with the ratio of meat and bamboo shoot 1 : 0.75 has protrude chemical

characteristics and bioactivity. It is recommended to conduct further research using these results.

ACKNOWLEDGMENTS

The authors would like to thank the Directorate of Islamic Higher Education, Ministry of Religious Affairs, Republic of Indonesia for financial support of the research by the Programm Applied Global Research 2019.

REFERENCES

Commented [U12]: About 60% references are up to date journals. It should be added new journals

[AOAC] Association Official Analytical Chemist's Technical Standard.960-52. 2005. Official Methods of Analysis, 16th Ed. Washington.

Albenzio, M., A. Santillo, M. Caroprese, A. della Malva and R. Marino. 2017. Review. Bioactive peptides in animal food products. Food 6(35):1-14. Doi : 10.3390/foods60500355.

Arihara, K., Y. Nakashima, T. Mukai, S. Ishikawa and M. Itoh. 2001. Peptide inhibitor for angiotensin-I converting enzyme from enzymatic hydrolisates of skeletal muscle proteins. J. Meat Sci. 57: 319-324.

Arihara, K. 2006. Strategies for designing novel functional meat products. J. Meat Sci. 74: 219-229.

Bover-Cid, S., M. Izquierdo-Pulido and M.C. Vidal-Carou. 2000. Influence of hygienic quality of raw materials on biogenic amine production during ripening and storage of dry fermented sausages. J.Food Protection . 63(11):1544–1550.

Broncano, J.M., J. Otte, M.J. Petron, V. Parra and M.L. Timon. 2012. Isolation and identification of low molecular weight antioxidant compounds from fermented "chorizo" sausage. J.Meat Sci. 90(2): 494-501.

Choe, J., K.H. Seol, H.J. Kim, J.T. Hwang, M. Lee and C. Jo. 2019. Isolation and identification of angiotensin I-converting enzyme inhibitory peptides derived from thermolysin-injected beef *M. Longissimus*. Asian-Australas J Anim Sci. 32 (3) : 1011-2367.

Choudhury, D., J.K. Sahu and G.D. Sharma. 2012. Bamboo shoot : microbiology, biochemistry and technology of fermentation- a review. Indian J Traditional Knowledge 11(2):242-249.

Chusman D.W and H.S. Cheung. 1971. Spectrophotometric assay and properties of the angiotensin-converting enzyme of rabbit lung. Biochem Pharmacol. 20: 1637-1648.

Escudero, E., M.C. Aristoy, H. Nishimura, K. Arihara and F. Toldra. 2012. Antihypertensive effect and antioxidant activity of peptide fractions extracted from Spanish dry-cured ham. J.Meat Sci. 91:306-311.

Faithong, N., S. Benjakul, S. Phatcarat and W. Binsan. 2010. Chemical composition and antioxidative activity of Thai traditional fermented shrimp and krill products. Food Chem. 119:133-140.

Hasnaliza H, M.Y. Maskat, A.W.M. Wan and S. Mamot. 2010. The effect of enzyme concentration, temperature and incubation time on nitrogen content and degree of hydrolysis of protein precipitate from cockle (*Anadara granosa*) meat wash water. Int. Food Research J 17:1 47-152.

Hui, Y. H. 2006. *Handbook of Food Science, Technology, and Engineering*. Volume 1. Edited by Y. H. Hui. CRC Press. Florida.

Jain, S. and A.K. Anal. 2017. Production and characterization of functional properties of protein hydrolysates from egg shell membranes by lactic acid bacteria fermentation. J. Food Sci. Technol. 54(5):1062-1072.

Kameník, J., P. Steinhauserová, A. Saláková, Z. Pavlík, G. Bořilová, L. Steinhauser and J. Ruprich. 2013. Influence of various pork fat types on the ripening and characteristics of dry fermented sausage. Czech J. Food Sci. 31: 419–431.

Kampen, W.H. 2014. Nutritional requirement in fermentation process. In. Fermentation and Biochemical Engineering Handbook 3rd Edition. (H.C. Vogel and C.M. Todaro, eds). Elsevier Science. USA. P. 37-57.

Li Ping-lan, Q.W. Shen and L.V. Yan-ni. 2003. Analysis of main of microorganism in xuanwei ham. Chinese Journal of Microecology : (5).

Manoharan, S., A.S. Shuib and N. Abdullah. 2017. Structural characteristics and antihypertensive effects of angiotensin-I-converting enzyme inhibitory peptides in the renin-angiotensin and kallikrein kinin systems. Afr J. Tradit Complement Altern Med. 14 (2): 383-406.

Nielsen, P.M., D. Petersen and C. Dambmann. 2001. Improved method for determining food protein degree of hydrolysis. J. Food Sci. 66 (5):642-646.

Ockerman, H.W. and L. Basu. 2017. Current status of fermented meat production In Fermented Meat Products Health Aspects. (N Zdolec Ed). CRC Press. Boca Raton New York. 572p

Owens, D.J. 2015. Indigenous Fermented Foods of Southeast Asia. CRC Press Taylor & Francis Group. New York.

Rahman, A., S. Fardiaz, W.P. Rahayu, Suliantari dan C.C. Nurwitri . 1992. Teknologi Fermentasi Susu. Penerbit Pusat Antar Universitas, Institut Pertanian Bogor. Bogor.

Ruiz, J.N., N.D.M. Villanueva, C.S. Favaro-Trindade and C.J. Contreras-Castillo. 2014. Physicochemical, microbiological and sensory assesments of Italian salami sausages with probiotic potential. Scienta Agricola. 71(3): 204-211.

Rutherfurd, S.M., 2010. Methodology for determining degree of hydrolysis of protein in hydrolysates : a review. J.AOAC Int.:93(5):1515-22.

Ryan, J.T., R.P. Ross, D. Bolton, G.F. Fitzgerald and C. Stanton. 2011. Bioactive peptides from muscle source : meat and fish. A review. Nutrient.3:765-791.

Salahuddin. 2004. Kajian Fermentasi Cangkuk dari Daging Sapi dan Rebung Bambu Betung (*Dendrocalamus asper*). Tesis. Sekolah Pascasarjana. Institut Pertanian Bogor. Bogor

Singh, V.P., V. Pathak and A.K. Verma. 2012. Fermented meat product : organoleptic qualities and biogenic amines- a review. American J. Food Tech. 7 (5):278-288. Doi : 10.3923//ajft.2012.278.288.

Steel, R.G.D, and J.H. Torrie. 1993. Prinsip dan Prosedur Statistika: Suatu Pendekatan Biometrik. Sumantri B, penerjemah. Jakarta: PT. Gramedia Pustaka Utama.

Soenarno, M.S., B.N. Polli, A. Febriantosa, dan R. Hanifah . 2013. Identifikasi peptida bioaktif dari olahan susu fermentasi tradisional Indonesia sebagai bahan pangan fungsonal untuk kesehatan. J. Ilmu Produksi dan Teknologi Hasil Peternakan.1. (3).191-195.

Waterborg, J.H. 2002. The Lowry method for protein quantitation. In The Protein Protocols Handbook (J.M. Walker Ed.): second edition. Humana Press, Inc. New Jersey. (pp.7-9).

Zhou, G.H. and G.M. Zhao, GM. 2007. Biochemical changes during processing of traditional Jinhua ham. Meat Science. 77(1):114-120.

Zhou, Y., Y. Ma, G. Yao, J. Li and S. Wang. 2017. Changes of protein composition and its relevance with textural properties during processing of fermented solid beef. J Food Process Preserv. https://doi.org/10.1111/jfpp.13224.

Zivkovic, D., Z. Radulovic, S. Aleksic, M. Perunovic, S. Stajic, N. Stanisic and C. Radovic. 2012. Chemical, sensory and microbiological characteristics of Sremska sausage (traditional dry-fermented Serbian sausages) as affected by pig breed. African J. Biotech.11(16): 3858-3867.

Table and Figure

Commented [U13]: This information is minim category. Please add parameters of interest

Table 1. Preparation Method, Meat and Bamboo Shoot Ratios and Their Interactions on Total Protein, Soluble Protein, Degree of Hydrolysis, pH Value, Titratable Acidity and Lactic Acid Bacteria of Fermented Beef Meat "cangkuk"

Parameters	Preparation Method	Meat : Bamboo Ratios	Significance

	C	G	WSE	1:0.75	1:1	1:1.25	PM	MBR	INT
Total Protein (g/100 g)	16.62	15.02	15.25	14.85	15.61	16.43	**	**	ns
Soluble Protein (g/100 g)	0.46	0.44	0.32	0.39	0.40	0.44	**	ns	ns
Degree of Hydrolysis (%)	2.83	2.97	2.13	2.66	2.61	2.66	*	ns	*
pH Value	4.67	4.57	4.40	4.58	4.45	4.59	*	ns	ns
Titratable Acidity (%)	0.79	0.84	0.94	1.03	0.84	0.70	ns	**	ns
Lactic Acid Baccteria Total (Log_{10} CFU/g)	7.11	7.11	7.05	7.17	7.07	7.03	ns	ns	ns

C = Chopped, G = Ground, WSE = Water Soluble Extract, PM = Preparatiom Method, MBR = Meat and Bamboo Shoot Ratio, INT = Interaction between Preparation Method and Meat and Bamboo Shoot Ratio, **= highly significant (P<0.01); * = significant (P<0.05); ns = non significant (P>0.05)

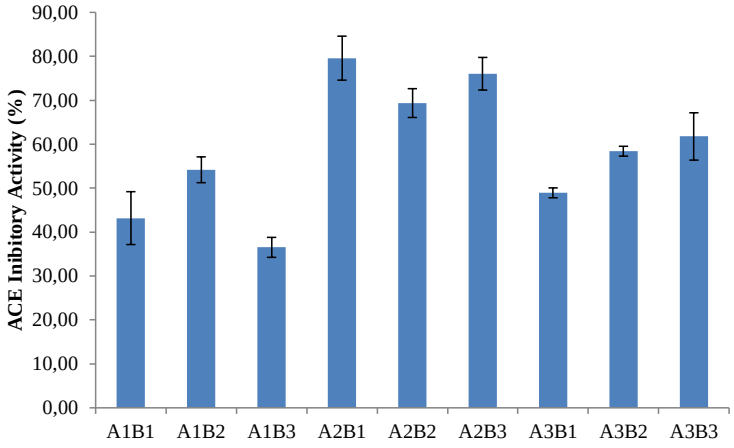


Figure 1. Angiotensin converting enzyme inhibitory activities of beef meat fermentation from combination of preparation method (A) and ratio of meat and bamboo shoot (B). A1: Chopped, A2: Ground, A3: Extracted. B1 : 1:0.75, B2 : 1:1, B3 : 1:1.25. data presented in mean±standard deviation from 2 replications. Sample concentration 10 ml contain 15 g/100 g protein.

Revised manucript - mirdhayati@

mail.google.com/mail/u/0/#search/jitaa/FFNDWMtcvQpfbXnKKjKKxSCNlVVXWXvZ

Gmail

jitaa

Tulis

Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya

Label
Pribadi
Selengkapnya

22 dari 33

Revised manucript

Irdha Mirdhayati <mirdhayati@gmail.com>
kepada JITAA

Jum, 12 Jun 2020, 13.09

Dear Editor JITAA

Hereby we enclosed the revised manuscript entitle " **Chemical characteristic, lactic acid bacteria population, and angiotensin converting enzyme inhibitory activity of traditional fermented beef "cangkuk" by spontaneous fermentation with the addition of bamboo shoot** .

Thank you very much for your attention.

Best regards,

Irdha Mirdhayati

Satu lampiran • Dipindai dengan Gmail

Chemical charact...

28451-Form. REVI....pdf

Show all

Search

20:11
17/04/2023

Mohon infromasi progres review

mail.google.com/mail/u/0/#search/jitaa/KtbxLzFvSgCnQnDwlFSTpDSfKwsJzDFXqV

Gmail

jitaa

Tulis

Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya

Label
Pribadi
Selengkapnya

21 dari 33

Mohon infromasi progres review

Kotak Masuk ×

Irdha Mirdhayati <mirdhayati@gmail.com>
kepada JITAA

Rab, 15 Jul 2020, 23.42

Kepada Yth.
Bapak Pimpinan Dewan Redaksi
JITAA
di Tempat

Assalamu'alaikum wr.wb
Dengan hormat, Do'a dan harapan saya semoga Bapak berada dalam keadaan sehat-walafiat.
Bersama ini kami ingin menanyakan tentang perkembangan artikel kami dengan ID 28451 atas nama Irdha Mirdhayati dan Wieda N.H.Zain dengan tanggal pengiriman 7 Feb 2020, mayor revisi pada pertengahan juni 2020 yang sudah kami perbaiki sesuai saran reviewer.
Demikian maksud kami. Atas perhatian Bapak, kami ucapkan terima kasih.

Wassalam,
Hormat kami,

Irdha Mirdhayati

JITAA JPPT <jppt.fpundip@gmail.com>

Sab, 18 Jul 2020, 09.00

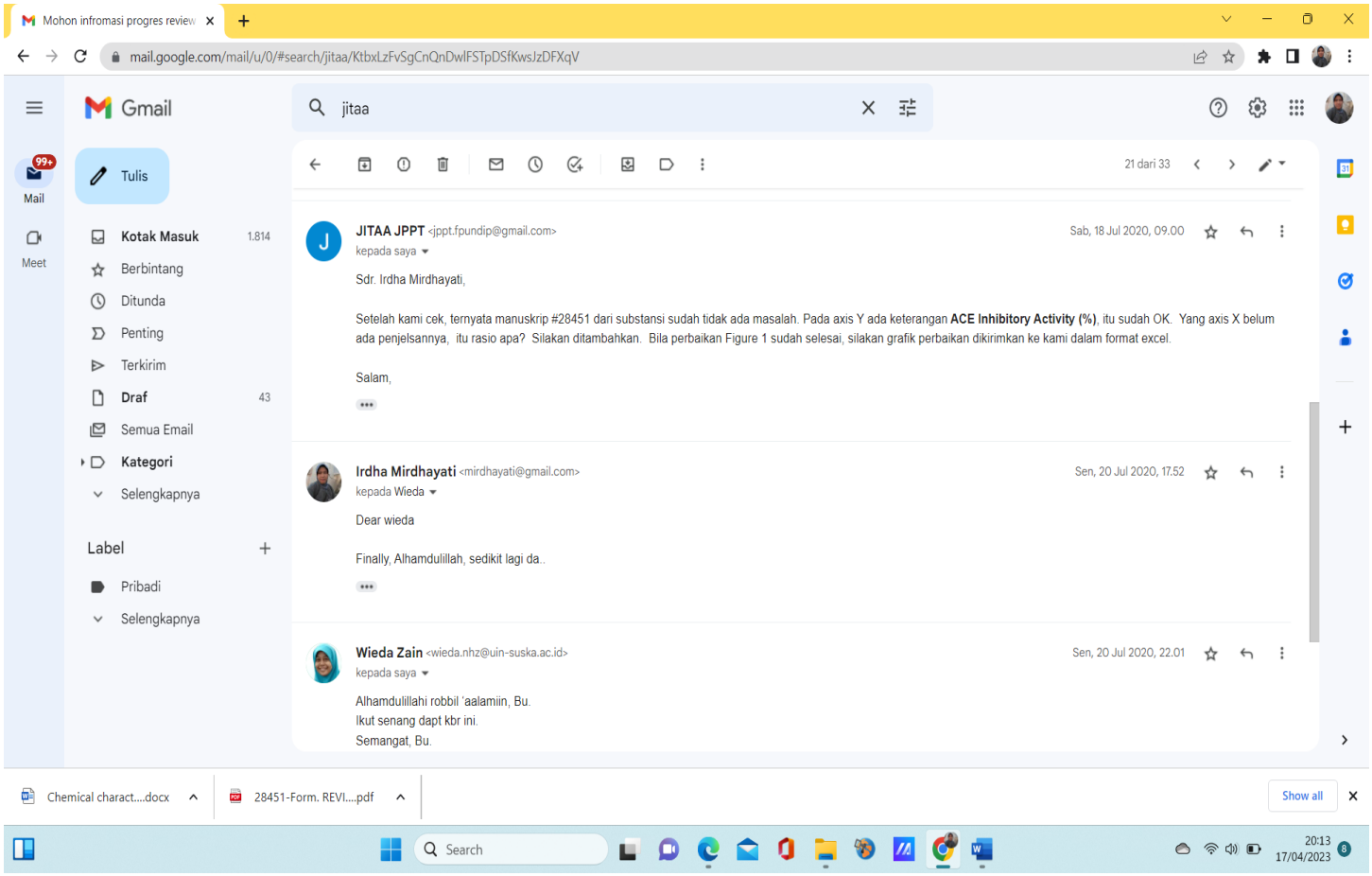
Chemical charact....docx

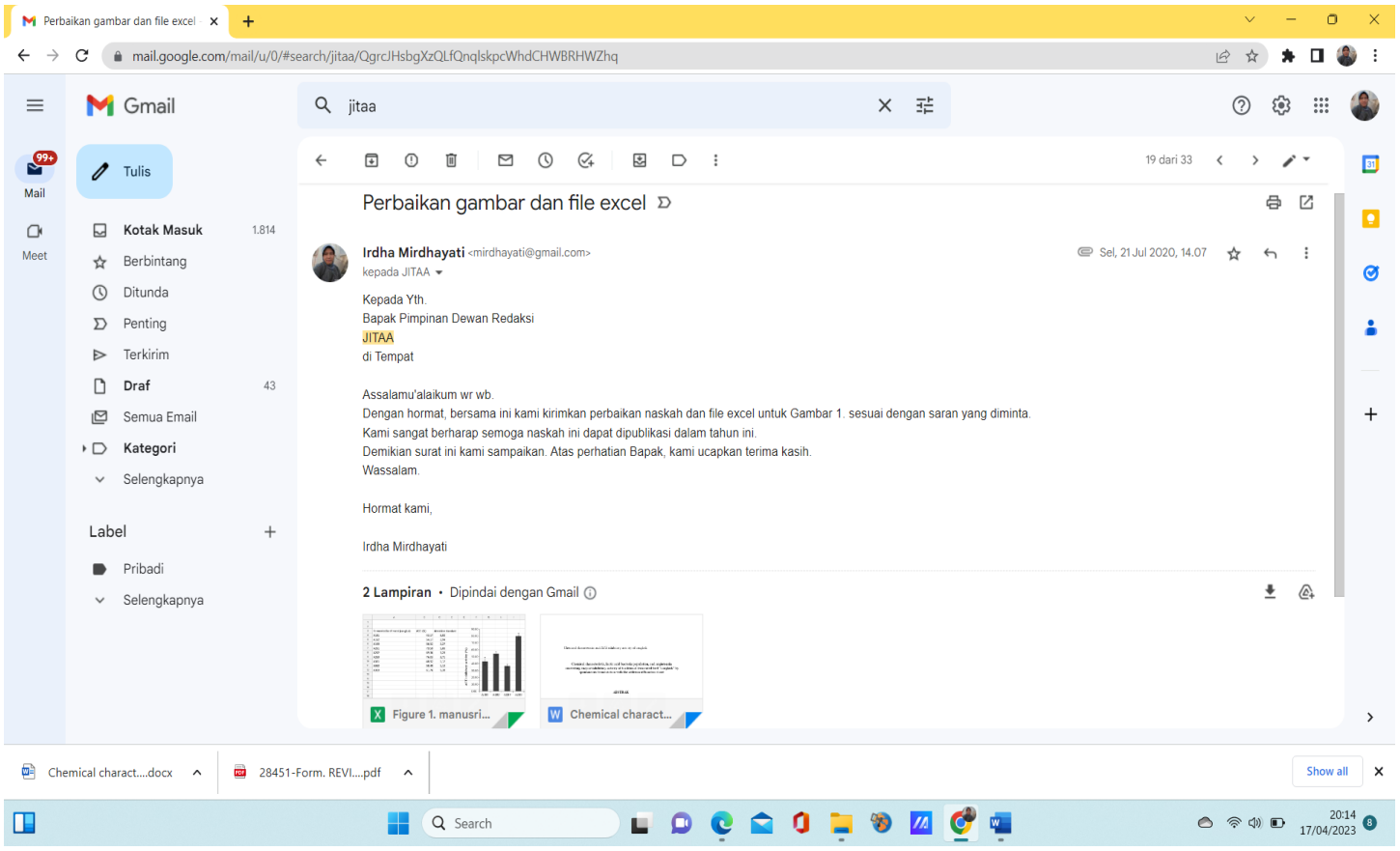
28451-Form. REVI....pdf

Show all

Search

20:13
17/04/2023


Mohon infromasi progres review
mail.google.com/mail/u/0/#search/jitaa/KtbxLzFvSgCnQnDwlFSTpDSfKwsJzDFXqV
Gmail
jitaa
Tulis
Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya
Label
Pribadi
Selengkapnya
21 dari 33
JITAA JPPT <jppt.fpundip@gmail.com>
kepada saya
Sab, 18 Jul 2020, 09.00
Sdr. Irdha Mirdhayati,
Setelah kami cek, ternyata manuskrip #28451 dari substansi sudah tidak ada masalah. Pada axis Y ada keterangan ACE Inhibitory Activity (%), itu sudah OK. Yang axis X belum ada penjelsannya, itu rasio apa? Silakan ditambahkan. Bila perbaikan Figure 1 sudah selesai, silakan grafik perbaikan dikirimkan ke kami dalam format excel.
Salam,
Irdha Mirdhayati <mirdhayati@gmail.com>
kepada Wieda
Sen, 20 Jul 2020, 17.52
Dear wieda
Finally, Alhamdulillah, sedikit lagi da..
Wieda Zain <wieda.nhz@uin-suska.ac.id>
kepada saya
Sen, 20 Jul 2020, 22.01
Alhamdulillahi robbil 'aalamiin, Bu.
Ikut senang dapt kbr ini.
Semangat, Bu.
Chemical charact....docx
28451-Form. REVI....pdf
Show all
Search
20:13
17/04/2023


Perbaikan gambar dan file excel
mail.google.com/mail/u/0/#search/jitaa/QgrcJHsbgXzQLfQnqlskpcWhdCHWBRHWZhq
Gmail
jitaa
Tulis
Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya
Label
Pribadi
Selengkapnya
19 dari 33
Perbaikan gambar dan file excel
Irdha Mirdhayati <mirdhayati@gmail.com>
kepada JITAA
Sel, 21 Jul 2020, 14.07
Kepada Yth.
Bapak Pimpinan Dewan Redaksi
JITAA
di Tempat
Assalamu'alaikum wr wb.
Dengan hormat, bersama ini kami kirimkan perbaikan naskah dan file excel untuk Gambar 1. sesuai dengan saran yang diminta.
Kami sangat berharap semoga naskah ini dapat dipublikasi dalam tahun ini.
Demikian surat ini kami sampaikan. Atas perhatian Bapak, kami ucapkan terima kasih.
Wassalam.
Hormat kami,
Irdha Mirdhayati
2 Lampiran • Dipindai dengan Gmail
Figure 1. manusri...
Chemical charact...
Chemical charact....docx
28451-Form. REVI....pdf
Show all
Search
20:14
17/04/2023

Mohon informasi perkembangan

mail.google.com/mail/u/0/#search/jitaa/KtbxLzGLlQrLdGzgpKzVcttJXvMLHLFFg

Gmail

jitaa

Tulis

Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya

Label
Pribadi
Selengkapnya

14 dari 33

JITAA JPPT <jppt.fpundip@gmail.com>
kepada saya

Kam, 1 Okt 2020, 21.43

Sdr Irdha,

Manuskrip Sdr sedang disusun proof sheet-nya. Mohon maaf penanganan edisi September agak terlambat karena ada masalah teknis. Dalam waktu sekitar 2 hari, proof sheet akan kami kirimkan.

Terima kasih,

Irdha Mirdhayati <mirdhayati@gmail.com>
kepada JITAA

Jum, 2 Okt 2020, 10.10

Kepada Yth.
Bapak Prof. Dr. Ir. Edy Kurnianto, M.S. M.Agr.
di Semarang

Assalamu'alaikum wr wb.

Dengan hormat, Kami mengucapkan terima kasih banyak atas email balasan dari Bapak. Alhamdulillah.

Wassalam,

Irdha

Chemical charact....docx
28451-Form. REVI....pdf
Show all

Search
20:16
17/04/2023

Proof sheet and Charge of Pulica

mail.google.com/mail/u/0/#search/jitaa/FMfcgxwJZJSzQHdHqshTkCmhlbPghrJL

Gmail

jitaa

Tulis

Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya

Label
Pribadi
Selengkapnya

13 dari 33

Proof sheet and Charge of Pulication

Kotak Masuk ×

JITAA JPPT <jppt.fpundip@gmail.com>
kepada saya

Jum, 2 Okt 2020, 04.48

Inggris › Indonesia Terjemahkan pesan

Nonaktifkan untuk: Inggris ×

Dear Author,

We are sending herewith the proof sheet to be checked by you. We just give you 2 days for checking. It is possible there are mistakes in writing sentences or numbers. Please send information after checking it to us.

We are also sending the charge information. Please respond soon.

Best regards,

2 Lampiran • Dipindai dengan Gmail

Mirdhayati-adm....
08. Mirdhayati.pdf

Chemical charact....docx
28451-Form. REVI....pdf
Show all

Search
20:19
17/04/2023

Konfirmasi prof sheet sudah dite

mail.google.com/mail/u/0/#search/jitaa/KtbxLthZgMDksfjCVgjXrfvxJTSnGGGtCg

Gmail

jitaa

Tulis

Mail

Meet

Kotak Masuk 1.814

Berbintang

Ditunda

Penting

Terkirim

Draf 43

Semua Email

Kategori

Selengkapnya

Label

Pribadi

Selengkapnya

10 dari 33

Irdha Mirdhayati <mirdhayati@gmail.com> Jum, 2 Okt 2020, 14.20

kepada JITAA

Kepada Yth.
Pimpinan Redaksi JITAA

di Semarang

Assalamu'alaikum wr wb.
Terima kasih untuk prof sheet dan informasi biaya administrasi yang dikirimkan.
Akan segera kami tindak lanjuti dan kirimkan kembali.

Wassalam.

Hormat kami,

Irdha Mirdhayati

JITAA JPPT <jppt.fpundip@gmail.com> Sen, 5 Okt 2020, 11.35

kepada saya

Sdr Irdha,

Informasi tentang No Kontrak pada Aknowledgment belum Sdr lakukan. Kami tunggu sampai nanti malam.

Terima kasih.

Chemical charact....docx

28451-Form. REVI....pdf

Show all

Search

20:20
17/04/2023

Konfirmasi prof sheet sudah dite

mail.google.com/mail/u/0/#search/jitaa/KtbxLthZgMDksfjCVgjXrfvxJTSnGGGtCg

Gmail

jitaa

Tulis

Mail

Meet

Kotak Masuk 1.814

Berbintang

Ditunda

Penting

Terkirim

Draf 43

Semua Email

Kategori

Selengkapnya

Label

Pribadi

Selengkapnya

10 dari 33

Irdha Mirdhayati <mirdhayati@gmail.com> Sen, 5 Okt 2020, 14.39

kepada JITAA

Kepada Yth. Bapak Pimpinan Redaksi JITAA
di Semarang

Assalamu'alaikum wr wb
Kami lampirkan kembali file proof sheet naskah kami, pada kolom acknowledment, kami sudah menuliskan nomor SK Penerima bantuan penelitian klaster Penelitian Global dari Direkrtorat Pendidikan Tinggi Isllam Kementerian Agama. Sebagai bukti kami lampirkan screenshoot SK tersebut. Mohon maaf, kami tidak diberikan nomor kontrak pada saat menerima bantuan penelitian tersebut.

Demikian kami sampaikan pak. Terima kasih banyak atas perhatiannya.

Wassalam,

Irdha Mirdhayati

2 Lampiran • Dipindai dengan Gmail

08. Mirdhayati_Pr...

Nomor SK Cangk...

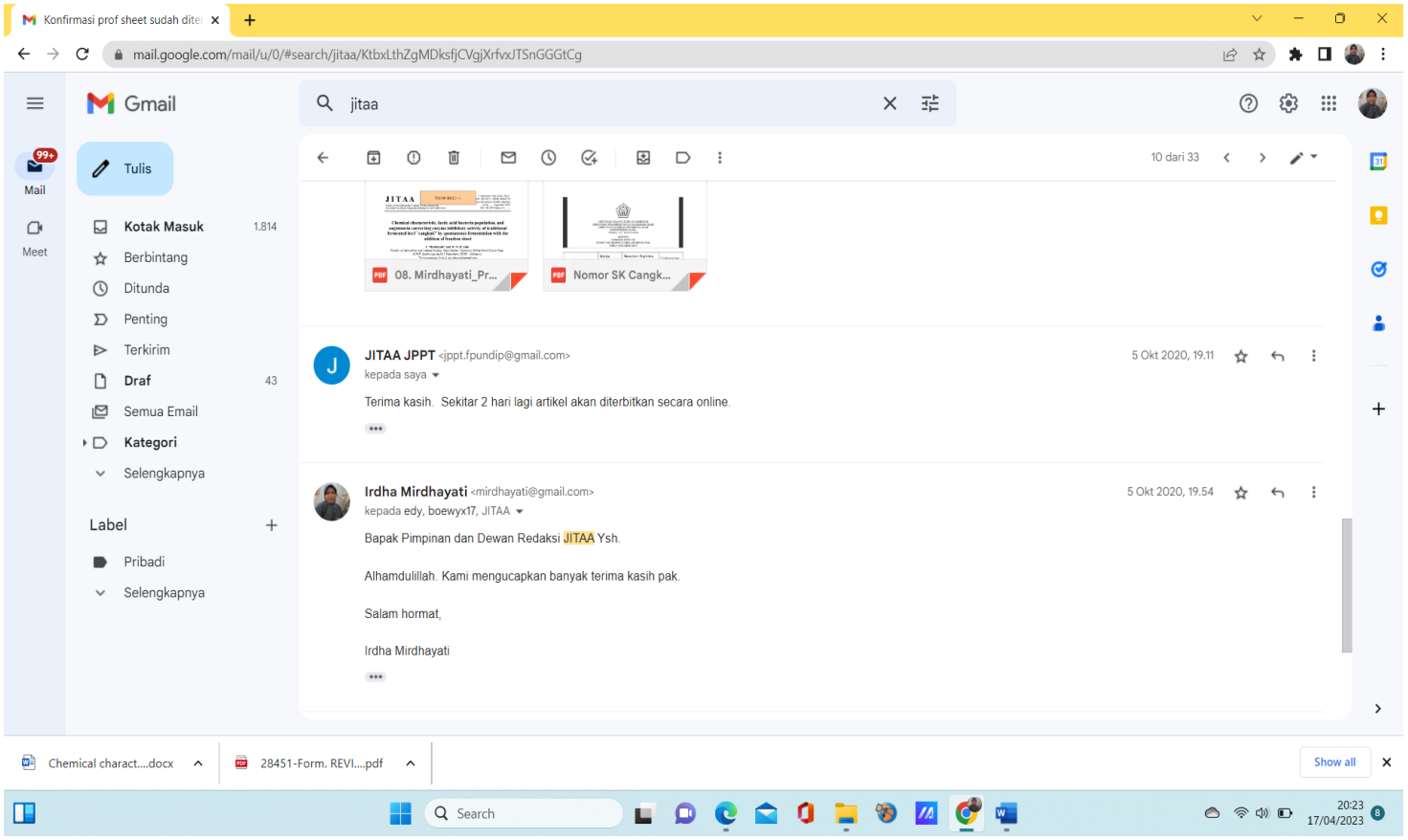
Chemical charact....docx

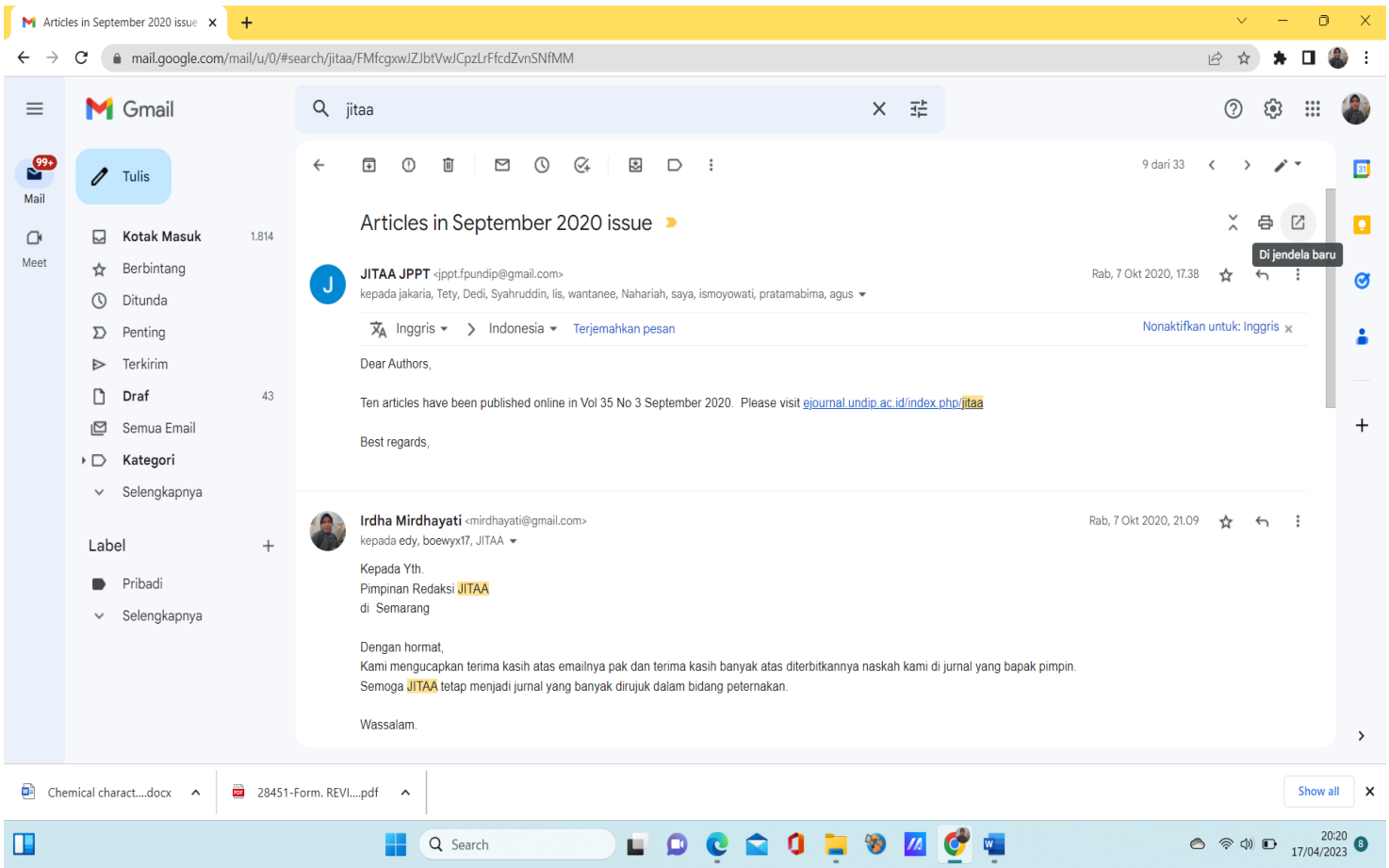
28451-Form. REVI....pdf

Show all

Search

20:22
17/04/2023


Konfirmasi prof sheet sudah dite
mail.google.com/mail/u/0/#search/jitaa/KtbxLthZgMDksfjCVgjXrfvxJTSnGGGtCg
Gmail
jitaa
Tulis
Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya
Label
Pribadi
Selengkapnya
10 dari 33
08. Mirdhayati_Pr...
Nomor SK Cangk...
JITAA JPPT <jppt.fpundip@gmail.com>
5 Okt 2020, 19.11
kepada saya
Terima kasih. Sekitar 2 hari lagi artikel akan diterbitkan secara online.
Irdha Mirdhayati <mirdhayati@gmail.com>
5 Okt 2020, 19.54
kepada edy, boewyx17, JITAA
Bapak Pimpinan dan Dewan Redaksi JITAA Ysh.
Alhamdulillah. Kami mengucapkan banyak terima kasih pak.
Salam hormat,
Irdha Mirdhayati
Chemical charact....docx
28451-Form. REVI....pdf
Show all
Search
20:23
17/04/2023


Articles in September 2020 issue
mail.google.com/mail/u/0/#search/jitaa/FMfcgxwJZJbtVwJCpzLrFfcdZvnSNfMM
Gmail
jitaa
Tulis
Kotak Masuk 1.814
Berbintang
Ditunda
Penting
Terkirim
Draf 43
Semua Email
Kategori
Selengkapnya
Label
Pribadi
Selengkapnya
9 dari 33
Articles in September 2020 issue
Di jendela baru
JITAA JPPT <jppt.fpundip@gmail.com>
Rab, 7 Okt 2020, 17.38
kepada jakaria, Tety, Dedi, Syahruddin, Iis, wantanee, Nahariah, saya, ismoyowati, pratamabima, agus
Inggris
Indonesia
Terjemahkan pesan
Nonaktifkan untuk: Inggris
Dear Authors,
Ten articles have been published online in Vol 35 No 3 September 2020. Please visit ejournal.undip.ac.id/index.php/jitaa
Best regards,
Irdha Mirdhayati <mirdhayati@gmail.com>
Rab, 7 Okt 2020, 21.09
kepada edy, boewyx17, JITAA
Kepada Yth.
Pimpinan Redaksi JITAA
di Semarang
Dengan hormat,
Kami mengucapkan terima kasih atas emailnya pak dan terima kasih banyak atas diterbitkannya naskah kami di jurnal yang bapak pimpin.
Semoga JITAA tetap menjadi jurnal yang banyak dirujuk dalam bidang peternakan.
Wassalam.
Chemical charact....docx
28451-Form. REVI....pdf
Show all
Search
20:20
17/04/2023