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On behalf of the Head of The Research and Society Service Institute of Jenderal Soedirman University, I would like to present the *International Conference Life and Applied Science*.

This year, to improve the publication quality of the conferences, we have arranged the 1st *International Conference Life and Applied Science*. The registered participants in this conference provided about 200 titles for the international conference.

The given oral and poster presentation showed output for future need as indicated in the conference theme of “*Life and Applied Science*”.

The purposes of the conference are:

- The first to provide a forum for scientific discussion, professional networking, research collaboration, education, and dissemination of scientific research, innovation and industrial products.
- The second to increase the quality of research and development in the *Life and Applied Science* approach for sustainable rural development.
- And the third to encourage the local and regional young scientists to attend and present their works at the international level.

The success of the Conference would not have been attained without strong supports from contributing scientists as well as both national and international conference Committee.

I would like to thank all of them for helping to make a very successful conference.



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Characteristics of cheese analogue from corn extract added by papain and pineapple extract

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Abstract. Corn extract is an alternative ingredient which can substitute cow's milk in making cheese analogue. The addition of pineapple and papain extract aims to produce cheese analogue with the physical and chemical desired. This study aims to 1) find out the optimum formula of additional papain and pineapple extract to produce extract corn-substituted cheese analogue, 2) Knowing the sensory, physical and chemical characteristics of cheese from corn milk produced from the best formula. The experimental design in this study was determined by Response Surface Methodology (RSM) using Central Composite Design with 2 factors studied, which are the amounts of pineapple extract (31.72-88.28 ml) and papain extract (89.64-150 mg). Variables observed include yield, moisture content, soluble protein, soluble solid and sensory variables. The optimum formula for producing cheese analogue substituted by corn extract is the addition of 40 ml pineapple extract and 130.82 mg papain extract. The yield of the formula is 19.2%. The cheese analogue has 5.908% of dissolved protein content, 12°Brix of dissolved solids and 24.3% of moisture content. The sensory characteristics (scale 1-5) of cheese analogue are whitish yellow (3.44), typical corn aroma (3.5), good taste (3.5), easy to spread (4.28) and preferred (3.5)

Keyword: corn extract, pineapple extract, papain, spread analogue cheese

1. Introduction

Spread cheese is usually made by the coagulation of cow's milk or the other milk, for example is goat's milk. The lifestyle of today's consumers who want a balanced consumption of plant and animal foods raises innovation in cheese making by replacing a part or all of cow's milk with vegetable ingredients [1]. The cheese is called as cheese analogue. Cheese analogue, also called as cheese imitation, is defined as a cheese-like product, made from ingredients such as milk fat, vegetable fat, protein with the addition of emulsifiers, and also made through heat and mechanical energy [2].

Sweet corn extract is an alternative ingredient which can substitute the cow's milk in making cheese analogue. The type of cheese analogue which is widely made and used is spreadable cheese analogue because its manufacture is relatively easy and simple [3].

The coagulation process is an important stage which determines the texture and flavour of the cheese [4]. In order to help the coagulation process, rennet enzyme is added as the coagulant [5]. The rennet enzyme used as the coagulant of cheese is expensive; therefore it needs an alternative of rennet enzyme. According to [6] protease enzyme from plants can be used as an alternative in cheese making. One of the enzymes that can be used as the substitute



of rennet enzyme is papain from papaya gum. The use of papain in cheese making can produce high yields and the characteristics of its cheese are similar to cheese made using rennet enzymes [7].

Cheese making requires an acidulant which aims to reduce pH. The decrease of pH is important in order to reach the isoelectric point which plays a role in the formation of the cheese texture. Pineapple has a pH of 2.3 and the presence of bromelain enzyme in pineapple can help the coagulation process in cheese making [8], [9]. According to [10] the addition of pineapple extract can coagulate milk in the production of soft cheese.

The objectives of this study are: 1) To find out the optimum formula for adding papain and pineapple extract to produce corn-substituted cheese analogue, 2) Knowing the sensory, physical and chemical characteristics of cheese from corn milk produced from the best formula.

2. Experimental details

2.1. Ingredients

The ingredients used in this study are sweet corn and pineapple bought from Wage Market, Purwokerto, fresh cow's milk (CV Tiga Putra), commercial papain (Paya®), *Lactobacillus casei* from the Biotechnology Research Center, Indonesian Institute of Sciences in Cibinong, West Java, Indonesia.

2.2. The making of cheese analogue

The cheese making includes the preparation of ingredients, corn steaming and corn seeds shelling. The next step is refining corn seeds by adding water (twice the weight of corn) to obtain the corn extract. The corn extract obtained was mixed with cow's milk which was then pasteurized for 30 minutes. The pasteurization was left to a temperature of 40°C and added with 1 ml of *Lactobacillus casei* liquid, 30g of sucrose, and 2Cl of CaCl₂ then incubated for 2 hours. The incubated milk was added by pineapple and papain extract. The curd formed is then separated by filter cloth and pressed, so that a semi-solid curd is produced. The curd was then cooked at 52°C for 15 seconds and added with 2g of NaCl and 4g of sucrose.

2.3. Experimental design

The experimental design in this study was determined by Response Surface Methodology (RSM) using (Central Composite Design) with 2 factors studied, which are the amount of pineapple and papain extract. The pineapple extract used was 31.72-88.28 ml; while the papain extract was used 89.64-150 mg. Based on the results of the randomization, 13 formulas were obtained (Table 1).

Table 1. The formula of spreadable cheese analogue

Run	Pineapple Extract(ml)	Papain (mg)
1	80.00	100.00
2	60.00	125.00
3	60.00	125.00
4	80.00	150.00
5	40.00	150.00
6	60.00	125.00
7	88.28	125.00

8	60.00	160.36
9	31.72	125.00
10	60.00	125.00
11	60.00	125.00
12	60.00	89.64
13	40.00	100.00

2.4. Analysis of samples

Variables observed include yield [11], moisture content [12], soluble protein [12], soluble solids [3], and sensory variables (scale 1-5) on color, taste, aroma, topical power, and preference [13]. The data obtained were analyzed by response analysis with Design Expert v.7 software.

3. Result and Discussion

3.1. Initial product characteristics

The yield of cheese analogue produced was 8.32-9.28% (Figure 1). This yield has a quadratic model with R-squared value of 0.35937 or not significant with the F value of 0.79 and p-value of 0.5912. This yield is almost the same as soft cheese from cow's milk using fruit extract which is 7.75 -10.29% [14]. The yield of this cheese analogue is lower than the cheese produced with acidification using fruit extract by [15] which states that cheese making using a fruit extract produces a yield of 14-18%. The cheese yield is also lower than the results [16] which states that the yield of cheese made using papain is 20.4-23.4%. According to [10], yield is affected by raw materials and composition, type of acidulant, as well as pasteurization and pressing method.

Increasing the amount of papain in cheese analogue making increases the yield of cheese. According to [17], the higher the protease enzyme added the more increase the yield.

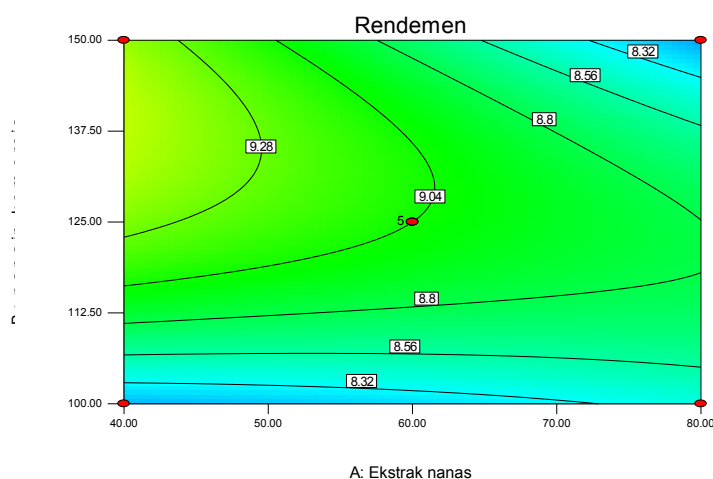


Figure 1. The yield of cheese analogue with additional of pineapple and papain extract

The more pineapple extract is added, does not affect the yield of cheese. This is different from [15] who states that the higher the concentration of fruit extracts, the lower the yield of

the cheese obtained. The more fruit extracts can cause excessive proteolysis so that the casein more dissolves in whey. The cheese analogue result of this study has dissolved solids of 2.09-4.76 °Brix (Figure 2). The more addition of pineapple extract, the higher the dissolved solids. Pineapple extract contains the bromelain enzyme and is acidic so that it can reduce pH so that it reaches an isoelectric point. At the isoelectric point, milk clots occur which will separate whey and curd proteins. This will increase the dissolved solids in the cheese.

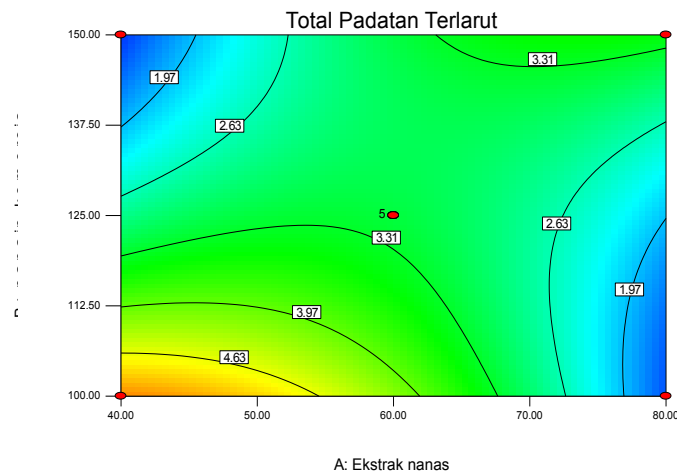


Figure 2. Cheese analogue dissolved solids with the addition of pineapple and papain extract

The moisture content of this cheese analogue is 57.11% - 76.87% (Figure 3). This is consistent with [15] that the moisture content of soft cheese without the ripening process has a moisture content of 52 - 80%.

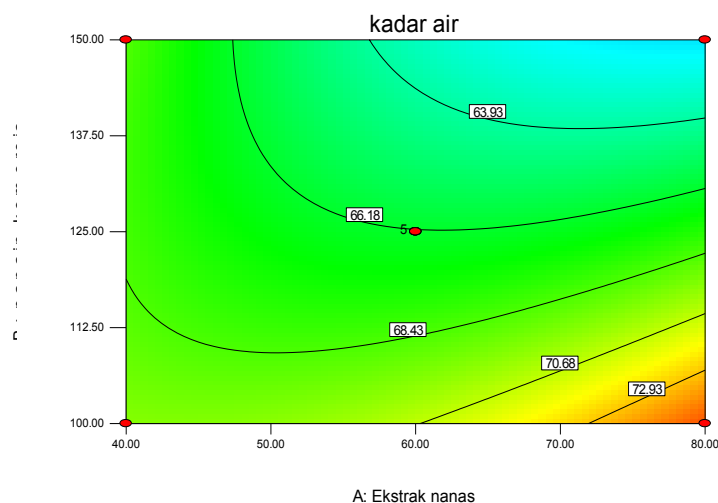


Figure 3. The moisture content of cheese analogue with the addition of pineapple and papain extract

The addition of papain concentration does not significantly affect the moisture content. This is slightly different from [18] who states that the more addition of papain the more increase the moisture content of the cheese.

The more addition of pineapple to cheese making will reduce the moisture content of cheese. The addition of acid to cheese making will accelerate the process of decreasing the pH. The lower pH the more acidic; so that the whey is easier to be separated from the curd. The ease of separating whey and curd results in low moisture content in the curd so that the moisture content of the resulting cheese is also low [18].

The cheese analogue produced has dissolved protein levels of 2.18-3.24% (Figure 4). The addition of papain increases the level of protein dissolved in cheese analogue. This is consistent with [16] that the higher the concentration of the papain enzyme is used, the higher the level of protein in traditional cheese produced. Papain is a type of protease enzyme, thus the more papain the more increase the proteolytic activity. Increasing the proteolytic activity will increase the breakdown of protein into peptides and amino acids so that the dissolved protein levels in cheese analogue increases [17]. This dissolved protein level is lower than the cheese analogue from cow's milk using papain, which is 12.14-22.56% [7]. This difference is caused by the differences in the materials used, because in this study the material used is cow's milk plus raw corn extract, where sweet corn has lower protein content than cow's milk.

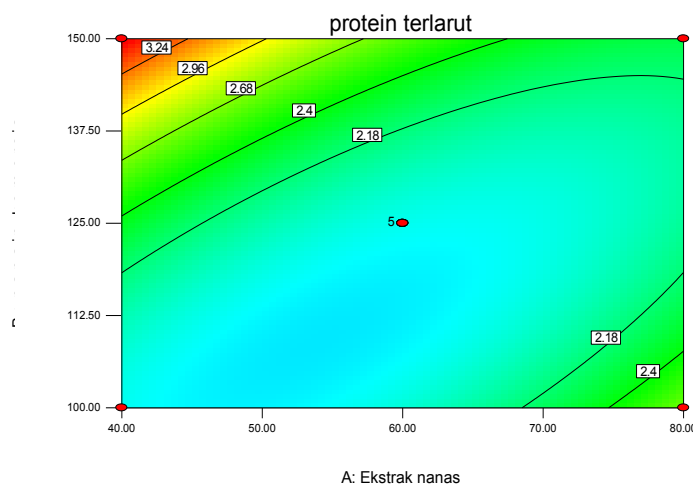


Figure 4. Dissolved protein level in cheese analogue with the addition of pineapple and papain extract

The increase in the amount of pineapple extract added does not significantly affect the level of cheese protein. This is slightly different from [19] that increasing the concentration of pineapple extract added will increase the protein content in cheese. This is because pineapple has a low pH which helps clump the protein so that in the process of separation, the level of protein in curd which is then processed into cheese is also high.

Topical cheese analogue making in this study did not use stabilizers. According to [19], the addition of stabilizers can increase dissolved protein level in cheese making.

3.2. The optimum formula and its verification

The optimization stage was done to get a formula with the most optimal response adjusted to the product characteristics desired. The most optimal response was obtained if the value of the desirability is close to 1. Weighting is done on each component to achieve the desired goal (Table 2).

Table 2. Optimization criteria for each factor and response

Response	Goal	Limitation		Importance
		Bottom	Top	
Pineapple extract	<i>In range</i>	40	80	-
Commercial papain	<i>In range</i>	100	150	-
Dissolved solid	<i>maximize</i>	1	6	4
Dissolved protein	<i>maximize</i>	1.36	3.5	5
Moisture content	<i>minimize</i>	57.11	76.87	4

Explanation: The score of 1-5 shows that the higher the score, the more it is preferred to be optimized

Based on the optimization with the criteria in Table 2, the optimum formula recommended is 40 ml of pineapple extract and 130.82 grams of commercial papain. The formula can produce topical cheese analogue with the prediction set. The desirability value predicted from the optimum formula is 0.507. This value is actually very small, but this is the maximum result of the desirability that can be obtained in this study. The optimization result is then made the product and analysed to determine its accuracy, and the result can be seen in Table 3.

Table 3. Analysis result of optimum formula compared to PI (Prediction Interval)

Response	Actual value	Prediction value	95% PI		Verification
			Low	High	
Yield	19.2	9.46	6.742	12.173	Not exactly
Soluble solid	12	3.06	-1.412	7.337	Not exactly
Dissolved protein	5.91	2.13	1.095	4.046	Not exactly
Moisture content	24.37	68.16	53.492	82.836	Not exactly

The product verification produces data which does not match the prediction, but the result is better than the prediction. The yield of topical cheese produced was 19.2% greater than the predicted results (9.46%) (Table 3). This yield is almost close to the results of [7] which makes cheese using papain and get cheese yields of 20.4-23.4%.

The optimized protein content was higher (5.91%) compared to the prediction (2.13%) (Table 3). This dissolved protein level is lower than cheese analogue from the cow's milk using papain by [7] which is equal to 12.14-22.56%. This difference is caused not only by the raw material but also by the hydrolysis process using the bromelin enzyme in imperfect pineapple. According to [19], the low level of protein in cheese made using pineapple extract can be due to the low hydrolysis process. This results in wasted proteolysis and protein in whey.

The soluble solid of the optimization result was higher (12°Brix) compared to the prediction (3.06°Brix) (Table 3). The high total dissolved solid indicates the quality of good topical cheese. Total dissolved solid is the component of dissolved solids consisting of total sugars, pigments, organic acids and proteins [20].

The optimum colour cheese analogue formula has a value of 3.44 which is whitish yellow. The yellow colour of the cheese analogue is thought to be due to the presence of beta-carotene from corn, but this article does not discuss beta carotene in cheese analogue. According to [21], sweet corn has beta carotene level of 400 SI.

The optimum aroma of cheese analogue the formula has a value of 3.5 which is typical of corn aroma. Aroma is affected by the components of volatile compounds present, which are dominated by the corn aroma.

The cheese analogue taste in this study was obtained from good optimum formula with a score of 3.5. The taste is dominated by the distinctive taste of corn and the panelists like the taste. This is in accordance with [21] who makes probiotic corn extract and increased corn extract solids can increase the consumer preference because of the typical corn flavour.

Ease of spreading is an important parameter in this study because the cheese analogue made is topical cheese analogue. The optimum cheese analogue formula has easy characteristics to be spread with a score of 4.28. This spread easiness characteristic is also supported by the results of testing, which is cheese that is easily attached to bread.

The favorite topical cheese produced from the overall optimum formula with a score (3.5), which is preferred. The assessment of the level of preference by panelists is a combination of the attributes (color, aroma, taste, topical power) which have the best value.

This is the initial research of the development of cheese analogue substituted with corn extract. The yield of cheese analogue produced is still low so further research is needed to increase the yield, for example by adding fillers and stabilizers.

4. Conclusion

The optimum formula for producing the cheese analogue substituted with corn extract is the addition of 40 ml of pineapple extract and 130.82 mg of papain extract. The yield of the formula was 19.2%. The analog cheese has 5.908% of dissolved protein content, 12°Brix of dissolved solids and 24.3% of moisture content. The sensory characteristic (scale 1-5) of cheese analogue is whitish yellow (3.44), typical corn aroma (3.5), good taste (3.5), easy to spread (4.28) and preferred (3, 5).

Acknowledgement

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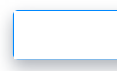
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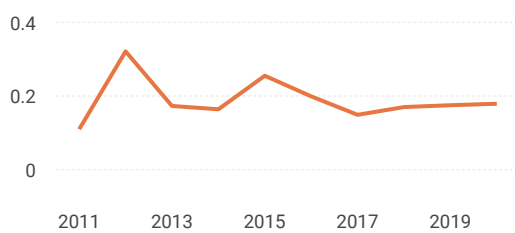
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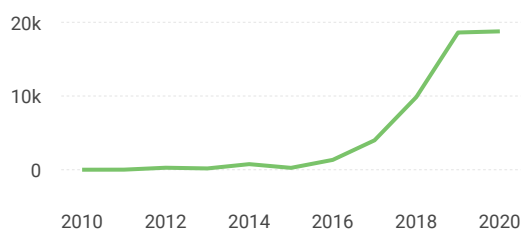
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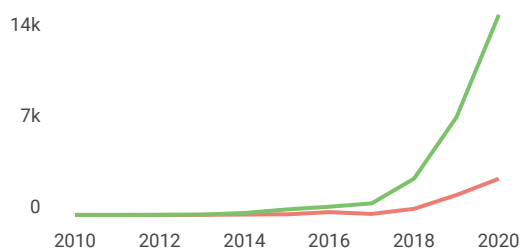
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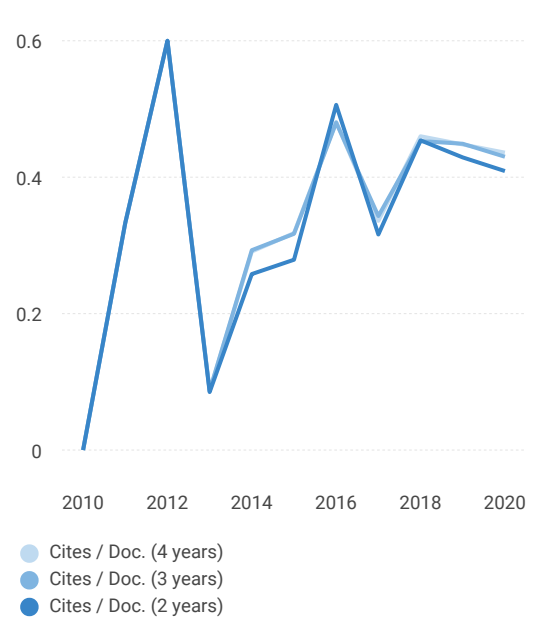
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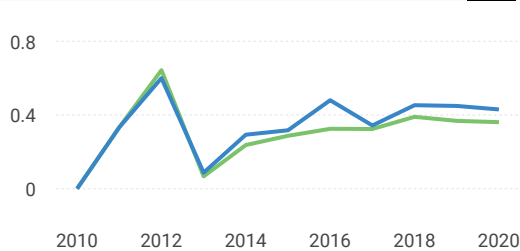
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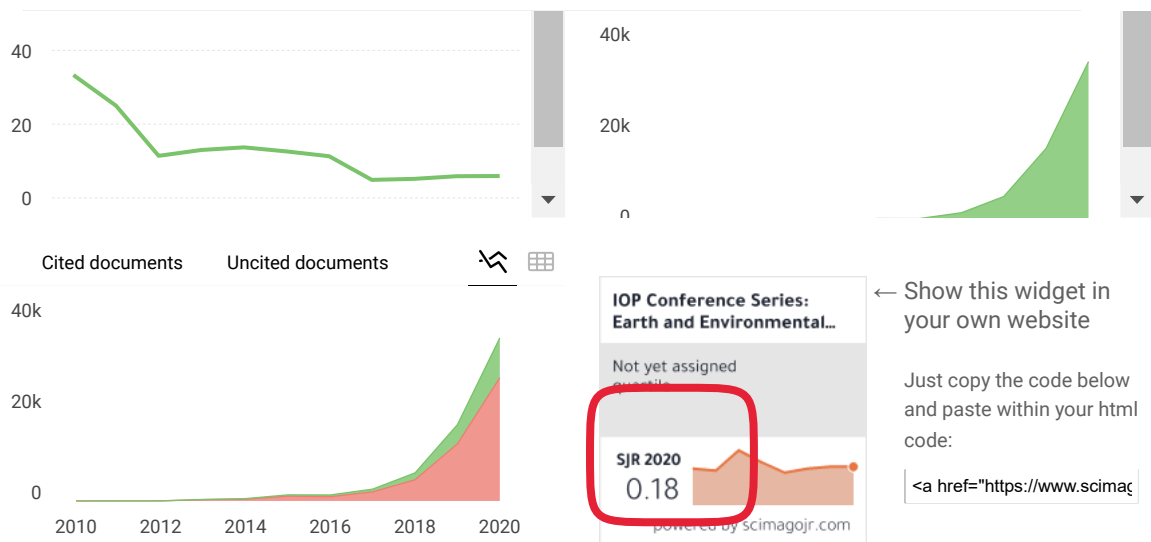


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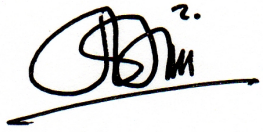
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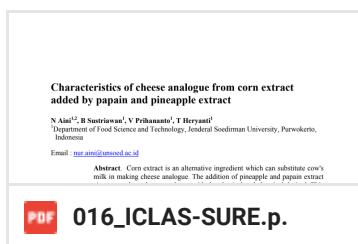
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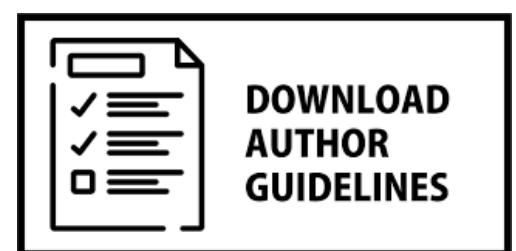
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10.00 – 10.15	Coffee/Tea Break
10.15 – 11.00	Keynote Speech: Prof. Dr. Hitoshi Habe (Kindai University, Japan)
11.00 – 12.30	Plenary Session I: Prof. Dr. Mohd. Marsin Sanagi (Universiti Teknologi Malaysia) Prof. Dr. Rifda Naufalin (Jenderal Soedirman University) Dr. Yusril Yusuf (Gadjah Mada University) Dr. Mulyoto Pangestu (Monash University)
12.30 – 13.15	Lunch
13.15 – 15.15	Parallel Session 1
15.15 – 15.30	Coffee/Tea Break
15.30 – 17.30	Parallel Session 2
19.00 – 21.00	Official Dinner
Second Day	Thursday, 15 th November 2018
07.30 – 08.00	Registration
08.00 – 10.00	Parallel Session 3
10.00 – 10.15	Coffee/Tea Break
10.15 – 11.00	Keynote Speech: Dr. Jesus C. Fernandez (SEAMEO Biotrop)
11.00 – 11.45	Keynote Speech:

First Day	Wednesday, 14 th November 2018
	Dr. Nguyễn Hữu Thọ (Thai Nguyen University, Vietnam)
11.45 – 12.30	Lunch
12.30 – 14.00	Plenary Session 2: Prof. Dr. Arief Anshory Yusuf (Padjajaran University) Dr. Najib Kailani (Sunan Kalijaga State Islamic University) Dr. M. Falikul Isbah (Gadjah Mada University)
14.00 – 14.45	Keynote Speech: Prof. Dr. Choi Jae Suk (Silla University, South Korea)
14.45 – 15.00	Coffee/Tea Break
15.00 – 17.00	Parallel Session 4
17.00 – 17.15	Closing Ceremony and Award Announcement

PARALLEL SESSION

DAY 1, NOVEMBER 14, 2018

PARALLEL SESSION 1 (13.15 – 15.15)

Group 1

Chair : Dr.Eng. Retno Supriyanti, ST, MT

1	DevOps Approach Embraces Forward and Reverse Engineering <i>Acep Taryana; Eko Murdyantoro; Ari Fadli; Siti Rahmah Nurshiami</i>
2	Designing Core Layer in Campus Network Using Software-Defined Networking <i>Iwan Setiawan, Azis Wisnu Widhi Nugraha, Sauqi, Asrorul Zaza</i>
3	Optimization of Photovoltaic DC Microgrid Systems for Residential Installations <i>Winasis (a*), Hari Prasetijo (b)</i>
4	FIBRE OPTIC AS EMBEDDED SENSORS TO FAILURE DETECTION OF BEAM GREEN CONCRETE <i>Farida Asriani (a), Gandjar Pamudji (b) HestiSusilawati (a), Dwi Meilana Tias Saputra (a)</i>
5	Leakage Current of Photovoltaic System in Transformerless Grid-Connected H-bridge Inverter with PI Current Controller <i>Suroso, Winasis, and Daru Tri Nugroho</i>
6	Stepper Motor Control with DRV 8825 Based on Square Wave Signal of The AVR Microcontroller Timer <i>Arief Wisnu Wardhana B.Eng (Hons)., M.Eng , Daru Tri Nugroho, S.T., M.T</i>
7	A Review of Lora Technology and Its Potential Use for Rural Development in Indonesia <i>Eko Murdyantoro, Azis Wisnu Widhi Nugraha, Arief Wisnu Wardhana, Ari Fadli, Mulki Indana Zulfa</i>
8	Classification Model for Graduation on Time Study Using Data Mining Techniques with SVM Algorithm <i>Ari Fadli, Mulki Indana Zulfa*, Yogi Ramadhani</i>
9	Intelligent Air Conditioner Ecosystem Based on Internet of Things <i>Azis Wisnu Widhi Nugraha (a*), Acep Taryana(a), Bayu Eko Saputro(a), Prayogo Ismu Abdillah(a)</i>
10	Potential for Availability of High Quality Paddy Seeds Supporting Rice Production / Productivity in West Java <i>Dian Firdaus (a*) and Ronnie Susman Natawidjaja (b)</i>

Group 2

Chair : Dr. Lutfi Makhasin

1	The Revitalization Model Through The Implementation Of Integrated Information System For Village Unit Cooperative In Banyumas <i>Eko Suyono and Oman Rusmana</i>
2	Village Official Website And Inclusive Communication Approach To Empowerment Of Marginal Villagers In Susukan Banyumas Central Java <i>Nuryanti, Subejo, Roso Witjaksono, Mochammad Fathoni</i>

3	Empowerment Of Karang Taruna As An Effort To Sustainability Of Rural Economic Growth In Madura Island RM. Moch. Wispandono
4	Model Of Inter Village Cooperation In Development Of Village Potentials To Support To Tourism In Baturraden District Kadar Pamuji, Riris Ardhanariswari, Abdul Aziz Ns, Supriyanto
5	The Role Of Stakeholders In The Accountability Of Village Enterprise Management: A Public Governance Approach Denok Kurniasih, Paulus Israwan Setyoko, M. Imron, Shadu S. Wijaya
7	Digital Marketing As A Catalyze Of Village-Owned Enterprise Revenue In Banyumas Agus Suroso, Amber Lumbantoruan, Mafudi, Ascaryan Rafinda
8	Fostering Trust As A Catalyst For The Sustainable Village Owned Enterprise Kiky Srirejeki, Agus Faturohman, Saras Supeno
9	Enhancing Group Entrepreneurial Quality Of Archaic Batik Design Agung Praptapa, Wiwiek Rabiatal Adawiyah, Istiqomah
10	Strategy To Develop Batik Tourism Village Istiqomah, Wiwiek Rabiatal Adawiyah, Agung Praptapa

Group 3

Chair : Dr. Haryadi

1	Factors Determining The Farmers Decision To Develop Their Beef Cattle Farming In The Southern Coastal Areas Of Central Java Mochamad Sugiarto, Syarifuddin Nur, and Oentoeng Edy Djatmiko
2	The Effect Of Dynamic Relationship Between Domestic Market And World Market On Stock Returns Volatility Najmudin, Dian Purnomo Jati, Sulistyandari, Retno Kurniasih
3	Bendi Traditional Transport Equipment As A Supporter Of Regional Economy Through Tourism And Culture Activities Elfrida Ratnawati Gultom
4	Behaviour Of Fishermens Implementing The Law In The Nature Conservation Rini Fidiyani, Erni Wulandari
5	Social And Legal Impact Of Different Determination Of Paddy Land Area In Indonesia Sri Wahyu Handayani
6	Co-Supply Chain As Local Entrepreneurial Support Model For Small Businesses: Is It Viable? Wiwiek Rabiatal Adawiyah, Istiqomah
7	The Impact Of Public Service Motivation On Individual Performance Adi Indrayanto, Ade Irma Anggraeni, Tiladela Luhita
8	Local Government Responsiveness In Preventing And Handling Divorce Phenomena (Study In Cilacap Regency) Dyah Retna Puspita, Rin Rostikawati , Pawrtha Dharma
9	Management Capacity Of Educational Office In The Provision Of Basic Education Services (Studi In Banyumas In Banyumas Regency) Muslih Faozanudin, Lilis Sri Sulistiani
10	Bridging The Legal Gap Between Open Selection And Internal Selection Of State Civil Apparatus Promotion In Indonesia Tedi Sudrajat, Siti Kunarti, Sri Hartini

Group 4**Chair : Dr. Norman Arie Prayoga**

1	PHYSICAL STIMULATION FOR HYPERBILIRUBINEMIA Eni Rahmawati; Puji Lestari; Dian Susmarini; Agustina Desy P. B. Utami
2	ADOLESCENT DELINQUENCY Elsava Tamara Putri Murwanda, Wahyu Ekowati, Eni Rahmawati
3	Knowledge and Perception on Outdoor Spatial Spraying Againsts Dengue : A Household Survey in Endemic Area, Central Java, Indonesia Siwi Pramatama Mars Wijayanti , Devi Octaviana, Arnika Dwi Asti
4	Consumer motivation to participate in the one day no rice policy Poppy Arsil , Kusmantoro Eddy Sularso, Altri Mulyani
5	Prevalence and Predictors of Maternal Anemia during Pregnancy in Banyumas District Mekar Dwi Anggraeni, Amin Fatoni, Rahmi Setyani
6	Communication Challenges with Older Adults Patients during Clinical Learning: A Qualitative Study among Student Nurse Rahmi Setiyani, Made Sumarwati, Asep Iskandar, Ima Rismawati
7	Knowledge of Nutrition and Macronutrients Consumption as Factors Causing Wasting in School Children and Effective Nutrition Education to Improve It Dyah Umiyarni Purnamasari, Endo Dardjito
8	Mentzer Index Diagnostic Value in Predicting Thalassemia Diagnosis Wahyu Siswandari, Lantip Rujito, Vitasari Indriani, Wahyu Djatmiko
9	The Influence of the Combination of Listening to the Al Quran and Acupressure to the Physiological Response of Stresses of Hypertension Iwan Purnawan, Eman Sutrisna , Ikit Netra Wirakhmi
10	Organoleptic Characteristics of Bali Beef Meatballs Based on Collagen Concentration in UKKMB and Time of Maturation Effendi Abustam, Muhammad Irfan Said, and Muhammad Yusuf

Group 5**Chair : Dr.Amron**

1	EFFECT OF IRON SUPPLEMENTATION TO ZINC SERUM Hesti Permata Sari, Ibnu Zaki, Farida, Afina Rachma Sulistyaning
2	Physicochemical Characteristics of Sweet Potato (Ipomoea batatas L.) Chips Pre-treated by Commercial and Eggshell Extracted Calcium Chloride David Tjandra, Thomas Indarto Putut Suseno, Ignasius Radix AP Jati
3	WELFARE AND HEMATOLOGIC CONDITION OF DUCKS UNDER INTENSIVE AND EXTENSIVE SYSTEMS OF PRODUCTION Imam Suswoyo and Rosidi
4	Family Roles on Supporting Patient with Terminal Illness : Lesson Learned from Banyumas Region Central Java Diyah Woro Dwi Lestari, Miko Ferine
5	Red Pitaya Pulp and Its Peel as a Lowering Agent of Blood Glucose Level for Patients with Diabetes Type 2 Sasi Gendro Sari, Siti Aminah, Susi, Rusmiati

6	DIGESTIBILITY IN VITRO OF STARCH AND PROTEIN ON ANALOG RICE BY FORMULATION OF NAGARA BEAN FLOUR MODIFIED L. plantarum AND SAGO STARCH WITH CONCENTRATION OF GLYCEROL MONOSTEARATE Susi Susi, Lya Agustina and Condro Wibowo
7	PRELIMINARY STUDY OF REHYDRATION CHARACTERISTICS AND COOKING TIME OF ANALOG RICE BY FORMULATION OF NAGARA BEAN FLOUR MODIFIED L. plantarum AND SAGO STARCH Susi Susi, Lya Agustina and Condro Wibowo
8	The Efficiency of Paddy Production Factors on Farm Land Consolidation In Sukoharjo Regency Titik Ekowati, Edy Prasetyo, Mukson
9	Low Frequency of electrical stimulation improve wound healing in acute wound Yunita sari, Atyanti Isworo, Arif Setyo Upoyo, Akhyarul Anam, Hartono, Eman Sutrisna
10	Effects of sucrose concentrations and scion sources on shoot tip grafting in vitro of Citrus aurantifolia Prita Sari Dewi, Fatichin, Octaviani Auditia, dan Aniq Sholihatul Lutfiyah

PARALLEL SESSION 2 (15.30 -17. 30)

Group 1

Chair : Dr.Eng. Suroso,ST, MT

1	ANALYSIS OF QUANTITATIVE RELATIONSHIPS OF ANIONIC SURFACTANT STRUCTURES OF SULFATE GROUP BASED ON LARGE AB INITIO CALCULATIONS <i>Eva Vaulina Y. D.</i>
2	THE EFFECT OF COMPACTION METHOD ON COMPRESSIVE STRENGTH OF SELF COMPACTING CONCRETE (SCC) IN LABORATORY <i>Agus Maryoto</i>
3	New paradigm to understanding turbidite sediment in Banyumas Basin <i>Eko Bayu Purwasatriya (a*), Sugeng Sapto Surjono (b), D.Hendra Amijaya (b)</i>
4	RESISTIVITY AND INDUCED POLARIZED (IP) APPROACH FOR POLYMETALLIC VEIN DISTRIBUTIONS OF BUKIT PONDOK MINERALIZATION (EX-VOC MINING IN 1902), TANAH TIDUNG, EAST KALIMANTAN <i>Fadlin(*a), Wildan Nur Hamzah (b), Eko Bayu Purwasatriya (c) Arifudin Idrus (d) Nita Ariyanti (e) Sekar Ramadhani (f)</i>
5	Ontology Model for Tourism Information in Banyumas <i>Lasmedi Afuan, Nurul Hidayat</i>
6	Measuring Usability Scale and Factors That Influence the Implementation of Internship Information System in Engineering Faculty of Jenderal Soedirman University <i>Swahesti Puspita Rahayu(*), Bangun Wijayanto(*), Dadang Iskandar(*)</i>
7	An Exploration Study : Spiritual belief, Spiritual need, and Spiritual care <i>Henie Kurniawati, Sofia Retnowati, Bagus Riyono, Widyawati</i>
8	Road Safety Audit at Black Spot Area (Case study in Tlahab Lor, Karangreja, Purbalingga) <i>Gito Sugiyanto (a*), Rizki Suciningtyas (a), Eva Wahyu Indriyati (a), Ari Fadli (b)</i>
9	Cattle feed concentrate automatization system based on internet of things <i>Bangun Wijayanto, S.T., M.Cs (*a), Swahesti Puspita Rahayu, S.Kom.,M.T. (b), Dadang Iskandar, S.T., M.Eng.(c)</i>

10	Investigation of Tsunami Hydrodynamic Loads Acting on a Slab Bridge <i>Hartana</i>
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Group 2

Chair : Dr.Wiwiek Rabiatal Adawiyah

1	The Impact Of Land Conflict On Darmakradenan Toward Social, Economic, And Politic Vulnerability In The Life Of Farmers Community Waluyo Handoko
2	Structural Violence Of Agrarian Conflict Settlement In Lampung Agus Raharjo, Yusuf Saefudin, Luthfi Kalbuadi
3	Violence Spiral And Social Conflict Settlement In The Perspective Of Law Agus Raharjo, Luthfi Kalbuadi, Yusuf Saefudin
4	Legal Protection Of Children As An Object And Subject (Accessors) Of Pornographical Websites Agus Raharjo
5	The Power Of Mediators Suggestion In Pancasila Industrial Relation Dispute Settled Outside The Court Siti Kunarti, Kartono, Sri Hartini
6	The Role Of Religious Leaders In Maintaining Social Sustainability In Rural Communities Najmu Tsaqib Akhda, F. Trisakti Haryadi, Siti Andarwati
7	Psychological Dynamics Of Terrorists Rindha Widyaningsih, Kuntarto
8	Local Wisdom Approach To Develop Counter-Radicalization Strategy Rindha Widyaningsih, Kuntarto
9	Methods Of Strengthening Social Marketing Communication In Preventive Actions Against Radicalism In Al Ikhsan Islamic Boarding School Muhammad Sulthan
10	Revisiting Indonesian Multiculturalism At The Local Level: Migrant Muslim Community And Customary Village In Contemporary Balinese Society Bowo Sugiarto

Group 3

Chair : Dr.Tedy Sudrajat, SH,MH

1	Challenges Of Political Parties In Banten To Meet 30% Gender Quota In The 2019 General Election Abdul Hamid, Anis Fuad
2	Gender Mainstreaming Through Woman Political Participation At Representative Counsel, Banten Province Ika Arinia Indriyany, M. Dian Hikmawan, M. Rizky Godjali
3	Kyai On The Political Stucturation In Pandeglang-Banten M Dian Hikmawan, Ika Arinia Indriyany, M. Rizky Godjali, Wahyu Kartiko Utami
4	Job Expansion And Job Satisfaction M Dian Hikmawan, Ika Arinia Indriyany, M. Rizky Godjali, Wahyu Kartiko Utami
5	Job Expansion And Job Satisfaction Iriani Ismail, Raudhatul Jannah

6	Hazard Identification At Hospital In Indonesia Nur Ulfah, Arwita Mulyawati, Irfan Dwi Andhono
7	The Study Of The Concept Of “Blakasuta’ As The Symbolic Capital Of Banyumas Societyfor Managing Diversity In Handling “Kampung Sri Rahayu” Slum Settlement S Bekti Istiyanto, Wiwik Novianti
8	An Exploration Study : Spiritual Belief, Spiritual Need, And Spiritual Care Henie Kurniawati, Sofia Retnowati, Bagus Riyono, Widyawati
9	Improving Societal Welfare Through Developing Creative Literation-Based Industries In Wadas Kelir Naqiyah

Group 4

Chair : Dr.Juni Sumarmono

1	GROWTH CHARACTERS OF UPLAND RICE AND PEST ATTACK LEVEL OF RICE EAR BAG (Leptocorisa acuta) WITH APPLICATION OF LEMON GRASS EXTRACT AND FERTILIZER OF N,P, K Yugi R. Ahadiyat, Rostaman, Okti Herliana, Ida Widiyawati
2	THE EFFECT OF SIKKOMODO (COMBINATION OF MUSIC, HUMOR, AND PRAYER) FORMULATION TOWARD BLOOD PRESSURE OF HYPERTENSION PATIENT ON THE ELDERLY GROUP IN BANYUMAS REGENCY Sidik Awaludin, Annas Sumeru, Galih Noor Alivian, Dwi Novitasari
3	FACTORS RELATED TO SPUTUM CONVERSION OF PATIENTS PULMONARY TUBERCULOSIS IN THE LAST PHASE OF INTENSIVE MEDICATION Atyanti Isworo, Akhyarul Anam, Agis Taufik, Annas Sumeru, Naula Affa, Aliyatul Aeni
4	Dates Seeds as Antidiabetic Drinking Coffee: A Systematic Review Saryono
5	Validation Method for The Direct Determination of Beta Carotene In High Carotene-Modified Cassava Flour by HPLC with Multi Wavelength Detection Andreas, Dian Muzdalifah, Hendris H. Kurniawan, Oman Zuas, Yosi Aristiawan, Osi Arutanti
6	CHARACTERISTIC OF PREGNANT WOMEN WHO ARE EXPERIENCING NAUSEA VOMITING IN RURAL AREAS OF BANYUMAS REGENCY Lutfatul Latifah, Aprilia Kartikasari, Nina Setiawati (a), Eli Kusmiarti (a)
7	The amount of food consumed in baby-led and traditional weaning Dian Susmarini, Eni Rahmawati, Made Sumarwati, Atyanti Isworo, Dian Anandari, Lutfatul Latifah
8	Formulation Of Flake Made From Mocaf Black Rice and Tapioca High in Protein and Dietary Fiber By Soy and Jack Bean Flour Addition Friska Citra Agustia, Sabila Rosyidah, Yovita Puri Subardjo, Gumintang Ratna Ramadhan, Dika Betaditya

Group 5

Chair : Dr.Fatichin

1	THE EFFECTS OF PURWOCENG ROOTS ETHANOL EXTRACT ADMINISTRATION TO MALE WHITE RATS (Rattus norvegicus) EXPOSED BY PARADOXICAL SLEEP DEPRIVATION Fitrinto Arjadi, Wahyu Siswandari, Yudhi Wibowo, Diah Krisnansari, Alfi Muntafiah
2	DETERMINANT of HEALTH PROMOTING LIFE STYLE NURSING STUDENT of JENDERAL SOEDIRMAN UNIVERSITY

	Eva Rahayu, Rahmi Setiyani, Made Sumarwati
3	THE EFFECT OF PLANT GROWTH PROMOTION RHIZOBACTERIA INOCULATION TO AGRONOMIC TRAITS OF AROMATIC RICE (<i>Oryza sativa</i> cv. Sintanur) Purwanto, T. Agustono, Mujiono, B.R.Widjonarko, T. Widiatmoko
4	Bioprospecting of red seaweed <i>Kappaphycus alvarezii</i> (cottonii) based on Their Neurotogenic Activities Maria Dyah Nur Meinita, Gabriel Tirtawijaya, Il So Moon, Yong-Ki Hong, Norman Arie Prayogo
5	Spatial Distribution of Seaweed in Sayang Heulang Beach, West Java Maria Dyah Nur Meinita, Nurul Riyanti, Bintang Marhaeni, Setijanto, Dicky Harwanto
6	Dynamics of soil physical and chemical properties within horizontal ridges-organic fertilizer applied potato land Krissandi Wijaya, Purwoko Hari Kuncoro, Poppy Arsil
7	Factors influencing supply chain management practices in brown sugar agro-industry Dindy Darmawati Putri, Dwidjono Hadi Darwanto, Slamet Hartono, Lestari Rahayu Waluyati
8	MATERNAL SERUM MATRIX METALLOPROTEINASE 14 (MMP14) IN EARLY ONSET PREECLAMPSIA AND NORMAL PREGNANCY Herman Sumawan , Sutrisno

DAY 2, November 15, 2018

PARALLEL SESSION 3 (08.00 – 10.00)

GROUP 1

Chair : Dr.Yunita Sari

1	Prevalence of Acute Otitis Media in Primary School Children, Karanglewas Banyumas Regency Daniel Joko Wahyono, Yudhi Wibowo, Aris Mumpuni, Diah Krisnansari, Dwi Utami Anjarwati, Anton Budhi Darmawan, Gita Nawangtantri, Nendyah, Dwi Arini, Dian Kristiantoro, Hendro Pramono, Meyta Pratiwi, Devi Octaviana, Dwi Sarwani Sri Rejeki, Dodi Safari, Korrie Salsabila, Siwi Pramutama Mars Wijayanti
2	Mosquito Indices in Outdoor Spatial Spraying Treated Area, Banyumas Regency, Indonesia Siwi Pramutama Mars Wijayanti, Devi Octaviana, Sri Nurlaela
3	CARCASS PRODUCTION CHARAKTERISTIC AND SINGLE NUCLEOTIDE POLYMORPHISM ADIPOCYTE FATTY ACID BINDING PROTEIN (A-FABP) GENE ON CAIRINA MOSCHATA Ismoyowati Ismoyowati, Elly Tugiyanti
4	THE EFFECT OF COGNITIVE BEHAVIOR THERAPY TO STUDENTS ACADEMIC ACHIEVEMENTS OF NURSING DEPARTMENT OF JENDERAL SOEDIRMAN UNIVERSITY Keksi Girindra Swasti, Wahyu Ekowati, Eva Rahayu
5	THE EFFECT OF POTATO (<i>Solanum tuberosum</i> L.) SKIN EXTRACT ON ALKALINE PHOSPHATASE LEVEL IN PERIODONTITIS Christiana Cahyani Prihastuti, Wulan Ratnasari, Hernayanti
6	FTIR AND SPECTROPHOTOMETRIC ANALYSIS OF BIODEGRADATION OF INDIGOSOL BLUE DYE IN SUBMERGED FERMENTATION BY <i>Aspergillus</i> sp. <i>Penicillium</i> sp. AND <i>Trichoderma</i> sp. Ratna Stia Dewi, Rina Sri Kasiamdari, Erni Martani, Yekti Asih Purwestri
7	A MODIFIED METHOD TO MANUFACTURE CONCENTRATED YOGURT FROM FRESH COWS MILK YOGURT Juni Sumarmono, Triana Setyawardani, Agustinus Hantoro Djoko Rahardjo

8	Formula Optimization and Characterization of Jam based on Carica Fruit (<i>Carica pubescens</i> , L) Santi Dwi Astuti, Erminawati
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Group 2

Chair : Dr.Romanus Edy

1	The Power of Weibull and Exponential Distributions On Testing Parameters Shape B. Pratikno, Jajang , S.Y. Layyinah, G.M. Pratidina, and Y. D. Suryaningtiyas
2	The Addition of Liquid Sap Preservatives Made from Lime, Mangosteen peel, and Jackfruit wood on Quality Characteristics of Coconut Sugar Karseno, Tri Yanto
3	Investigation of Hydrolysis Using Cellulase Enzyme Produced From Cow Rumen And Fermentation Method for Producing Ethanol from Nypa (<i>Nypa fruticans</i> Wurmb) Midrib Wiludjeng Trisasiwi, Agus Margiwiyatno, Gunawan Wijonarko
4	The physical recovery models based on fluid manipulation on the body reversibility process in sub-maximum physical exercise. Moh. Nanang Himawan Kusuma, Didik Rilastiyo, Rohman Hodayat, Topo Suhartoyo, Muh. Syafei
5	FEEDING MOCAF BISCUITS ENRICHED WITH IRON AND PROTEIN FROM TEMPEH AND FISH ON HEMOGLOBIN LEVEL OF ANEMIC SPRAGUE DAWLEY RATS Hidayah Dwiyanti, Retno Setyawati, Nur Aini
6	Isolation and characterization of bioactive components of lemongrass (<i>Cymbopogon citratus</i>) Erminawati, Rifda Naufalin, Ike Sitoesmi, Wuryatmo Sidik and Nandarose Rucki
7	Importance-Performance Analysis and Customer Satisfaction Index on Laboratory Services in the Faculty Mathematics and Natural Sciences, University of Jenderal Soedirman Wuryatmo Akhmad Sidik, Sunardi and Supriyanto
8	Application of Concentrates Flower Kecombrang on Edible Coating as Antioxidant to Suppress the Oxidative Damage on Gourami Sausage During Storage Rifda Naufalin, Rumpoko Wicaksono, Erminawati, Poppy Arsil and Kris Imanias Trikasihputri Gulo
9	A review on optimization of lactic acid bacteria for production goat milk yogurt Ibrahim A, Rifda Naufalin, Erminawati, Hidayah Dwiyanti

Group 3

Chair : Dr.Uyi Sulaiman

1	STUDY GRADIENT AND MOISTURE OF SAND EMBANKMENT ON PEAT SUBJECTED VIBRATION POTENTIAL OF LIQUEFACTION <i>Soewignjo Agus Nugroho a*) Agus Ika Putra b), Muhamad Yusa c), and Syawal Satibi d)</i>
2	THE EFFECT OF COMPACTION METHOD ON COMPRESSIVE STRENGTH OF SELF COMPACTING CONCRETE (SCC) IN LABORATORY <i>Agus Maryoto</i>
3	PETROLOGY AND TRACE ELEMENT STUDY OF IGNEOUS ROCK IN AYAH, KARANGBOLONG DOME, CENTRAL JAVA <i>Fadlin(a*), Gentur Waluyo(b), Sekar Ramadhani R(c), Wildan Nur H(d), Arifudin Idrus(e)</i>
4	SLIP SURFACE IDENTIFICATION BASED ON ANALYTICAL ENGINEERING PROPERTIES IN THE WEATHERING OF BRECCIA AT MOUNT PAWINIHAN LANDSLIDE, CENTRAL JAVA, INDONESIA

	<i>Indra Permanajati 1-2, Zufaldi Zakaria², Mohamad Sapari Dwi Hadian², Herryal Zoelkarnaen Anwar³, Rachmad Setijadi¹</i>
5	Gravity Anomalies And Regional Geological Studies Between Slamet Volcano, Buaran and Bantarkawung Areas For Geothermal Energy Exploration and Development <i>Sachrul Iswahyudi (a), Sukmaji Anom Raharjo (b), Indra Permanajati (a), Rachmad Setijadi (a), Riza Aditya Pratama (a), Baniarga Prabowo (a)</i>
6	FIRE SAFETY ASSURANCE ON BUILDING <i>Yusuf Latief (a), Manlian Ronald Simanjuntak (b), Paulus Setyo Nugroho (c)</i>
7	Edible coating application with kecombrang concentrate addition to holding the quality of gouramy fish fillet during storage Rifda Naufalin, Rumpoko Wicaksono, Retno Supriyanti, dan Eva Triyulianingrum
8	The antioxidant activity stability and acceptability of pasteurized milk added with mulberry leaf tea and soymilk powder Jintana Sangsopha, Anuchita Moongngarm, and Nutjaree Pratheepawanit Johns

Group 4

Chair : Dr. Wahyu Tri Cahyanto

1	Putting People In The Proper Position On Policy Process In Rural Area: A Deliberation And Empowerment Process In Village Level Of Indonesia Sukarso, Swastha Dharma, Niken Paramarti Dasuki
2	Analysis Of Financial Performance Factors And Its Impact On Growth Profit (Study On The Food And Beverage Industry Registered In Indonesia Stock Exchange) Chairul Anam
3	Agriculture Sector Analysis In Central Java Muliasari Pinilih
4	How To Improve The Competitiveness Of Palm Sugar? The Role Of Technical Innovation Suliyanto, Weni Novandari, Suwaryo
5	Design Of Strengthening Local Institutions That Support The Development Of Marketing Of Processed Products Of Mix Farming Imam Santosa, Agus Suyanto
6	Design Of Technology Valuation System: Case Study Of High Productivity Upland Rice In Central Java, Indonesia Budi Dharmawan, Akhmad Rizqul Karim, Ulfah Nurdiani
7	Media Violation, Foul And Refereeing Are Movement As A Source Learning To Students Of Pjkr On Basketball Education Ayu Rizky Febriani, Rohman Hidayat, Topo Suhartoyo
8	Basic Teaching Skills For The Candidates Of Professional Teachers Mustasyfa Thabib Kariadi, M. Riyanton

Group 5

Chair : Dr. Latjip Rudjito

1	The Experience Of Disabled Person In Accessing The Public Facilities In Universities Isplanacius, Tri Lisiani Prihatinah, Nur Wakhid
2	Lecturer Perception Of Public Information Management Practices In Higher Education Wisnu Widjanarko, Tri Nugroho Adi

3	Sport Development Index Of Banyumas Regency Ngadiman, Indra Jati Kusuma, Kusnandar, Panuwun Joko
4	M-Payment As A Strategy To Increase Financial Literacy In Islamic Boarding School Cooperatives Bambang Agus Pramuka, Poppy Dian I Kusuma, Sugiarto
5	The Digital Literacy Movement Of Former Migrant Workers Wiwik Novianti, S.Bekti Istiyanto
6	Smartphone: A Tool Of Social And Political Empowerment For Women Mite Setiansah
7	Eating And Performance : Contemporary Community Lifestyle Yusida Lusiana, P.M. Laksono, Tatang Hariri
8	Developing Cooperative Law Culture At Bmt (Baitul Maal Wa Tamwil) To Remove The Rente System In The Traditional Market Nita Triana dan Naqiyah

PARALLEL SESSION 4 (15.00 – 17.00)

GROUP 1

Chair : Dr.Nanang Martono

1	Initial Implementation Of Productive Migrant Village (PMV) Program In Banyumas Central Java Indonesia . Muslihudin, Tyas Retno Wulan, Tri Sugiarto, Sotyania Wardhianna, Sri Wijayanti
2	The Urgency Of Synchronization And Harmonization Of Law Regulations Post The Decision Of Constitutional Court In Judicial Review Riris Ardhanariswari, Muhammad Fauzan, Komari
3	Small Claims Court Philosophy In Applying Simple Judicial Principles Rahadi Wasi Bintoro, Dessi Perdani Yuris Puspita Sari
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