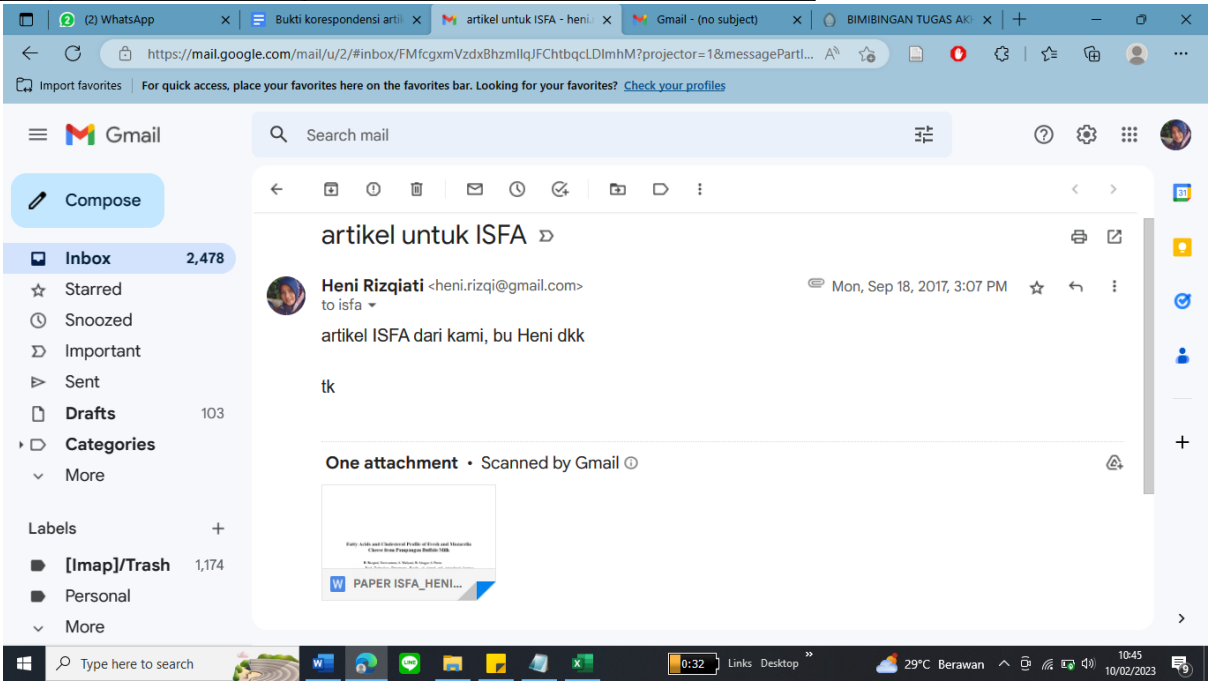
Bukti Korespondensi artikel “The comparison of fatty acid and cholesterol profile on fresh and mozarella cheese made by pampangan buffalo milk”

An. Dr. Heni Rizqiati, S.Pt., M.P.

No	Tanggal	Aktivitas Korespondensi
1	18 September 2017	Submitting paper
2	19 Oktober 2017	Pengembalian hasil review oleh Editor
3	31 Oktober 2017	Pengembalian Revisi oleh Author
4	16 November 2017	Review ke-2 oleh editor
5	27 November 2017	Pengembalian hasil review oleh Editor
6	13 Desember 2017	Accepted
7	13 Desember 2017	Pengiriman form fee publikasi
8	1 Februari 2018	Published online
9	24 September 2018	Published fee



Gmail Heni Rizqiati <heni.rizqi@gmail.com>

(no subject)

2 messages

International Symposium Food and Bio-Diversity <isfa@ift.or.id> Thu, Oct 19, 2017 at 6:58 PM
To: Heni Rizqiati <heni.rizqi@gmail.com>

Dear Heni Rizqiati,

As a follow up from the 2nd International Symposium on Food and Agro-biodiversity (ISFA 2017), we have successfully conducted a review for your presented paper entitled **Fatty Acids and Cholesterol Profile of Fresh and Mozarella Cheese from Pampangan Buffalo Milk**.

Please find the general comment for your paper as follow:

1. Quality of English:

- **Medium** – generally the manuscript has been written in good English. However, after careful reading several mistakes can be easily discernible such as, but not limited to, wrong grammatical structure, improper academic writing (e.g. usage of past tense), improper vocabulary choice, etc. Therefore, we recommend to **carefully re-read and revise the manuscript** and then do **proof reading with your peers**. If necessary you can seek help from English expert.

  The review process cannot identify the English mistakes one by one in detail and it was not in our review scope. We could only give a general comment. Therefore, it is author responsibility to ensure that the manuscript is prepared in good English. Failure to do so will result in rejection to be submitted to the international proceeding publication.

2. Similarity index (by Turnitin.com):

- **Low** (<30%), the manuscript has been well written and few similarities with other published (online) material found. If the manuscript is revised, please pay attention on this aspect. We do not expect high similarity index paper.

3. Compliance to manuscript guidelines:

- **Medium** – the manuscript has followed only part of the manuscript guideline (e.g. the reference and citation still use different style). Please consult the manuscript guideline using this URL http://isfa.ift.or.id/category/guideline-for-manuscript/

In addition to the above general comment, please find the specific comment from the reviewer as in attached document. Any revision or answer to reviewer's comment should be done as in attached example.

The revised manuscript should be sent back to the committee maximum in **7 days after this email**.

Once we receive the revised manuscript, we will conduct the 2nd review round and at this point we will take the final decision whether the paper is accepted or rejected for international proceeding publication.

We believe that fast and quality publication is everybody's expectation. Thus, we thank for your understanding and cooperation.

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Our Best Regards,

International Symposium on Food and Agro-Biodiversity (ISFA) **2017**
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2 attachments

Example of how to answer a reviewer comment.docx
31K

105. Full Paper - Heni Rizqiati.docx
40K

Heni Rizqiati <heni.rizqi@gmail.com> Tue, Oct 31, 2017 at 12:21 PM
To: International Symposium Food and Bio-Diversity <isfa@ift.or.id>

Assalamualaikum pak Yoga

Berikut kami kirimkan artikel kami yang sudah diperbaiki sesuai masukan reviewer. suwun.

Salam.

Heni Rizqi
[Quoted text hidden]

105. Full Paper ISFA - Heni Rizqiati.docx
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Gmail Heni Rizqiati <heni.rizqi@gmail.com>

[ISFA 2017] Review #2 Heni Rizqiati – ACCEPTED with major revision

6 messages

International Symposium Food and Bio-Diversity <isfa@ift.or.id> Thu, Nov 16, 2017 at 9:58 PM
To: Heni Rizqiati <heni.rizqi@gmail.com>

Dear Heni Rizqiati,

Thank you for sending us the revision of your paper entitled "**The Comparison of Fatty Acid and Cholesterol Profile on Fresh and Mozarella Cheese Made by Pampangan Buffalo Milk**".

We have concluded the second review process and we have come to the decision that your paper has been **accepted WITH further revision needed**. Please see the attached document for the new comments.

We expect to receive the second revision by no more than **5 days from now** by replying this email.

As we will **not** conduct the 3rd review, the revised paper will then undergo final layout and format setting before the submission to IOP conference series proceeding. The expected submission date is 1 December 2017.

Our kind regard,

ISFA 2017 Committee

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Our Best Regards,

International Symposium on Food and Agro-Biodiversity (ISFA) **2017**
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105. Full Paper - Heni Rizqiati.docx
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Heni Rizqiati <heni.rizqi@gmail.com> Mon, Nov 27, 2017 at 10:27 PM
To: International Symposium Food and Bio-Diversity <isfa@ift.or.id>

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105. Full Paper - Heni Rizqiati after revision_2.docx
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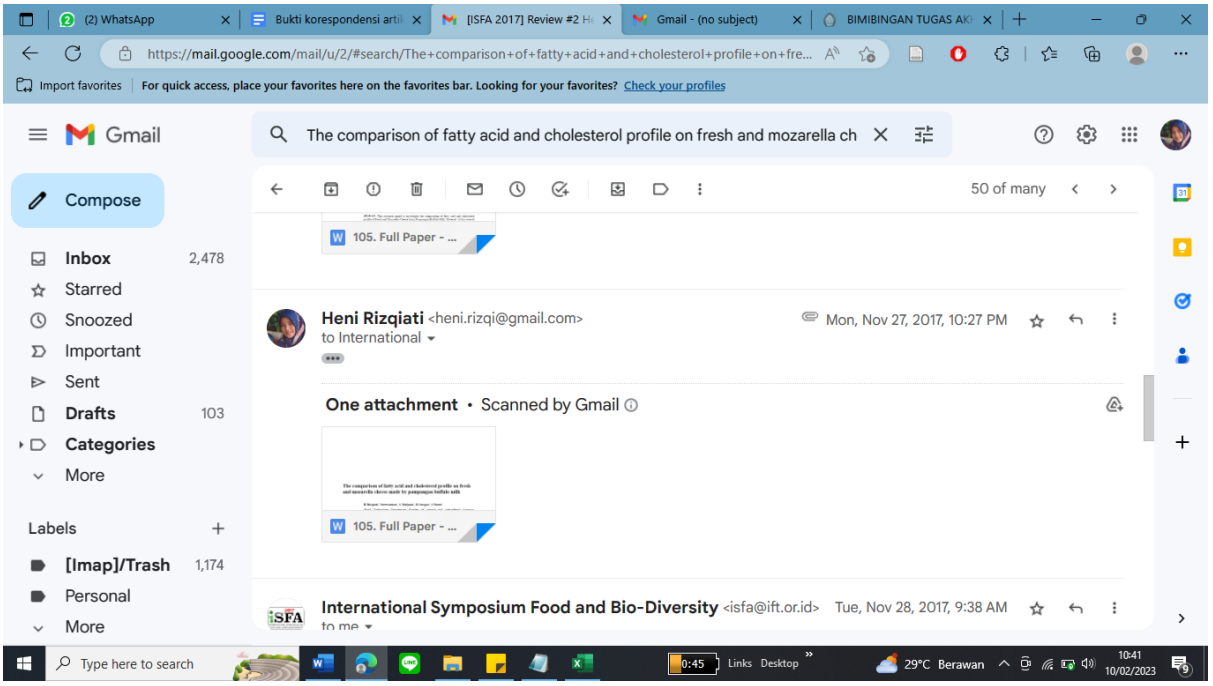

Gmail Heni Rizqiati <heni.rizqi@gmail.com>

[ISFA 2017] Update on proceeding / publication

1 message

International Symposium Food and Bio-Diversity <isfa@ift.or.id> Wed, Dec 13, 2017 at 9:55 AM
Bcc: heni.rizqi@gmail.com

Dear All Respected Authors,

This is to update you that after rigorous review and format setting, we have successfully submitted the manuscripts to IOP conference series.

Now, the manuscripts are at the hand of publisher which will do further check. In the case that the publisher still need some correction from the author, we will contact you individually.

If everything goes smoothly, the process may take up 4 weeks until your paper is published online. Thus, please expect that it will be available on early 2018.

We would take this moment as well to kindly remind you to pay the Publication Fee, IDR 1.500.000 or USD 135.

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Account holder: Indonesian Food Technologists
Bank Name: Mandiri Bank
Swift Code: BMRIIDJA
Branch: Diponegoro University, Semarang, Indonesia
Account number: 136-00-1354048-6
Address: Gedung B Lantai 3, Fakultas Peternakan dan Pertanian UNDIP, Tembalang, Semarang 50275

We hope you complete the payment **URGENTLY**, and send the proof of payment to this email address. The delay on the payment, will delay the publication process. We ask your understanding.

For those who have paid the publication fee and those who by special circumstances are exempted from the fee, please ignore above.

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Our Best Regards,

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Tel.: +622470422113

Gmail Heni Rizqiati <heni.rizqi@gmail.com>

[ISFA 2017] The Proceeding is PUBLISHED!

1 message

International Symposium Food and Bio-Diversity <isfa@ift.or.id> Thu, Feb 1, 2018 at 9:29 AM
Bcc: heni.rizqi@gmail.com

Dear Respected Authors,

We are very happy to inform you that the long awaited proceeding is now online.
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http://iopscience.iop.org/issue/1755-1315/102/1

We will then prepare the printed version of the proceeding and expedite it to your mail address. We will keep you updated about this.

Many thanks for your continuous support and we hope to see you again in our next symposium.

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Our Best Regards,

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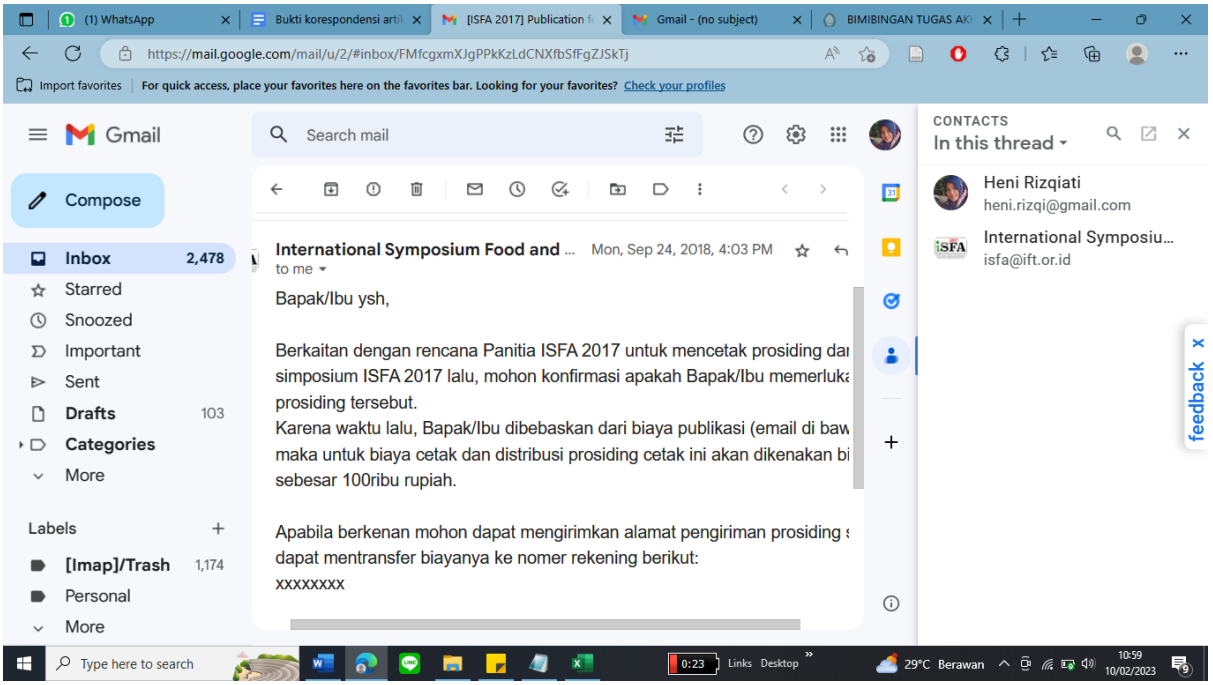

The comparison of fatty acid and cholesterol profile on fresh and mozarella cheese made by pampangan buffalo milk

The comparison of fatty acid and cholesterol profile on fresh and mozarella cheese made by pampangan buffalo milk

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Abstract. This research aimed to investigate the composition of fatty acid and cholesterol profile of Fresh and Mozarella Cheese from Pampangan Buffalo Milk. Material of this reseach was Pampangan buffalo milk and Mozarella cheese made from buffalo milk. Fatty acids composition were analyzed by [1] method. Result showed the major saturated fatty acid found in milk and Mozzarella cheese Pampangan buffalo milk were palmitic, stearic and miristic acid while the unsaturated fatty acid was oleic acid. The total amount of fatty acid in Mozarella cheese was lower than those in Pampangan buffalo milk.

Keyword: Buffalo milk, mozarella, fatty acids, cholesterol profile

1. Introduction

Buffalo milk was consumed by Pampangan's people, which is has a different nutrition with cow milk. [2] claimed that buffalo milk contain of 17.7% total solid, 7.3% fat, 5% protein, 4.6% lactose and 0.9% ash. [3] reported that buffalo milk has different compositions with cow's milk, because total solid, fat, protein, fat, lactose, mineral, and ash are higher than cow's milk. [4] explained that buffalo milk contained higher saturated fatty acids (palmitic and lauric) and lower mono-unsaturated fatty acid than cow milk in the same condition.

Milk fatty acid has been contributed in specific flavor, as a source of short chain-fatty acids (C6:0, C8:0, C10:0) which is made buffalo's milk become easy to absorb. Buffalo milk fatty acids produced energy and activated all of endocrine gland, organ, also body tissue without forming cholesterol and adipose tissue [5]. A higher of Medium chain-fatty acid in buffalo milk has a bacteriostatic effect.

The purpose of processing is to create or increase the flavor and nutrition, give an added value, produce a new product and extended the product's shelf-life. Buffalo's milk is a main material in mozarella cheese making because buffalo milk has a good nutrition. The making process of mozarella cheese is complex which is start with coagulation (K-casein was broke down by renet enzyme), aglomeration (produced similar protein mass) and water-released. During the process, fat maintained the membrane integrity and protein trapped in fat membrane also formed the cheese matrix [6]. [7] reported that Mozarella cheese has a 46.0% water content, 23.0% fat, 43.0% total solid fat and 1.2% salinity. In the making process of Mozarella cheese, fat degradated into fatty acids. Fatty acid in milk

in directly contributed to the aroma of cheese, however fatty acids have a role to form volatile compound through the metabolism of fatty acids [8].

This research aim to analyze total and type of fatty acid also cholesterol profile in fresh milk and mozarella cheese from Pampangan's buffalo milk.

2. Metodology

2.1. Material and Method

This research use milk and Mozzarella cheese from Pampangan's buffalo milk, obtained from Rambutan- Pampangan subdistric in Lampung. This research be held in Baranang Siang IPB Laboratory Bogor.

2.2. Experimental Procedure

This research has been analyzed the concentration and type of fatty acids, also cholestrol in milk and Mozzarella cheese from Pampangan's buffalo milk. Fatty acid analyzing is using gas chromatography through the procedure in IPB Laboratory which is following the [1].

2.3. Data Analysis

Fatty acid was identified by descriptive analyzed and compared with the previous research.

3. Result and Discussion

Total concentration of Pampangan buffalo milk's fatty acid and Mozarella cheese were recordered in Table 1. Total concentration of Fatty acid in Pampangan buffalo's milk (52.22%) is higher than Mozarella cheese (46.535%).

Table 1. Type and total unsaturated fatty acids of buffalo's milk and mozarella cheese

Fatty Acids	Concentration (%)	
	Buffalo Milk	Mozarella Cheese
Caproic. C6:0	1.31	0.86
Caprilic. C8:0	0.33	0.325
Capric. C10:0	0.65	0.65
Lauric. C12:0	0.96	0.95
tridekanoat. C13:0	0.14	0.125
miristic. C14:0	6.56	5.96
pentadekanoat. C15:0.	1.81	1.155
palmitat. C16:0	23.90	20.695
heptadekanoat. C17:0	1.03	0.93
stearat. C18:0	14.37	14.28
arakidat. C20:0	0.23	0.225
heneikosanoat. C21:0	0.09	0.12
behenat. C22:0	0.52	0.115
trikosanoat. C23:0	0.13	0.145
lignoserat. C24:0	0.15	0.86
Total	52.22	46.535

The final result shown some type of unsaturated fatty acids in fresh milk and Mozarella cheese from Pampangan's buffalo milk, such as lauric, miristic, palmitic, stearic, caproic, caprilic, capric, tridekanoat, arakidat, heneikosanoat, behenat, trikosanoat dan lignoseratrasi in different concentration. The highest concentration of saturated fatty acid in fresh milk and Mozarella cheese are palmitic, stearic, and miristic. [4] reported that buffalo's milk fatty acid contained of stearic and palmitic which is contributed to specific taste and aroma. [9] explained the highest concentration of fatty acid in buffalo's milk are palmitic, miristic and stearic acid. Saturated fatty acid's percentage in buffalo's milk is higher than cow's milk [10].

Miristic fatty acid (C14:0) has a role in increasing the *High Density Lipoprotein* (HDL) and *Low Density Lipoprotein* (LDL), antioxidant, prevent the oxidation of LDL and protect from microbe infection [11].

Buffalo milk's short chain fatty acids produced energy and activated all of endocrine gland, organ, also body tissue without forming cholesterol and adipose tissue [5]. Milk's fatty acid composition influenced by factors, such as lactation periods [12], type of buffalo [4] and feed composition [13]

In the making process of cheese involved curd forming with milk acidifocation and protease addition, so the process resulted the positive respond of fatty acid in milk and Mozarella cheese from buffalo milk. Milk fatty acid produced by lipolysis of fatty acid [8]. In this research, total fatty acid of Mozarella cheese is lower than Pampangan buffalo's milk. [5] reported that lypolisis not always increase the certain fatty acid. Lypolisis is chemical reaction which is produced the flavor of milk product. Therefore, the primer total of milk's fatty acid influenced the total fatty acid during the making process of Mozarella cheese.

Table 2. Type and Total Unsaturated Fatty Acids in Milk and Mozarella Cheese From Pampangan's Buffalo Milk

Fatty Acid	Buffalo Milk	Mozarella Cheese
miristoleinat. C14:1	0.04	0.355
palmitoleinat. C16:1	1.91	1.615
oleic. C18:1n6c	23.37	21.395
linoleat. C18:2n6c	0.76	0.725
linolenat. C18:3n3	0.33	0.02
Cis-11-Eikosenoat. C20:1	-	0.36
Cis-11-14- Eikosedienoat. C20:2	-	0.07
Cis -8.11.14 Eicosetrinoar . C20:3n6	-	0.035
arakidonat. C20:4n6	0.04	0.06
Cis-5.8.11.14.17 Eikosapentaenoat. C20:5n3. EPA	0.04	0.05
nervonat. C24:1	0.05	0.035
Total	26.91	24.72

Unsaturated fatty acid which is detected in fresh milk and Mozarella cheese from Pampangan's buffalo milk are miristoleic, palmitoleic, oleic, linoleic, linolenat, eikosanoat, arakidonat and eikosapentanoat shown in Table 2. Concentration of unsaturated fatty acid in Mozarella cheese is

lower than Pampangan's buffalo milk. [8] explained that milk's processing did not influence the fatty acid's composition. Unsaturated fatty acid in food materials related to food's spoilage. Unsaturated fatty acid not easily oxidized.

There is a tendency of decreasing in cholesterol during processing of Pampangan's buffalo milk into Mozarella cheese. The result shown cholesterol in milk and Mozarella cheese are 1.96% and 1.04. Fat's composition which is influenced the cholesterol is lypolisis. [6,9] explained that lauric acid (C12:0), palmitic acid (C16:0) and miristic acid (C14:0) increased the serum cholesterol. Oleic acid (C18:1), linoleic acid (C18:3), and α-linoleic acid (C18:3) decreased the serum cholesterol.

4. Conclusion

Pampangan buffalo milk has a higher fatty acid than mozarella cheese. Type of fatty acid which is identified in milk and mozarella has a similiarity, however the concentration is different. There was a tendency of decreasing in cholesterol during buffalo milk processing into mozarella cheese.

Acknowledgments

Our research is funded by The Directorate of Research and Devotion to community of The Ministry of Higher Education and Culture, through the BOPTN 2014.

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