

[Molecules] Manuscript ID: molecules-1494850 - Review Request

1 message

 Molecules Editorial Office <molecules@mdpi.com>
 Tue, Nov 23, 2021 at 7:17 AM

 Reply-To: Karol Zhang <karol.zhang@mdpi.com>
 To: Diding Suhandy <diding.sughandy@fp.unila.ac.id>

 Cc: Molecules Editorial Office <molecules@mdpi.com>, Karol Zhang <karol.zhang@mdpi.com>

Dear Dr. Suhandy,

We have received the following paper, submitted to Molecules (https://www.mdpi.com/journal/molecules/).

Type of manuscript: Article Title: Botanical Origin Differentiation of Malaysian Stingless Bee Honey produced by Heterotrigona itama and Geniotrigona thoracica using 13C NMR Spectroscopy and Chemometrics Special Issue: Plant Foods Ingredients as Functional Foods and Nutraceuticals https://www.mdpi.com/journal/molecules/special_issues/Plant_Foods_Ingredients

We kindly invite you to review this paper and evaluate its suitability for publication in Molecules. The article abstract is available at the end of this message.

If you choose to accept this invitation, we would appreciate receiving your comments within 1 week. Please let us know if you are likely to need more time to complete your review.

Please click on the link below to let us know if you will be able to provide a review and access the full manuscript and review report form.

https://susy.mdpi.com/user/review/review/22655426/25jLvMap

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Please disclose any potential conflicts of interest you might have concerning the manuscript's contents or the authors.

If you are not able to review this manuscript, we kindly ask you to decline by clicking on the above link such that we can continue processing this submission. We would also appreciate any feedback you can provide at this time (i.e., your general impression regarding the quality of this manuscript) and any suggestions for alternative expert reviewers.

Molecules is an open access journal of MDPI. Thank you very much for your consideration and we look forward to hearing from you.

Kind regards,

Ms. Karol Zhang E-Mail: karol.zhang@mdpi.com

MDPI Beijing Office Poly Metropolitan, Floor 9-11, Building 2, Courtyard 4, Guanyinan North Street, Tongzhou District, China

MDPI Molecules Editorial Office St. Alban-Anlage 66, 4052 Basel, Switzerland E-Mail: molecules@mdpi.com http://www.mdpi.com/journal/molecules

Manuscript details: Journal: Molecules Manuscript ID: molecules-1494850 Type of manuscript: Article Title: Botanical Origin Differentiation of Malaysian Stingless Bee Honey produced by Heterotrigona itama and Geniotrigona thoracica using 13C NMR Spectroscopy and Chemometrics Authors: Wen-Jie Ng *, Nam-Weng Sit, Peter Aun-Chuan Ooi, Kah-Yaw Ee, Tuck-Meng Lim Submitted to section: Food Chemistry, https://www.mdpi.com/journal/molecules/sections/food_chemistry

Special Issue: Plant Foods Ingredients as Functional Foods and Nutraceuticals https://www.mdpi.com/journal/molecules/special issues/Plant Foods Ingredients

Abstract: Stingless bee honey specifically honeydew types is generally valued for its better health benefits than those of most blossom types. However, scientific studies about the differentiation of stingless bee honey based on honeydew and blossom origins are very limited. In this study, 13C NMR spectroscopy was employed to quantify the seven major sugar tautomers in stingless bee honey samples, the sugar profiles of both honeydew and blossom types were found not significantly different. However, several physicochemical properties of honeydew honey including free acidity, moisture content, total soluble solid, ash content, electrical conductivity, proline, hydroxymethylfurfural, diastase, acetic acid, hydrogen peroxide and mineral elements levels were significantly different from blossom honey. Greater antioxidant capacity in honeydew honey was proven with higher total phenolic compounds, ABTS, DPPH, superoxide radical scavenging activities, peroxyl radical inhibition, iron chelation and ferric reducing power. Using principal component analysis (PCA), two clusters of stingless bee honey from the honeydew and blossom origin were observed. PCA also revealed that the differentiation between honeydew and blossom origin of stingless bee honey is possible with certain physicochemical and antioxidant parameters. The combination of NMR spectroscopy and chemometrics are suggested to be useful to determine the authenticity and botanical origin of stingless bee honey.

Keywords: Kelulut honey, honeydew honey, blossom honey, NMR profiling, physicochemicals, functional foods, antioxidant, honey differentiation

Note: We discourage reviewers from recommending citation of their own work when not clearly necessary to improve the quality of the manuscript under review. Please state in your comments to the editor if you recommend citation of your own work and the reason for this recommendation.

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[Molecules] Manuscript ID: molecules-1494850 - Review Request Accepted

1 message

molecules@mdpi.com <molecules@mdpi.com> To: Diding Suhandy <diding.sughandy@fp.unila.ac.id> Cc: Karol Zhang <karol.zhang@mdpi.com> Tue, Nov 23, 2021 at 7:41 AM

Dear Dr. Suhandy,

Thank you very much for agreeing to review this manuscript:

Manuscript ID: molecules-1494850 Type of manuscript: Article Title: Botanical Origin Differentiation of Malaysian Stingless Bee Honey produced by Heterotrigona itama and Geniotrigona thoracica using 13C NMR Spectroscopy and Chemometrics Authors: Wen-Jie Ng *, Nam-Weng Sit, Peter Aun-Chuan Ooi, Kah-Yaw Ee, Tuck-Meng Lim Submitted to section: Food Chemistry, https://www.mdpi.com/journal/molecules/sections/food_chemistry Plant Foods Ingredients as Functional Foods and Nutraceuticals https://www.mdpi.com/journal/molecules/special_issues/Plant_Foods_Ingredients

The review report form can be found here: https://susy.mdpi.com/user/review/review/22655426/25jLvMap

The review report due date is: 3 December 2021

We look forward to receiving your valuable comments.

Kind regards,

Ms. Karol Zhang E-Mail: karol.zhang@mdpi.com

MDPI Beijing Office Poly Metropolitan, Floor 9-11, Building 2, Courtyard 4, Guanyinan North Street, Tongzhou District, China

MDPI Molecules Editorial Office St. Alban-Anlage 66, 4052 Basel, Switzerland E-Mail: molecules@mdpi.com http://www.mdpi.com/journal/molecules

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[Molecules] Manuscript ID: molecules-1494850 - Review Request Reminder

1 message

Molecules Editorial Office <molecules@mdpi.com> Reply-To: karol.zhang@mdpi.com To: Diding Suhandy <diding.sughandy@fp.unila.ac.id> Cc: Molecules Editorial Office <molecules@mdpi.com>

Dear Dr. Suhandy,

A reminder that we are looking forward to receiving your review of the following manuscript soon:

Type of manuscript: Article Title: Botanical Origin Differentiation of Malaysian Stingless Bee Honey produced by Heterotrigona itama and Geniotrigona thoracica using 13C NMR Spectroscopy and Chemometrics Journal: Molecules

If possible, we would be pleased to receive your review report before the due date 3 December 2021. To complete your review report please click on this link:

https://susy.mdpi.com/user/review/review/22655426/25jLvMap

Do not hesitate to contact us if you have any questions.

Kind regards, Ms. Karol Zhang E-Mail: karol.zhang@mdpi.com

MDPI Beijing Office Poly Metropolitan, Floor 9-11, Building 2, Courtyard 4, Guanyinan North Street, Tongzhou District, China

MDPI Molecules Editorial Office St. Alban-Anlage 66, 4052 Basel, Switzerland E-Mail: molecules@mdpi.com http://www.mdpi.com/journal/molecules

Manuscript details: Journal: Molecules Manuscript ID: molecules-1494850 Type of manuscript: Article Title: Botanical Origin Differentiation of Malaysian Stingless Bee Honey produced by Heterotrigona itama and Geniotrigona thoracica using 13C NMR Spectroscopy and Chemometrics Authors: Wen-Jie Ng *, Nam-Weng Sit, Peter Aun-Chuan Ooi, Kah-Yaw Ee, Tuck-Meng Lim Submitted to section: Food Chemistry,

https://www.mdpi.com/journal/molecules/sections/food_chemistry Plant Foods Ingredients as Functional Foods and Nutraceuticals https://www.mdpi.com/journal/molecules/special issues/Plant Foods Ingredients

Abstract: Stingless bee honey specifically honeydew types is generally valued for its better health benefits than those of most blossom types. However, scientific studies about the differentiation of stingless bee honey based on honeydew and blossom origins are very limited. In this study, 13C NMR spectroscopy was employed to quantify the seven major sugar tautomers in stingless bee honey samples, the sugar profiles of both honeydew and blossom types were found not significantly different. However, several physicochemical properties of honeydew honey including free acidity, moisture Wed, Dec 1, 2021 at 7:30 AM

content, total soluble solid, ash content, electrical conductivity, proline, hydroxymethylfurfural, diastase, acetic acid, hydrogen peroxide and mineral elements levels were significantly different from blossom honey. Greater antioxidant capacity in honeydew honey was proven with higher total phenolic compounds, ABTS, DPPH, superoxide radical scavenging activities, peroxyl radical inhibition, iron chelation and ferric reducing power. Using principal component analysis (PCA), two clusters of stingless bee honey from the honeydew and blossom origin were observed. PCA also revealed that the differentiation between honeydew and blossom origin of stingless bee honey is possible with certain physicochemical and antioxidant parameters. The combination of NMR spectroscopy and chemometrics are suggested to be useful to determine the authenticity and botanical origin of stingless bee honey.



[Molecules] Manuscript ID: molecules-1494850 - Acknowledgement - Review Received

1 message

molecules@mdpi.com < Wed, Dec 1, 2021 at 9:47 PM Reply-To: Karol Zhang <karol.zhang@mdpi.com>, Molecules Editorial Office <molecules@mdpi.com> To: Diding Suhandy <diding.sughandy@fp.unila.ac.id> Co: Molecules Editorial Office <molecules@mdpi.com>

Cc: Molecules Editorial Office <molecules@mdpi.com>, Karol Zhang <karol.zhang@mdpi.com>

Dear Dr. Suhandy,

A short note to thank you very much for your review of the following manuscript:

Manuscript ID: molecules-1494850 Title: Botanical Origin Differentiation of Malaysian Stingless Bee Honey produced by Heterotrigona itama and Geniotrigona thoracica using 13C NMR Spectroscopy and Chemometrics Authors: Wen-Jie Ng *, Nam-Weng Sit, Peter Aun-Chuan Ooi, Kah-Yaw Ee, Tuck-Meng Lim

If we decide to ask the authors for revisions, we will send you the revised version soon. To help us improve our services, we kindly ask you to fill in our online survey on the peer-review process at https://www.surveymonkey.com/r/reviewerfeedbackmdpi

We encourage you to register an account on our submission system and bind your ORCID account (https://susy.mdpi.com/user/edit). You are able to deposit the review activity to your ORCID account manually via the below link: https://susy.mdpi.com/user/reviewer/status/finished

We also invite you to contribute to Encyclopedia (https://encyclopedia.pub), a scholarly platform providing accurate information about the latest research results. You can adapt parts of your paper to provide valuable reference information for others in the field.

Kind regards, Molecules Editorial Office Postfach, CH-4020 Basel, Switzerland Office: St. Alban-Anlage 66, CH-4052 Basel Tel. +41 61 683 77 34 (office) Fax +41 61 302 89 18 (office) E-mail: molecules@mdpi.com https://www.mdpi.com/journal/molecules/

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Your review for Molecules has been added to Publons

1 message

Team Publons <noreply@publons.com> Reply-To: Team Publons <noreply@publons.com> To: diding.sughandy@fp.unila.ac.id Thu, Dec 2, 2021 at 7:32 AM

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Logout (/user/logout)	Authors	Wen-Jie Ng * , Nam-Weng Sit , Peter Aun-Chuan Ooi , Kah-Yaw Ee , Tuck-Meng Lim		
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(/user/manuscripts/upload) Abstract		Stingless bee honey specifically honeydew types is generally		
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Invoices		bee honey from the honeydew and blossom origin were		
(/user/invoices)		honeydew and blossom origin of stingless bee honey is possible		
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Count	word count)	combination of NMR spectroscopy and chemometrics are suggested to be useful to determine the authenticity and botanical origin of stingless bee honey.		
	word_count)			

^

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Volunteer	(/user/review/review/22655426/25jLvMap?
Preferences	report=16035848#authorReply))
(/volunteer_reviewer_info/view)	Accept (/user/review/review/22655426/25jLvMap? report=16417977) (10 December 2021)

Other reviewers' comments

Reviewer 1 Review Report (round1) (/user/review/other/22655426/25jLvMap?report_id=16030579) (Reconsider after major revision (control missing in some experiments)) Review Report (round2) (/user/review/other/22655426/25jLvMap?report_id=16417980) (Accept in present form)

Review Report Form

Reviewer's Information (will not be revealed to authors)

(includes author's reply

Name	Dr. Diding Suhandy
Email	diding.sughandy@fp.unila.ac.id
Website	https://www.researchgate.net/profile/Diding-Suhandy (https://www.researchgate.net/profile/Diding-Suhandy)
Affiliation	Lampung University
Research Keywords	analytical chemistry

Report 1 Hide Report and Author Response [-]

	High Average L	ow	Overall Recommendation
Originality / Novelty	() (x) (()	() Accept in present form() Accept after minor revision (corrections to minor methodological errors and text editing)
Significance of Content	() (x) ()	()	(x) Reconsider after major revision (control missing in some experiments)() Reject (article has serious flaws,
Quality of Presentation	() () ((x)	additional experiments needed, research not conducted correctly)
Scientific Soundness	() (x) ()	()	English language and style
Interest to the readers	() (x) (()	() Extensive editing of English language and style required
Overall Merit	() (x) (()	()	 () Moderate English changes required () English language and style are fine/minor spell check required (x) I don't feel qualified to judge about the English language and style

Does the introduction provide sufficient background and include all relevant references?	(x)	()	()	()
Is the research design appropriate?	()	()	(x)	()
Are the methods adequately described?	()	()	(x)	()
Are the results clearly presented?	()	()	(x)	()
Are the conclusions supported by the results?	()	()	(x)	()
Comments				

and	The authors should add more description of botanical origin		
Suggestions	of the honey samples. It is not clear monoflora or multiflora		
for Authors	honey samples? All samples harvested from the same		
	season (year) from the sa		
	More		
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INO	res	
(x)	()	Do you have any potential conflict of interest with regards to this paper?
(x)	()	Did you detect plagiarism?
(x)	()	Did you detect inappropriate self-citations by authors?
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Author response to report 1:

Author's Notes	Dear reviewer, thank you for your valuable comments and
	suggestions. Please see the attached file for more
	information. Have a great day.

Author Response

author_response.pdf (/user/review/displayFile/22655426/25jLvMap?file=author-

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Report 2 Hide Report and Author Response [-]

	High Average No Answer	Low	Overall Recommendation
Originality / Novelty	() (x) ()	()	 () Accept after minor revision (corrections to minor methodological errors and text editing)
Significance of Content	() (x) ()	()	 () Reconsider after major revision (control missing in some experiments) () Reject (article has serious flaws,
Quality of Presentation	() () ()	(x)	additional experiments needed, research not conducted correctly)
Scientific Soundness	() (x) ()	()	English language and style
Interest to the readers	() (x) ()	()	 () Extensive editing of English language and style required () Moderate English changes required
Overall Merit	() (x) ()	()	() English language and style are fine/minor spell check required

(x) I don't feel qualified to judge about the English language and style

Comments All comments have been resolved.

and Suggestions for Authors

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Response to Reviewer 2 Comments

Point 1: The authors should add more description of botanical origin of the honey samples. It is not clear monoflora or multiflora honey samples? All samples harvested from the same season (year) from the same location? Especially for blossom honey.

Response 1: We are grateful to reviewer for the insightful comments. The nectar source and harvest time of each honey sample has been added in Table 8.

Point 2: The overall objective of this study is unclear. From the title and its explanation in the introduction, the motivation of this study is the merit of ¹³C NMR spectroscopy for possible differentiation of stingless honey samples. However, in the material and method and the results, the authors measured and described several physical, chemical and phytochemical properties of honey samples. So, actually, what is the X matrix for the PCA calculation? What is the size of X matrix? Only data from ¹³C NMR spectroscopy (the seven major sugar tautomers)? or the authors also included the other properties honey samples as X matrix in the PCA calculation. PCA is suitable for an unsupervised analysis with relatively big data matrix.

Response 2: We are grateful to reviewer for the insightful comments.

We have revised the title to "Botanical Origin Differentiation of Malaysian Stingless Bee Honey produced by *Heterotrigona itama* and *Geniotrigona thoracica* using Chemometrics". Introduction was revised accordingly as well.

For the "major sugar composition" category, there is no significant difference in the concentrations of glucose and fructose between honeydew honey and blossom honey, hence the data were not included in PCA. On the other hand, for other categories including "maturity of honey", "purity of honey", "deterioration state of honey", "mineral profile" and "antioxidant properties", there are at least three parameters significantly different between honeydew honey and blossom honey, hence all of the data from these categories were included in PCA.

Point 3: The authors should provide the PCA score plots to map the possible differentiation between *Heterotrigona itama* and *Geniotrigona thoracica*.

Response 3: We are grateful to reviewer for the insightful comments. Due to all or most of the related journal articles focus on the differentiation of honeydew honey and blossom honey produced by Apis bees, hence, in this paper, we focus on the differentiation between honeydew and blossom honey that produced by stingless bee. To my best knowledge, there is none or very limited journal article that used stingless bee honey for such differentiation. Perhaps in future, we will conduct a study for the differentiation of honey that produced by different native stingless bee species.

Point 4: The first principal component (PC1) and second principal component (PC2) represented 56.40% of the variance. It is necessary to provide enough number of PCs with CEV

(cumulative explained variance) more than 80%. Please add the third PC and so on in your analysis.

Response 4: We are grateful to reviewer for the insightful comments. In the first PCA, at least 8 principal components are needed to achieve more than 80% CEV. We understand the concern pointed out by reviewer; hence, we did another PCA which only included parameters with correlation coefficient more than 0.800, both PC1 and PC2 managed to give 84.60% CEV.



[Molecules] Manuscript ID: molecules-1494850 - Thank you for reviewing: paper published

1 message

MDPI - Website Editor <website@mdpi.com>

Thu, Dec 16, 2021 at 1:58 PM

Reply-To: Karol Zhang <karol.zhang@mdpi.com>, Molecules Editorial Office <molecules@mdpi.com> To: Diding Suhandy <diding.sughandy@fp.unila.ac.id>

Cc: Molecules Editorial Office <molecules@mdpi.com>, Karol Zhang <karol.zhang@mdpi.com>, Faith Zhang <faith.zhang@mdpi.com>

Dear Dr. Suhandy,

We are writing to inform you that the following paper which you kindly reviewed has been published: https://www.mdpi.com/1420-3049/26/24/7628

Thank you for your participation in the review process. The paper was accepted by the academic editor after peer review by 2 reviewers and author revision. You can now see the comments of other reviewers by creating an account on our submission system at https://susy.mdpi.com with your review email diding.sughandy@fp.unila.ac.id and visiting the reviews section. You may also download a PDF certificate (https://susy.mdpi.com/reviewer/certificate/displayFIIe/9298744) of your review record from the Susy website. We look forward to your future participation in the review process. By signing up at https://susy.mdpi.com/volunteer/profile/edit you can provide further details about your availability and the journals you are interested in reviewing for.

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Kind regards,

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