Gmail vilia paramita [redacted]@gmail.com>

Fwd: Decision on your submission to Food Hydrocolloids

2 messages

Stefan Kasapis [redacted]@gmail.com> Fri, May 15, 2020 at 11:19 AM
To: vilia paramita [redacted]@gmail.com>, Diah Ikasari [redacted]@gmail.com>

Vilia,

please send to me Response to Reviewers Letter and Revised Paper as per usual (including showing all changes in yellow highlight).

Let me have your revisions on Tuesday morning if possible (but not before that as I am busy until then).

Thank you, Stefan

---------- Forwarded message ---------
From: **Vassilis Kontogiorgos (Food Hydrocolloids)** <EviseSupport@elsevier.com>
Date: Fri, 15 May 2020 at 12:57
Subject: Decision on your submission to Food Hydrocolloids
To: [redacted]@gmail.com>

Ref: FOODHYD_2020_894
Title: Mechanical versus calorimetric glass transition temperature in the diffusion of nicotinic acid from a condensed gelatin/glucose syrup system
Journal: Food Hydrocolloids

Dear Professor. Kasapis,

Thank you for submitting your manuscript to Food Hydrocolloids.

I have completed my evaluation of your manuscript. The reviewers recommend reconsideration of your manuscript following revision. I invite you to resubmit your manuscript after addressing the comments below.

When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline in a cover letter every change made in response to their comments and provide suitable rebuttals for any comments not addressed. Please note that your revised submission may need to be re-reviewed.

If you would like to revise your manuscript, you first need to accept this invitation:

- Log into EVISE® at: http://www.evise.com/evise/faces/pages/navigation/NavController.jspx?JRNL_ACR=FOODHYD;
- Locate your manuscript under the header 'My Submissions that need Revisions' on your 'My Author Tasks' view; and
- Click on 'Agree to Revise'.

Upon agreeing to revise your manuscript, your revision deadline will be displayed in your 'My Author Tasks' view.

When you are ready, please submit your revision by logging into EVISE® at: http://www.evise.com/evise/faces/pages/navigation/NavController.jspx?JRNL_ACR=FOODHYD

Food Hydrocolloids values your contribution and I look forward to receiving your revised manuscript.

Kind regards,

Vassilis Kontogiorgos
Editor
Food Hydrocolloids

Editor and Reviewer Comments:
-Reviewer 1

- The research and its presentation in the manuscript are at very high standard. However, there are some minor points that should be addressed to improve:

Line 83-84: Regarding the citation of references "(Muyonga, Cole, & Duodu, 2004; Avena-Bustillos et al., 2006; Haug, Draget, & Smidsrød, 2004; Zhou, Mulvaney, & Regenstein, 2006)": these are a considerable number of references and all of them are before 2010, can you use one or two newer references?

Line 232: "The monochromatic radiation of WAXD unveiled an increasing intensity in the peak at 20°". Could you please double check to confirm if this is an increase in the intensity or due to the plotting technique to avoid an overlap of the diffractograms and to make the graph clear to observe?

Line 289: The use of "master curve in Figure 3a" may lead to a confusion with the master curve generated following TTS principle. This can be replaced with " ….analogue of temperature profile (Figure 3a)"

Line 314: "*Tgc* prediction"? Could you please check this as *Tgc* should be directly obtained from thermograph generated by Q2000 software.

Line 307-308: "are according to experience from research on amorphous synthetic and natural polymers (Ferry, 1980; Kasapis & Sablani, 2005)". This should be changed into either "are in accordance with/agree with/referred from previous studies on amorphous synthetic and natural polymers (Ferry, 1980; Kasapis & Sablani, 2005)".

Line 309-310: "The discontinuities observed in Figure 3d, as the conjunction of the WLF and modified Arrhenius fits, are taken to be the mechanical glass transition temperature" should be "The discontinuities at the conjunction of the WLF and modified Arrhenius fits determine/pinpoint the mechanical glass transition temperature (Figure 3d)".

-Reviewer 2

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The manuscript number FOODHYD_2020_894 presents the theoretical relationship of free volume in a condensed gelatine/glucose syrup matrix and diffusivity of nicotinic acid embedded in the matrix. The release of nicotinic acid was physically controlled by the glass transition of the condensed matrix from the low release in a glassy state to a higher release in a rubbery state. The glass transition temperature obtained from mechanical measurement on the condensed system affected the vitamin release pattern such as a super case II in the glassy high solids. The network formation generated from a high molecular weight gelatine was strengthened in the mechanical property by shifting the glass transition temperature and limited the vitamin mobility. The research pinpointed that a mechanical glass transition was a more reliable parameter to explain the vitamin diffusion in the condensed gelatine gel than a calorimetric glass transition. The systematic research supports the fundamental theory of both free volume theory and diffusion theory, which advances the theories in a biopolymer system. Therefore, the high quality research is worthy to be published in Food Hydrocolloids.

-Reviewer 3

- The manuscript by Ikasari et al. examines glass transition temperature of condensed system containing common food ingredients (i.e. gelatins and glucose syrup) and vitamin B3, and diffusion of the vitamin within the gelatin/glucose syrup network. The experimental design is comprehensive and the findings are interesting, including on how the bovine gelatin based system demonstrated a higher mechanical Tg than that containing fish gelatin. The authors also provide detailed discussion on the results. The paper is potentially of interest to researchers in food hydrocolloids area.

I'd recommend that the authors address the following minor comments to increase the quality of the paper:
line 215: region 3000 to 2800 is not visible in Figure 1a
lines 342-344: A brief discussion on why the release of nicotinic acid was higher for system containing fish gelatin than the bovine counterpart would be helpful.

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2 attachments

Response to Reviewers_VPedit.docx
48K

Paper_VP.docx
3190K