All the replied are written in boldface.
We appreciate reviewer’s comments on our manuscript, which have made us to significantly revise the manuscript.

Response on comments of Reviewer 3

In this manuscript, authors investigated the effect of the high molecular weight (Mn=3400) PEG blended in the films of PHBHx with different ratios of PEG by using chemical FTIR imaging. The manuscript is well-organized, and conclusions seems in agreement with the obtained data. Therefore, I recommend this manuscript to be published after minor revisions as suggested bellows:

Have authors checked the optical image of the PHBHx/PEG blend films? Is there any difference between the optical image and chemical FTIR image?

Yes, we already measured the optical image of the PHBHx/PEG blend films and also compared the optical image with chemical FTIR image. As shown in Figures A(a), A(c) and A(e), PHBHx/PEG blend film looks almost the same. However, each chemical images of PHBHx/PEG blend films are different. We expected that each mixed film in the FTIR image would have the domain or thickness of the film.

![Figure A. The optical images (a, c, and e) and the FTIR images (b, d, and f) of PHBHx/PEG=70/30 (a and b), 60/40 (c and d), and 50/50 (e and f) blend films at 30 °C.](image-url)
2. In addition, what kinds of new information did author obtain from the FTIR imaging?

As you can see the Figure A, we cannot get any information only from optical images. However, chemical information can be obtained clearly from FTIR images. From the FTIR images, PHBHx/PEG = 60/40 and 50/50 blends have domains and different thermal behaviors. Therefore, we conclude that PEG can affect the thermal behavior of PHBHx copolymers.