

# Bukti Korespondensi

## Paper 21

### Effect of Precipitated Calcium Carbonate on Physical, Mechanical and Thermal Properties of Cassava Starch Bioplastic Composites



# Submission

3 Apr 2017, 07:21



Nonaktifkan untu

[IJASEIT] Revision Required >

Kotak Masuk x



**Rahmat Hidayat** rahmat@insightsociety.org lewat legion.in-hell.com

kepada saya ▾



Inggris ▾



Indonesia ▾

[Terjemahkan pesan](#)

Mr Edi Syafri:

We have reached a decision regarding your submission to International Journal on Advanced Science, Engineering and Information Technology, "Effect of Precipitated Calcium Carbonate on Physical, Mechanical and Thermal Properties of Cassava Starch Bioplastic Composite".

Please, correction table 2 according to template cause not clear, write the data. Thanks

Editorm

---

International Journal on Advanced Science, Engineering and Information Technology

<http://insightsociety.org/ijaseit/index.php/ijaseit>

# [IJASEIT] Revision Required

Kotak Masuk

R

Rahmat Hidayat rahmat@insightsociety.org lewat legion.in-hell.com 8, 10 Sep 2017, 20.46

kepada saya

Inggris

Indonesia

[Terjemahkan pesan](#)

[Nonaktifkan untuk: Inggris](#)

Mr Edi Syafri:

We have reached a decision regarding your submission to International Journal on Advanced Science, Engineering and Information Technology, "Effect of Precipitated Calcium Carbonate on Physical, Mechanical and Thermal Properties of Cassava Starch Bioplastic Composite".

Our decision is to: Revision Required

Editor

-----  
Reviewer A:

Manuscript Number : 1292-2315-2-RV

Title : Effect  
of Precipitated Calcium Carbonate on Physical,

Mechanical and Thermal Properties of Cassava Starch

Bioplastics Composites

A moderately good contribution but need a thorough language editing/proofreading. I strongly recommend resubmitting by doing a professional language editing.

•

The contents of the abstract must be (i) objective, (ii) brief methodology, and (iii) brief results. However, at the current abstract, the brief results are incomplete. The authors only highlighted the tensile strength results. A lot of grammatical errors are found at the current abstract, i.e.,:

(i) at the 2nd line “the effect of PCC on the physical, mechanical and thermal bioplastics ... “ must be “the effect of PCC on the physical, mechanical and thermal properties of bioplastics ... ..”

(ii) at the 3rd line, “bioplastics composites made by ... ..” which must be “bioplastics composites are made of ... ..”.

(iii) at the last sentence (2nd last line), “tensile strength occurred upon the addition of PCC was on 4%” must be “tensile strength obtained upon the addition of PCC was on 4%”.

- 

The caption is missing in Figure 1. The content of the 2nd last box (Figure 1) “Characteristics” must be “Characterization”.

- 

Need correction of the caption of Table 1.

- 

Some figures are unclear (ex. Figure 5).

- 

The conclusion does not address the objective. Need to rewrite the conclusion in paragraph format to address the objectives set at the beginning of the manuscript.

Need a professional language editing, otherwise, cannot be accepted for the publication in a SCOPUS indexed journal.

-----

---

International Journal on Advanced Science, Engineering and Information Technology

<http://insightsociety.org/ijaseit/index.php/ijaseit>

Manuscript Number : 1292-2315-2-RV  
Title : Effect of Precipitated Calcium Carbonate on Physical,  
Mechanical and Thermal Properties of Cassava Starch  
Bioplastics Composites

A moderately good contribution but need a thorough language editing/proof reading. I strongly recommend to **resubmit** by doing a professional language editing.

1. The contents of the abstract must be (i) objective, (ii) brief methodology, and (iii) brief results. However, at the current abstract, the brief results are incomplete. The authors only highlighted the tensile strength results. A lot of grammatical errors are found at the current abstract, i.e.,:
  - (i) at the 2<sup>nd</sup> line “the effect of PCC on the physical, mechanical and thermal bioplastics ...” must be “the effect of PCC on the physical, mechanical and thermal properties of bioplastics ...”.
  - (ii) at the 3<sup>rd</sup> line, “bioplastics composites made by ...” which must be “bioplastics composites are made of ...”.
  - (iii) at the last sentence (2<sup>nd</sup> last line), “tensile strength occurred upon the addition of PCC was on 4%” must be “tensile strength obtained upon the addition of PCC was on 4%”.
2. Caption is missing in Figure 1. The content of the 2<sup>nd</sup> last box (Figure 1) “Characteristics” must be “Characterization”.
3. Need correction of the caption of Table 1.
4. Some figures are unclear (ex. Figure 5).
5. Conclusion does not address the objective. Need to rewrite the conclusion in paragraph format to address the objectives set at the beginning of the manuscript.
6. Need a professional language editing, otherwise cannot be accepted for the publication in a SCOPUS indexed journal.

Leave this box blank  
Please submit online <http://www.insightsociety.org/ojaseit/index.php/ijaseit> in DOC file  
Editor will not receive submission by email  
**Please be sure to check for spelling and grammar before submitting your paper.**

## Effect of Precipitated Calcium Carbonate on Physical, Mechanical and Thermal Properties of Cassava Starch Bioplastic Composites

Edi Syafri\*, Anwar Kasim#, Hairul Abral\*\*, Alfi Asben#

\* Department of Agricultural Technology, Agricultural Polytechnic, Payakumbuh, West Sumatra 26271, Indonesia  
E-mail: [edisyafril1@gmail.com](mailto:edisyafril1@gmail.com)

# Department of Agriculture Product Technology, Andalas University Kampus Limau Manis, West Sumatra 25163, Indonesia  
E-mail: [anwar\\_ks@yahoo.com](mailto:anwar_ks@yahoo.com), [alfi\\_asben@yahoo.com](mailto:alfi_asben@yahoo.com)

\*\* Department of Mechanical Engineering, Andalas University Kampus Limau Manis, West Sumatra 25163, Indonesia  
E-mail: [hairulabral1966@gmail.com](mailto:hairulabral1966@gmail.com)

**Abstract**—The development of bioplastic composites from various natural polymers reinforced with Precipitated Calcium Carbonate (PCC) has become a field of increasing interest. In this study, the effect of PCC on the physical, mechanical and thermal properties of a cassava starch matrix composite was examined. The bioplastic composites were made of cassava starch and mixed with glycerol as a plasticizer and 0-10% by weight of PCC. The material was then poured into a mold and oven dried. The physical, thermal and mechanical properties of bioplastic/PCC composites were investigated using Tensile Strength measurements, X-Ray Diffraction, Thermogravimetric Analysis, Scanning Electron Microscopy (SEM), and Fourier Transform Infrared Spectroscopy (FTIR). The optimum tensile strength was obtained upon the addition of 4 % PCC. The addition of PCC improved the thermal stability of bioplastic/PCC composites. The results of X-ray Diffraction testing showed an increase in the crystallinity of the bioplastic/PCC composites with increase in PCC content but there is a decrease in the moisture absorption. SEM images indicated that the PCC filler content was incorporated into the matrix. In general, FTIR indicated the bioplastic/PCC composites were hydrophilic and the addition of PCC reduced the hydrophilic properties by damaging the hydrogen bonding between starch molecules and water.

**Keywords**— cassava starch, precipitated calcium carbonate, tensile strength, thermal stability, moisture absorption

# International Journal on Advanced Science, Engineering and Information Technology



[HOME](#) [ABOUT](#) [USER HOME](#) [SEARCH](#) [CURRENT](#) [ARCHIVES](#) [ANNOUNCEMENTS](#)

[Home](#) > [User](#) > [Author](#) > [Submissions](#) > [#1292](#) > [Summary](#)

## #1292 Summary

[SUMMARY](#) [REVIEW](#) [EDITING](#)

### Submission

Authors	Edi Syafri, Anwar Kasim, Hairul Abral, Alfi Asben
Title	Effect of Precipitated Calcium Carbonate on Physical, Mechanical and Thermal Properties of Cassava Starch Bioplastic Composites
Original file	<a href="#">1292-2314-1-SM.DOC</a> 2016-11-13
Supp. files	None
Submitter	Mr Edi Syafri 
Date submitted	November 13, 2016 - 08:36 PM
Section	Articles
Editor	Balza Achmad 
Abstract Views	33

### Status

Status	Published Vol 7, No 5 (2017)
Initiated	2017-10-17
Last modified	2017-11-03

## Submission Metadata

### Authors

Name	Edi Syafri 
Affiliation	Payakumbuh Agricultural Polytechnic
Country	Indonesia
Bio Statement	—
Principal contact for editorial correspondence.	
Name	Anwar Kasim 
Affiliation	Department of Agriculture Product Technology, Andalas University Kampus Limau Manis, West Sumatra 25163, Indonesia
Country	Indonesia
Bio Statement	—
Name	Hairul Abral 
Affiliation	Department of Mechanical Engineering, Andalas University Kampus Limau Manis, West Sumatra 25163, Indonesia
Country	Indonesia
Bio Statement	—
Name	Alfi Asben 
Affiliation	Department of Agriculture Product Technology, Andalas University Kampus Limau Manis, West Sumatra 25163, Indonesia
Country	Indonesia
Bio Statement	—

### Title and Abstract

Title Effect of Precipitated Calcium Carbonate on Physical, Mechanical and Thermal Properties of Cassava Starch Bioplastic Composites

Abstract

The development of bioplastic composites from various natural polymers reinforced with Precipitated Calcium Carbonate (PCC) has become a field of increasing interest. In this study, the effect of PCC on the physical, mechanical and thermal properties of a cassava starch matrix composite was examined. The bioplastic composites were made of cassava starch and mixed with glycerol as a plasticizer and 0-10% by weight of PCC. The material was then poured into a mold and oven dried. The physical, thermal and mechanical properties of bioplastic/PCC composites were investigated using Tensile Strength measurements, X-Ray Diffraction, Thermogravimetric Analysis, Scanning Electron Microscopy (SEM), and Fourier Transform Infrared Spectroscopy (FTIR). The optimum tensile strength was obtained upon the addition of 4 % PCC. The addition of PCC improved the thermal stability of bioplastic/PCC composites. The results of X-ray Diffraction testing showed an increase in the crystallinity of the bioplastic/PCC composites with increase in PCC content but there is a decrease in the moisture absorption. SEM images indicated that the PCC filler content was incorporated into the matrix. In general, FTIR indicated the bioplastic/PCC composites were hydrophilic and the addition of PCC reduced the hydrophilic properties by damaging the hydrogen bonding between starch molecules and water.

### Indexing

Keywords cassava starch; precipitated calcium carbonate; tensile strength; thermal stability; moisture absorption



**Publish**

WJN | Scho | 1 jan | zMa | 17 E | WJN | 18 N | draft | 16 Sc | 16 S | Bukti | emia | ijase | 21 E

File | D:/00GB/Paper%20dan%20smilarity/21%20ES%202017.pdf

Import favorites | Gmail | Maps | YouTube | Gmail | Edi Syafri - YouTube | News | Other favorites

Draw | Read aloud | 1 of 7

International Journal on  
Advanced Science  
Engineering  
Information Technology

Vol.7 (2017) No. 5  
ISSN: 2088-5334

Effect of Precipitated Calcium Carbonate on Physical, Mechanical and Thermal Properties of Cassava Starch Bioplastic Composites

Edi Syafri\*, Anwar Kasim#, Hairul Abiral\*\*, Alfi Asben#

\* Department of Agricultural Technology, Agricultural Polytechnic, Payakumbuh, West Sumatra 26271, Indonesia  
E-mail: edisyafri11@gmail.com

# Department of Agriculture Product Technology, Andalas University, West Sumatra 25163, Indonesia  
E-mail: anwar\_ks@yahoo.com, alfi\_asben@yahoo.com

\*\* Department of Mechanical Engineering, Andalas University, West Sumatra 25163, Indonesia  
E-mail: hairulabral1966@gmail.com

**Abstract**—The development of bioplastic composites from various natural polymers reinforced with Precipitated Calcium Carbonate (PCC) has become a field of increasing interest. In this study, the effect of PCC on the physical, mechanical and thermal properties of a cassava starch matrix composite was examined. The bioplastic composites were made of cassava starch and mixed with glycerol as a plasticizer and 0-10% by weight of PCC. The material was then poured into a mold and oven dried. The physical, thermal and mechanical properties of bioplastic/PCC composites were investigated using Tensile Strength measurements, X-Ray Diffraction, Thermogravimetric Analysis, Scanning Electron Microscopy (SEM), and Fourier Transform Infrared Spectroscopy (FTIR). The optimum tensile strength was obtained upon the addition of 4 % PCC. The addition of PCC improved the thermal stability of bioplastic/PCC composites. The results of X-ray Diffraction testing showed an increase in the crystallinity of the bioplastic/PCC composites with increase in PCC content but there is a decrease in the moisture absorption. SEM images indicated that the PCC filler content was incorporated into the matrix. In general, FTIR indicated the bioplastic/PCC composites were hydrophilic and the addition of PCC reduced the hydrophilic properties by damaging the hydrogen bonding between starch molecules and water.

Type here to search | 24°C Berawan | 8:50 29/04/2023