# HOW TO WRITE MANUSCRIPT FOR INTERNATIONAL JOURNAL


Lembaga Penelitian dan Pengabdian kepada Masyarakat
Universitas Jember


September 21, 2020


**DR. MOCHAMAD ASROFI, S.T.**

Laboratory of Material Testing, Department of Mechanical Engineering,
University of Jember, Jember, East Java, Indonesia

S.T. (University of Jember, Indonesia) – Materials for Energy : 2011-2015
Dr. (Andalas University, Indonesia) – Bionanocomposite Materials : 2015 - 2019

H-index = 13
Total citation= 477


# Presentation summary

1. Pendahuluan
2. Planning publikasi
3. Langkah – langkah menulis manuscript
4. Kiat diterima di jurnal internasional
5. Bagaimana jika artikel kita ditolak?

# Pendahuluan

## Mengapa publikasi ilmiah?

- Sebagai syarat kelulusan studi pascasarjana (*Surat Dirjen DIKTI No. 152/E/T/2012 : wajib publikasi ilmiah bagi S1/S2/S3*)
- Diseminasi hasil penelitian pada komunitas yang lebih luas
- Menunjukkan reputasi kualitas penelitian kita
- Terkait jenjang karir sebagai dosen dan peneliti
- Alat tukar untuk mendapatkan beasiswa (khususnya internasional)
- Berperan untuk menjalin networking dan funding (internasional)
- Menunjukkan daya saing bangsa khususnya bidang riset dan pendidikan

# Menulis Artikel di Jurnal Internasional adalah Sebuah "Skill"

# Bagaimana reputasi Indonesia?

*Jumlah total artikel beberapa negara ASIA (http://www.scimagojr.com)*

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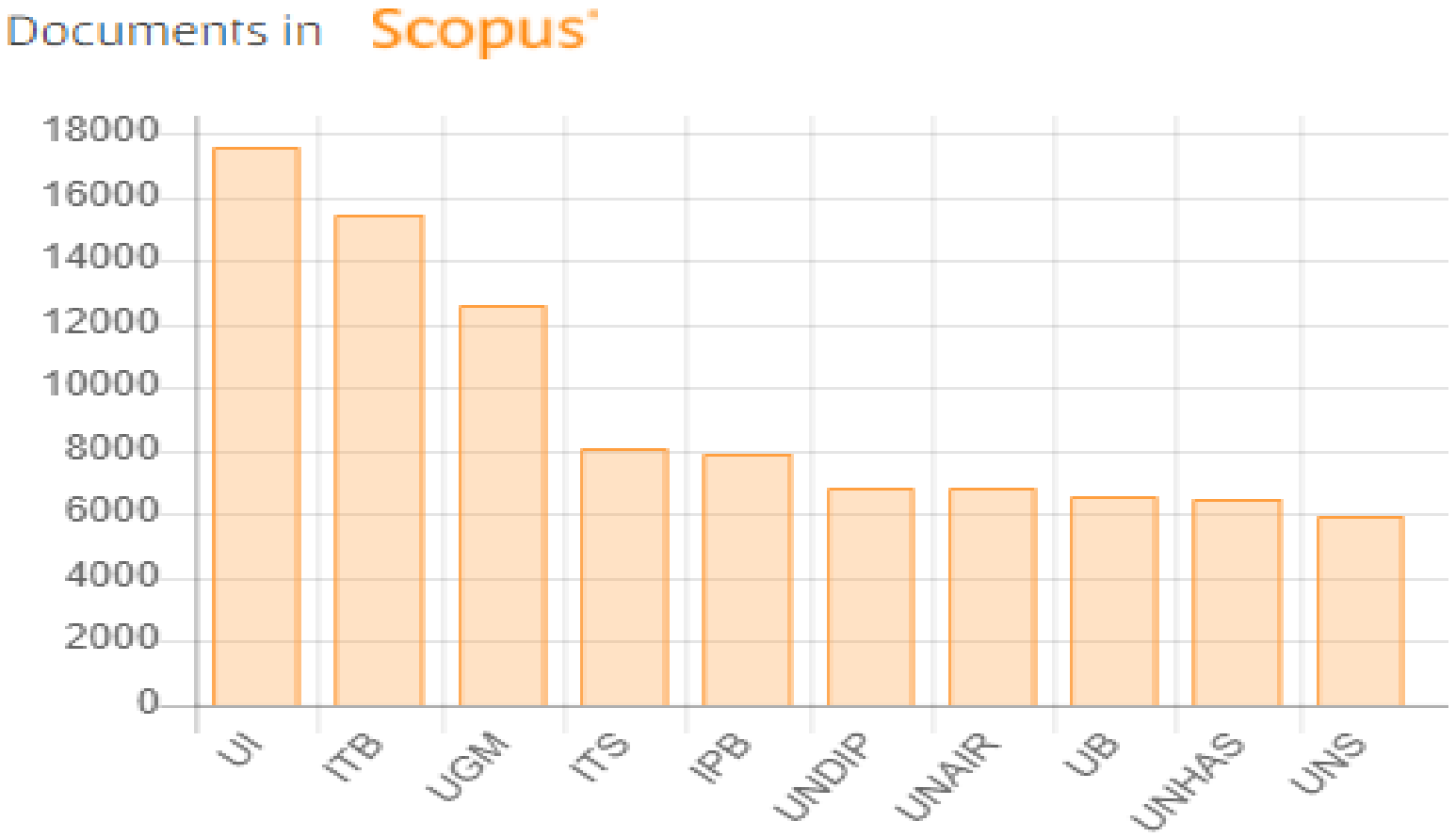
|---|---|---|---|---|---|---|---|
| 1 | China | 6589695 | 6469704 | 61658138 | 35288321 | 9.36 | 884 |
| 2 | Japan | 2893614 | 2762245 | 48232916 | 12366873 | 16.67 | 1036 |
| 3 | India | 1873277 | 1741868 | 18243852 | 6215206 | 9.74 | 624 |
| 4 | South Korea | 1196961 | 1156291 | 17047690 | 3293943 | 14.24 | 687 |
| 5 | Taiwan | 698107 | 671883 | 10201735 | 1844946 | 14.61 | 523 |
| 6 | Hong Kong | 335459 | 310301 | 7350908 | 886153 | 21.91 | 574 |
| 7 | Malaysia | 325476 | 312331 | 2737551 | 669571 | 8.41 | 323 |

# Bagaimana reputasi Indonesia?

*Jumlah total artikel beberapa negara ASIA (http://www.scimagojr.com)*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | China | 6589695 | 6469704 | 61658138 | 35288321 | 9.36 | 884 |
| 2 | Japan | 2893614 | 2762245 | 48232916 | 12366873 | 16.67 | 1036 |
| 3 | India | 1873277 | 1741868 | 18243852 | 6215206 | 9.74 | 624 |
| 4 | South Korea | 1196961 | 1156291 | 17047690 | 3293943 | 14.24 | 687 |
| 5 | Taiwan | 698107 | 671883 | 10201735 | 1844946 | 14.61 | 523 |
| 6 | Hong Kong | 335459 | 310301 | 7350908 | 886153 | 21.91 | 574 |
| 7 | Malaysia | 325476 | 312331 | 2737551 | 669571 | 8.41 | 323 |
| 8 | Singapore | 317592 | 292112 | 6839745 | 731077 | 21.54 | 589 |
| 9 | Thailand | 199226 | 188690 | 2452571 | 378284 | 12.31 | 339 |
| 10 | Pakistan | 176602 | 168340 | 1605446 | 397884 | 9.09 | 281 |
| 11 | Indonesia | 158733 | 154127 | 793905 | 178581 | 5.00 | 241 |
| 12 | Viet Nam | 63969 | 60949 | 671649 | 107970 | 10.50 | 220 |




Komparasi publikasi dari berbagai Universitas di Indonesia hingga 2020
(http://sinta.ristekbrin.go.id/)

# Mana Unej???

Skor 3 tahun terakhir

| | | | |
|---|---|---|---|
| 23 | UNIVERSITAS NEGERI YOGYAKARTA<br>UNY | 3,015 |
| 24 | UNIVERSITAS JEMBER<br>UNEJ | 2,797 |
| 25 | UNIVERSITAS LAMPUNG<br>UNILA | 2,786 |
| 26 | UNIVERSITAS ANDALAS<br>UNAND | 2,665 |
| 27 | UNIVERSITAS SAM RATULANGI<br>UNSRAT | 2,466 |
| 28 | UNIVERSITAS RIAU<br>UNRI | 2,380 |
| 29 | UNIVERSITAS MUHAMMADIYAH SURAKARTA<br>UMS | 2,324 |

| | | | |
|---|---|---|---|
| 23 | UNIVERSITAS RIAU<br>UNRI | 16,680 |
| 24 | UNIVERSITAS WIDYATAMA<br>UTama | 16,408 |
| 25 | UNIVERSITAS NEGERI JAKARTA<br>UNJ | 15,992 |
| 26 | UNIVERSITAS LAMPUNG<br>UNILA | 15,264 |
| 27 | UNIVERSITAS SRIWIJAYA<br>UNSRI | 15,189 |
| 28 | UNIVERSITAS ANDALAS<br>UNAND | 14,484 |
| 29 | UNIVERSITAS JEMBER<br>UNEJ | 14,266 |

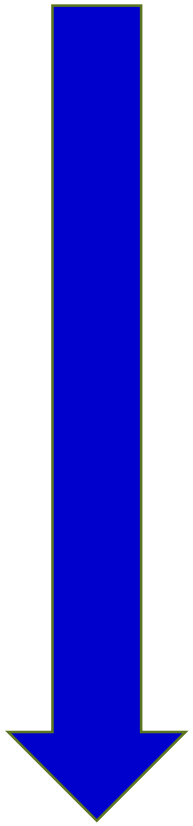
Total Skor

Sumber: (http://sinta.ristekbrin.go.id/)

# Planning Publikasi

Tahapan publikasi

- Submit
- Revisi (1,2,3x)
- Accepted
- Published online
- Published printed



Nasional: 1-4 bulan

Internasional: 3-12 bulan

ELSEVIER

International Journal of Biological Macromolecules
Volume 108, March 2018, Pages 167-176

# Effect of duration of sonication during gelatinization on properties of tapioca starch water hyacinth fiber biocomposite

Mochamad Asrofi [a], Hairul Abral [a] ✉, Yogi Kurnia Putra [a], SM Sapuan [b, c], Hyun-Joong Kim [d]

[a] Department of Mechanical Engineering, Andalas University, 25163 Padang, Sumatera Barat, Indonesia
[b] Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia
[c] Laboratory of Biocomposite Technology, Institute of Tropical Forestry and Forest Products (INT Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia
[d] Laboratory of Adhesion & Bio-Composites, Program in Environmental Materials Science, Research Institute for Agriculture & Life Sciences, Seoul National University, Seoul 151-921, Republic of Korea

Received 8 October 2017, Revised 11 November 2017, Accepted 26 November 2017, Available online 1 December 2017.

Q1

ELSEVIER

Chemical Engineering Research and Design
Volume 109, May 2016, Pages 65-75

# Experimental and modeling studies on the acid-catalyzed conversion of inulin to 5-hydroxymethylfurfural in water

B.A. Fachri [a, b], R.M. Abdilla [a], C.B. Rasrendra [c], H.J. Heeres [a] ✉

[a] Chemical Engineering Department, University of Groningen, Nijenborgh 4, 9747 AG Groningen, The Netherlands
[b] Faculty of Engineering, University of Jember, Kalimantan 37, 68121 Jember, Indonesia
[c] Chemical Engineering Department, Institut Teknologi Bandung, Ganesha 10, Bandung 40132, Indonesia

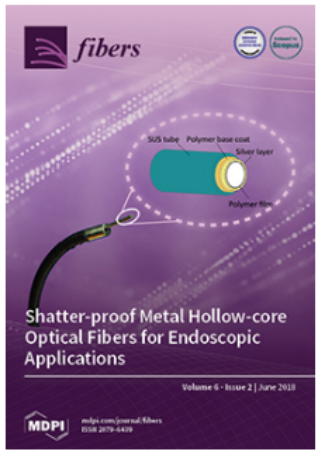
Received 24 February 2015, Revised 26 December 2015, Accepted 5 January 2016, Available online 11 January 2016.

Q1



fibers

Volume 6, Issue 2




Open Access Article

# Mechanical Properties of a Water Hyacinth Nanofiber Cellulose Reinforced Thermoplastic Starch Bionanocomposite: Effect of Ultrasonic Vibration during Processing

Mochamad Asrofi [1] ✉, Hairul Abral [1,*] ✉, Anwar Kasim [2] ✉, Adjar Pratoto [1] ✉, Melbi Mahardika [1] ✉ and Fadli Hafizulhaq [1] ✉

[1] Department of Mechanical Engineering, Andalas University, 25163 Padang, Sumatera Barat, Indonesia
[2] Department of Agriculture Technology, Andalas University, 25163 Padang, Sumatera Barat, Indonesia
* Author to whom correspondence should be addressed.

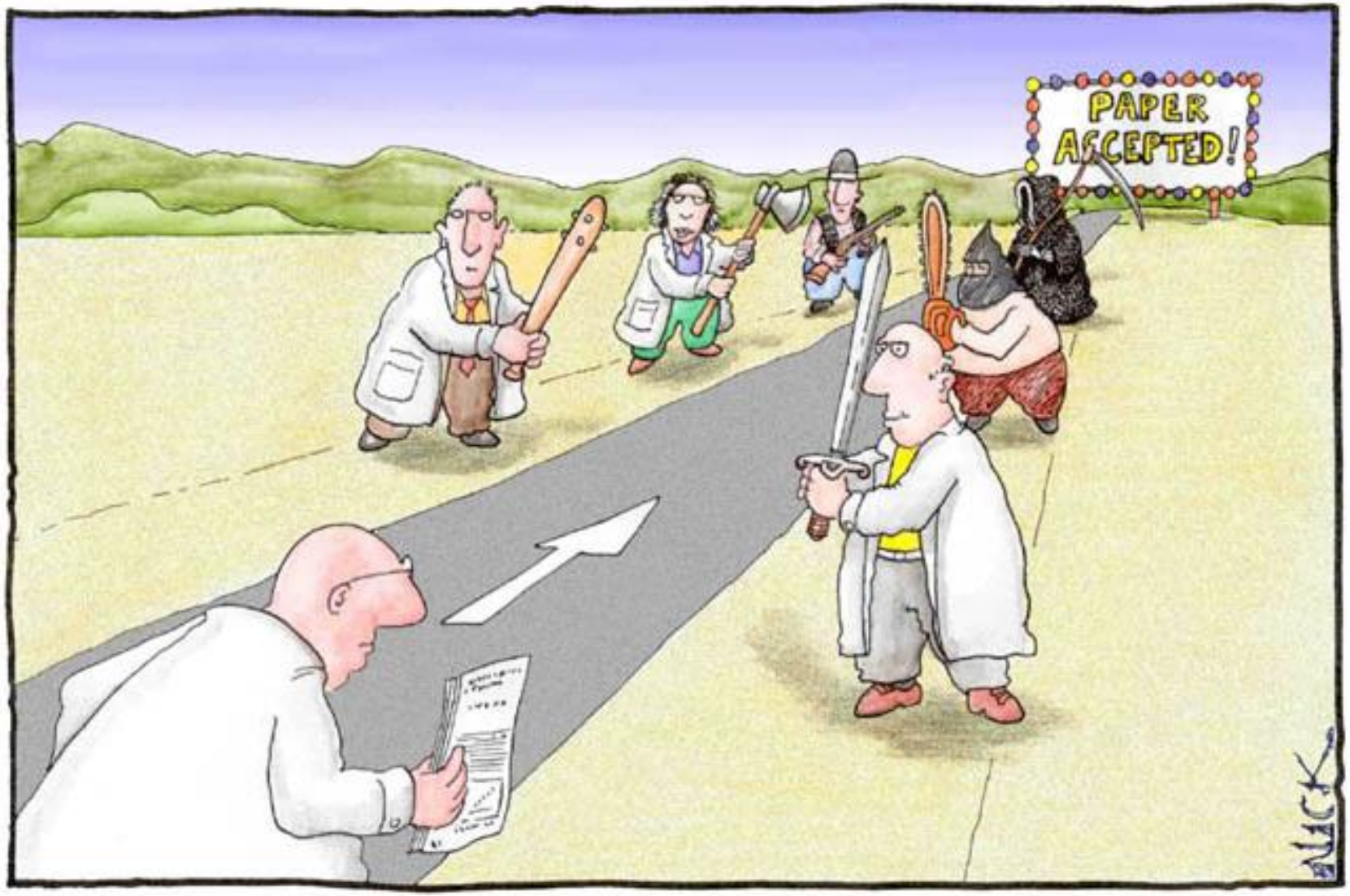
*Fibers* 2018, 6(2), 40; https://doi.org/10.3390/fib6020040

*Received: 12 March 2018 / Revised: 19 May 2018 / Accepted: 5 June 2018 / Published: 8 June 2018*

(This article belongs to the Special Issue Natural Fibre Biocomposites)



Q2


PAPER
ACCEPTED!

# Planning Publikasi Mahasiswa Magister (S2)

| Tahapan | Sem 1 | Sem 2 | Sem 3 | Sem 4 |
|---|---|---|---|---|
| Kuliah | 0 | 0 | | |
| Penelitian | | 0 | 0 | 0 |
| Publikasi | | | 0 | 0 |
| Ujian sidang | | | 0 | 0 |

# Planning Publikasi Mahasiswa Doktor (S3)

| Tahapan | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Kuliah | 0 | | | | | |
| Topik khusus | | 0 | | | | |
| Proposal | 0 | 0 | | | | |
| Penelitian | | 0 | 0 | 0 | 0 | |
| Publikasi | | | | 0 | 0 | 0 |
| Ujian sidang | | | | | | 0 |


# Langkah - langkah Menulis Manuscript untuk Jurnal Internasional

## Komponen Jurnal

| Section | Purpose |
|---|---|
| Title | Clearly describes contents |
| Authors | Ensures recognition for the writer(s) |
| Abstract | Describes what was done – 200 words |
| Key Words (some journals) | Ensures the article is correctly identified in abstracting and indexing services |
| Introduction | Explains the problem |
| Methods | Explains how the data were collected |
| Results | Describes what was discovered |
| Discussion | Discusses the implications of the findings |
| Acknowledgements | Ensures those who helped in the research are recognised |
| References | Ensures previously published work is recognised |
| Appendices (some journals) | Provides supplemental data for the expert reader |

# Bagaimana cara memulai untuk menulis?

## *Yang perlu disiapkan sebelum menulis:*

- Siapkan data yang diperoleh dari hasil penelitian. Olah data tersebut menggunakan software Origin Pro Lab.
- Pilih target jurnal yang akan disasar. Untuk list jurnal dapat dicek di SJR
- Setelah mendapatkan target jurnal, lihat persyaratan dari jurnal tersebut mulai dari scope, author guidline, template, proses submit – terbit dan lainnya
- Perhatikan struktur artikelnya dengan memahami gaya bahasa pada paper yang sudah terbit pada jurnal yang dituju.

1. Siapkan data yang diperoleh dari hasil penelitian

## Data mentah

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File Edit Format View Help

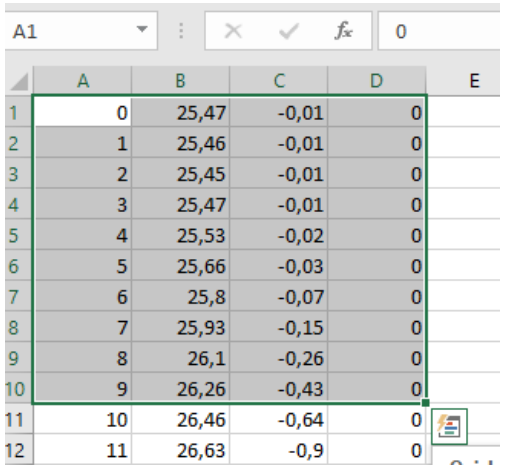
| | | | |
|---|---|---|---|
| 0.00 | 25.47 | -0.01 | -0.00 |
| 1.00 | 25.46 | -0.01 | -0.00 |
| 2.00 | 25.45 | -0.01 | -0.00 |
| 3.00 | 25.47 | -0.01 | -0.00 |
| 4.00 | 25.53 | -0.02 | -0.00 |
| 5.00 | 25.66 | -0.03 | -0.00 |
| 6.00 | 25.80 | -0.07 | -0.00 |
| 7.00 | 25.93 | -0.15 | -0.00 |
| 8.00 | 26.10 | -0.26 | -0.00 |
| 9.00 | 26.26 | -0.43 | -0.00 |
| 10.00 | 26.46 | -0.64 | -0.00 |
| 11.00 | 26.63 | -0.90 | -0.00 |

*Convert menjadi Excel file*

A1 | 0

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | 0 | 25,47 | -0,01 | 0 | |
| 2 | 1 | 25,46 | -0,01 | 0 | |
| 3 | 2 | 25,45 | -0,01 | 0 | |
| 4 | 3 | 25,47 | -0,01 | 0 | |
| 5 | 4 | 25,53 | -0,02 | 0 | |
| 6 | 5 | 25,66 | -0,03 | 0 | |
| 7 | 6 | 25,8 | -0,07 | 0 | |
| 8 | 7 | 25,93 | -0,15 | 0 | |
| 9 | 8 | 26,1 | -0,26 | 0 | |
| 10 | 9 | 26,26 | -0,43 | 0 | |
| 11 | 10 | 26,46 | -0,64 | 0 | |
| 12 | 11 | 26,63 | -0,9 | 0 | |

1. Siapkan data yang diperoleh dari hasil penelitian



| | A | B | C | D | E |
|---|---|---|---|---|---|
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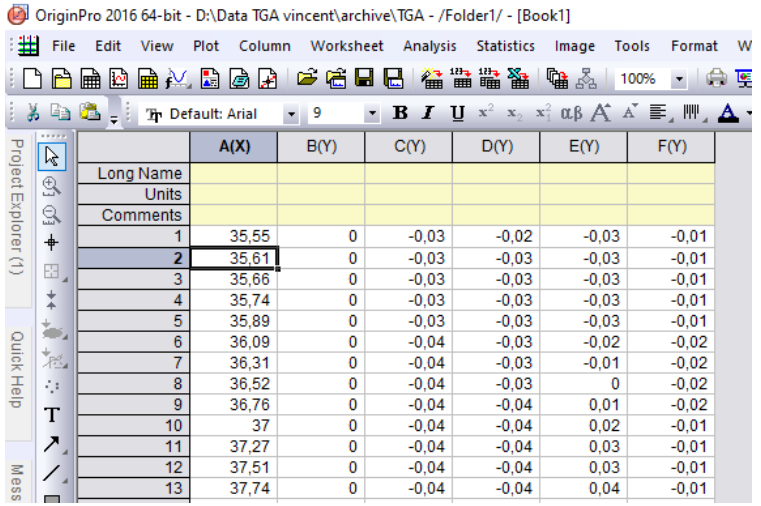
| 2 | 1 | 25,46 | -0,01 | 0 | |
| 3 | 2 | 25,45 | -0,01 | 0 | |
| 4 | 3 | 25,47 | -0,01 | 0 | |
| 5 | 4 | 25,53 | -0,02 | 0 | |
| 6 | 5 | 25,66 | -0,03 | 0 | |
| 7 | 6 | 25,8 | -0,07 | 0 | |
| 8 | 7 | 25,93 | -0,15 | 0 | |
| 9 | 8 | 26,1 | -0,26 | 0 | |
| 10 | 9 | 26,26 | -0,43 | 0 | |
| 11 | 10 | 26,46 | -0,64 | 0 | |
| 12 | 11 | 26,63 | -0,9 | 0 | |

*Buat grafik menggunakan origin*


| | A(X) | B(Y) | C(Y) | D(Y) | E(Y) | F(Y) |
|---|---|---|---|---|---|---|
| Long Name | | | | | | |
| Units | | | | | | |
| Comments | | | | | | |
| 1 | 35,55 | 0 | -0,03 | -0,02 | -0,03 | -0,01 |
| 2 | 35,61 | 0 | -0,03 | -0,03 | -0,03 | -0,01 |
| 3 | 35,66 | 0 | -0,03 | -0,03 | -0,03 | -0,01 |
| 4 | 35,74 | 0 | -0,03 | -0,03 | -0,03 | -0,01 |
| 5 | 35,89 | 0 | -0,03 | -0,03 | -0,03 | -0,01 |
| 6 | 36,09 | 0 | -0,04 | -0,03 | -0,02 | -0,02 |
| 7 | 36,31 | 0 | -0,04 | -0,03 | -0,01 | -0,02 |
| 8 | 36,52 | 0 | -0,04 | -0,03 | 0 | -0,02 |
| 9 | 36,76 | 0 | -0,04 | -0,04 | 0,01 | -0,02 |
| 10 | 37 | 0 | -0,04 | -0,04 | 0,02 | -0,01 |
| 11 | 37,27 | 0 | -0,04 | -0,04 | 0,03 | -0,01 |
| 12 | 37,51 | 0 | -0,04 | -0,04 | 0,03 | -0,01 |
| 13 | 37,74 | 0 | -0,04 | -0,04 | 0,04 | -0,01 |

ORIGIN
Data Analysis and Graphing Software

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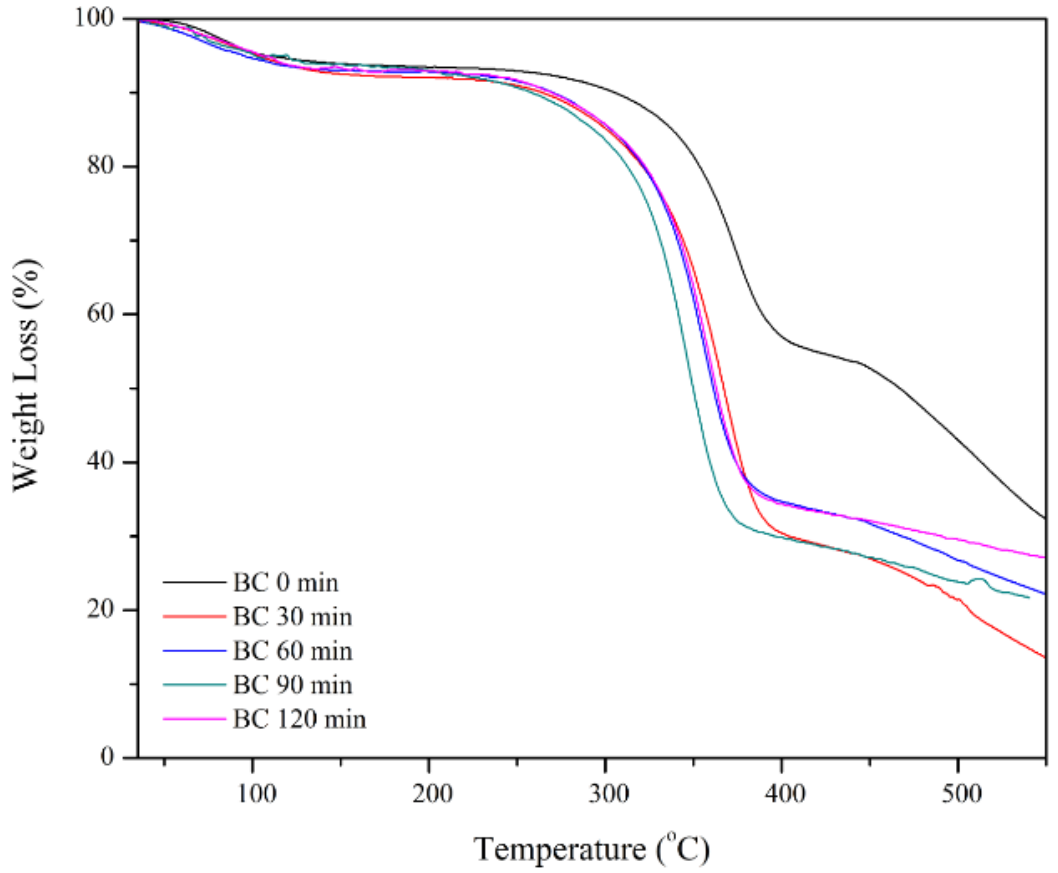
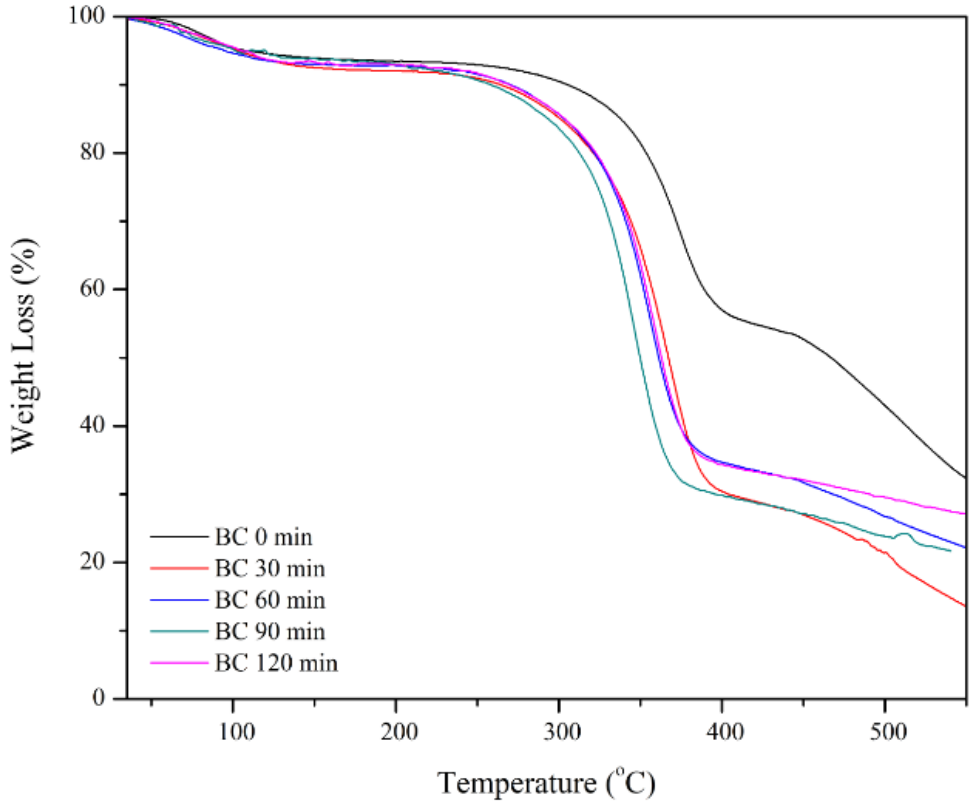
| | A(X) | B(Y) | C(Y) | D(Y) | E(Y) | F(Y) |
|---|---|---|---|---|---|---|
| Long Name | | | | | | |
| Units | | | | | | |
| Comments | | | | | | |
| 1 | 35,55 | 0 | -0,03 | -0,02 | -0,03 | -0,01 |
| 2 | 35,61 | 0 | -0,03 | -0,03 | -0,03 | -0,01 |
| 3 | 35,66 | 0 | -0,03 | -0,03 | -0,03 | -0,01 |
| 4 | 35,74 | 0 | -0,03 | -0,03 | -0,03 | -0,01 |
| 5 | 35,89 | 0 | -0,03 | -0,03 | -0,03 | -0,01 |
| 6 | 36,09 | 0 | -0,04 | -0,03 | -0,02 | -0,02 |
| 7 | 36,31 | 0 | -0,04 | -0,03 | -0,01 | -0,02 |
| 8 | 36,52 | 0 | -0,04 | -0,03 | 0 | -0,02 |
| 9 | 36,76 | 0 | -0,04 | -0,04 | 0,01 | -0,02 |
| 10 | 37 | 0 | -0,04 | -0,04 | 0,02 | -0,01 |
| 11 | 37,27 | 0 | -0,04 | -0,04 | 0,03 | -0,01 |
| 12 | 37,51 | 0 | -0,04 | -0,04 | 0,03 | -0,01 |
| 13 | 37,74 | 0 | -0,04 | -0,04 | 0,04 | -0,01 |

*Grafik yang dihasilkan dari origin*

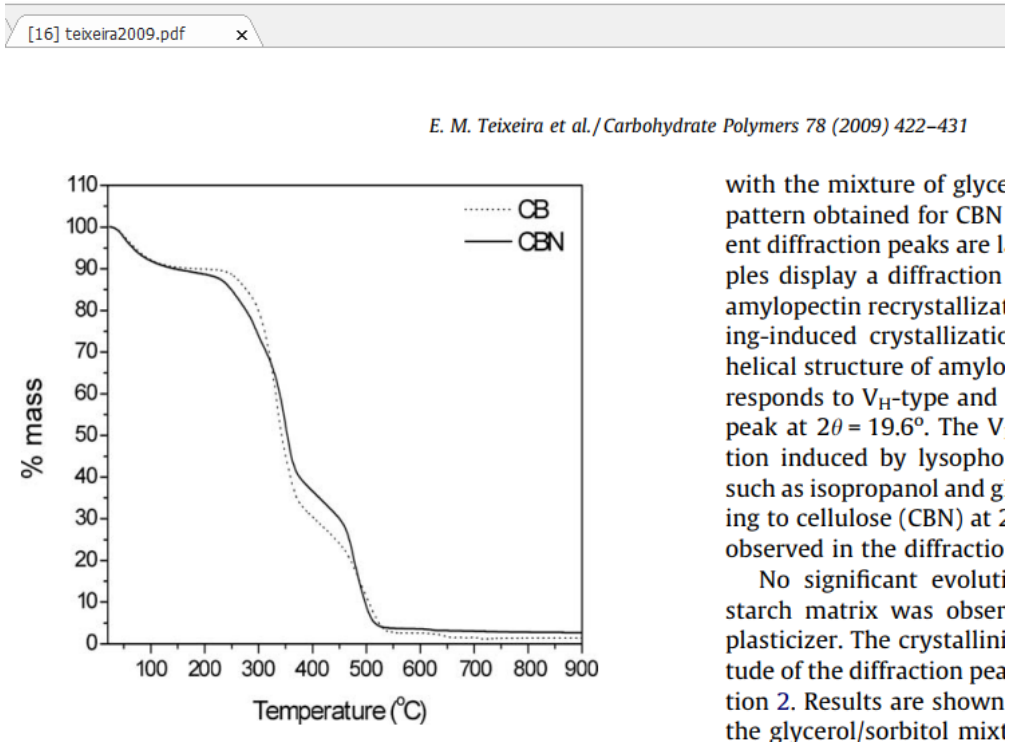


# Perbandingan antara grafik hasil penelitian dengan gambar yang ada di paper published jurnal target

*Grafik yang dihasilkan dari origin*




*Grafik yang ditunjukkan oleh paper yang sudah published*


[16] teixeira2009.pdf

E. M. Teixeira et al. / Carbohydrate Polymers 78 (2009) 422–431



with the mixture of glyce
pattern obtained for CBN
ent diffraction peaks are l
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helical structure of amylo
responds to $V_H$-type and
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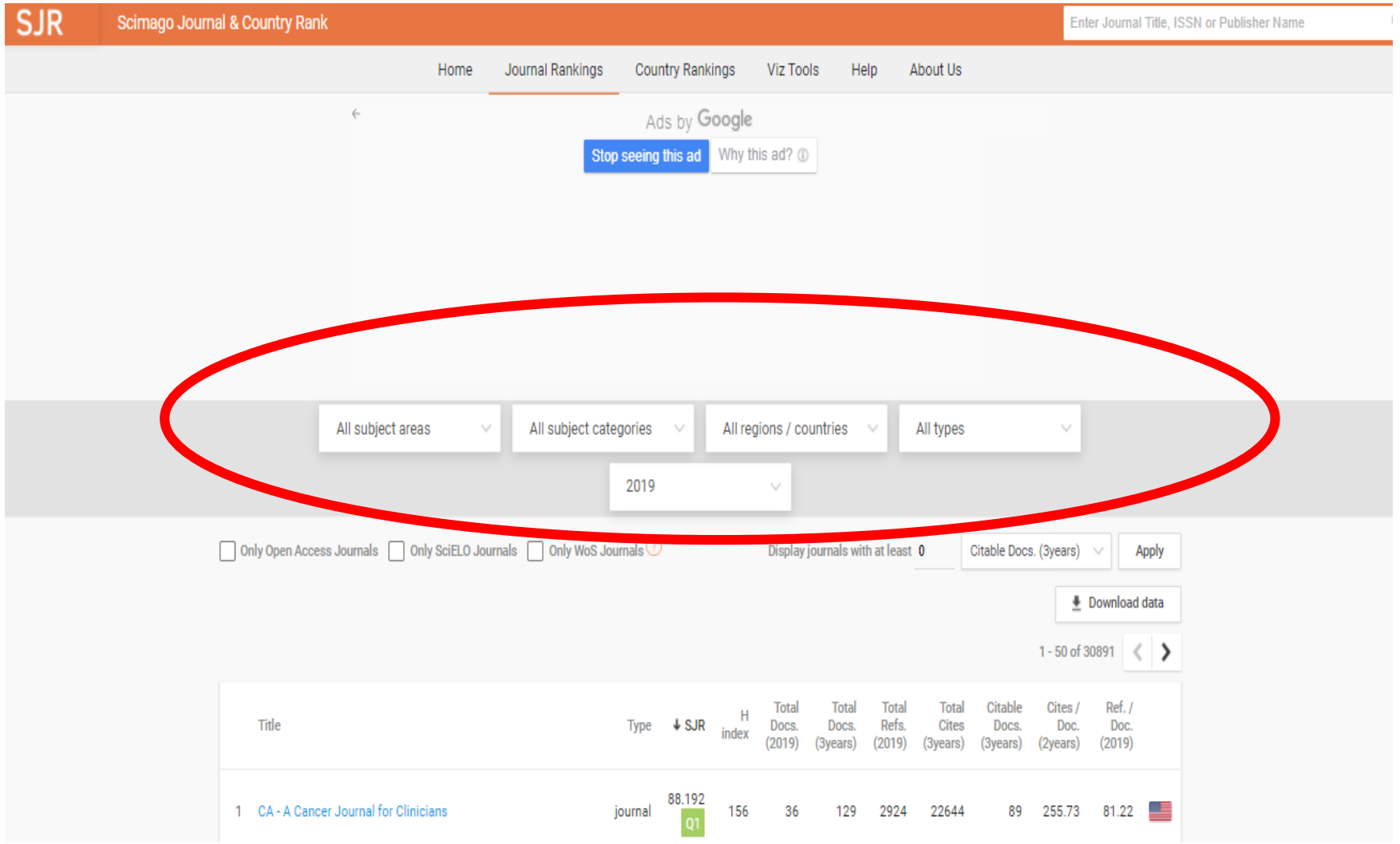
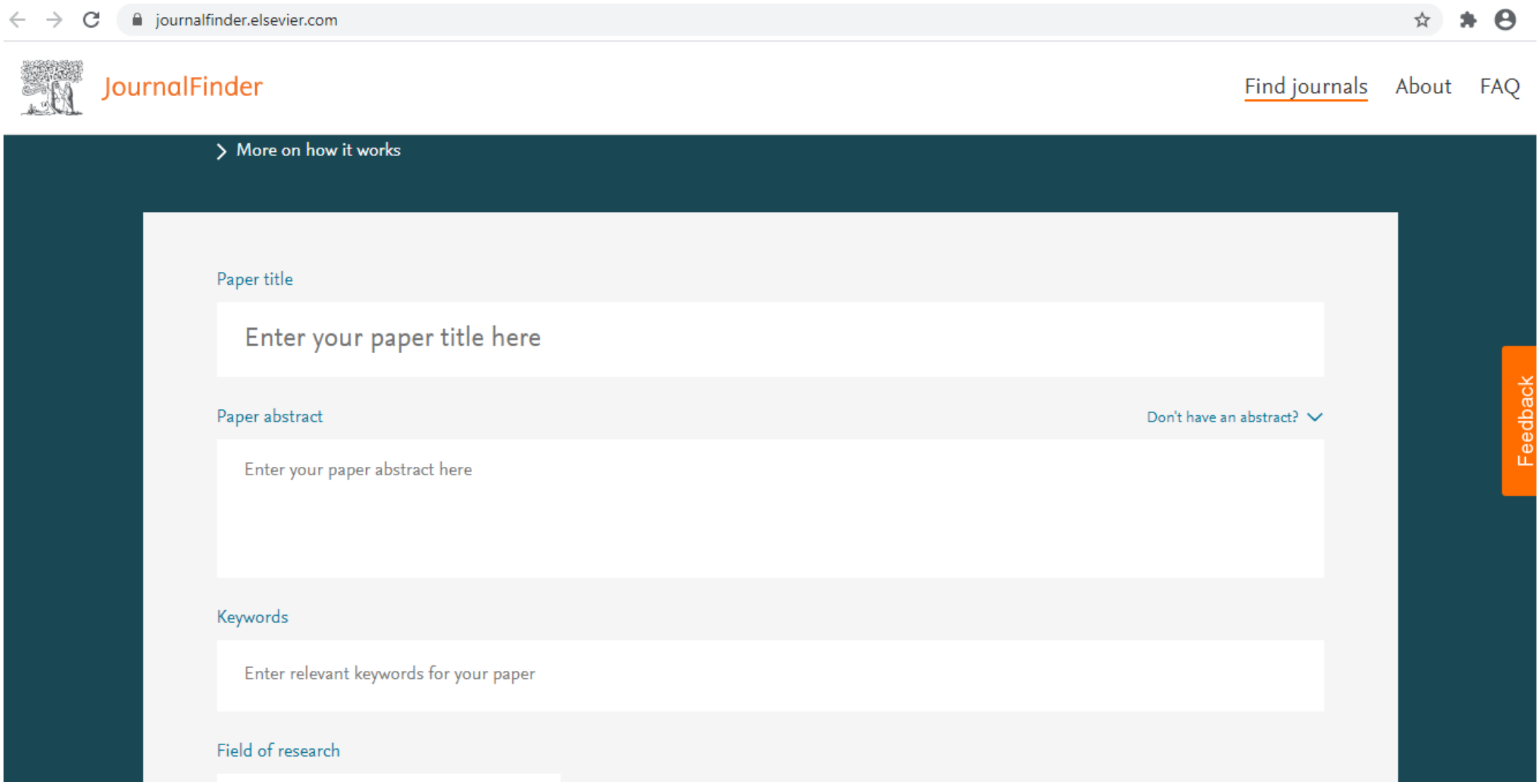
observed in the diffractio

No significant evoluti
starch matrix was obser
plasticizer. The crystallini
tude of the diffraction pea
tion 2. Results are shown
the glycerol/sorbitol mixt

2. Pilih target jurnal yang akan disasar. Untuk list jurnal dapat dicek di SJR

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ISSN: 0141-8130

# International Journal of Biological Macromolecules

Structure, Function and Interactions

Editors in Chief: Aichun Dong, John F. Kennedy, BA, BSc, PhD, DSc

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Scope

*International Journal of Biological Macromolecules* is an established international journal of research into **chemical** and **biological** aspects of all **natural macromolecules**.It presents the latest findings of studies on the molecular structure and properties of proteins, macromolecular carbohydrates, glycoproteins, proteoglycans, lignins, biological poly-acids, and nucleic acids. These findings must be new and novel rather than a repeat of earlier or analogous published work. The scope includes biological activities and interactions, molecular associations, chemical and biological modifications, and functional properties. Papers on related model systems, structural

4. Gaya Bahasa pada paper yang sudah published

### 2.2. Experiment

#### 2.2.1. Extraction the OPEFB fibers

OPEFB fibers were extracted from oil palm empty fruit bunch cooked during 6 h. The extracted fibers were cleaned and cut about 1 cm long, then they were mixed into solution of 25% NaOH (from the weight of the dried fibers) for making pulping with a high-pressure reactor. This compound in the reactor was heated at 170 °C and 8–9 bars respectively for 2 h. Finally, we produce soft OPEFB fiber in form of pulp with pH of about 12. Then, it was neutralized with distilled water until pH 7. The OPEFB fiber was blended in wet condition using blender for 30 min. The pulp was cast in a pulp paper into screen printing, and then dried until becoming a paper. Diameter of the treated OPEFB fiber was about 6 μm.

#### 2.2.2. Measuring chemical compositions

Chemical composition of OPEFB fibers before and after being pulp was tested to determine change of content of cellulose, hemicellulose, and lignin in the fiber by using ASTM 1104–56, Technical Association of the Pulp and Paper Industry (TAPPI) standard T9M-54, and TAPPI T13M-54 respectively. Dried OPEFB fibers of 5 g was tested for measuring the holocellulose content, and then, 2 g of those was verified of cellulose content. Meanwhile disparity between holocellulose and cellulose was lignin content in OPEFB fibers.

Menggunakan kalimat pasif

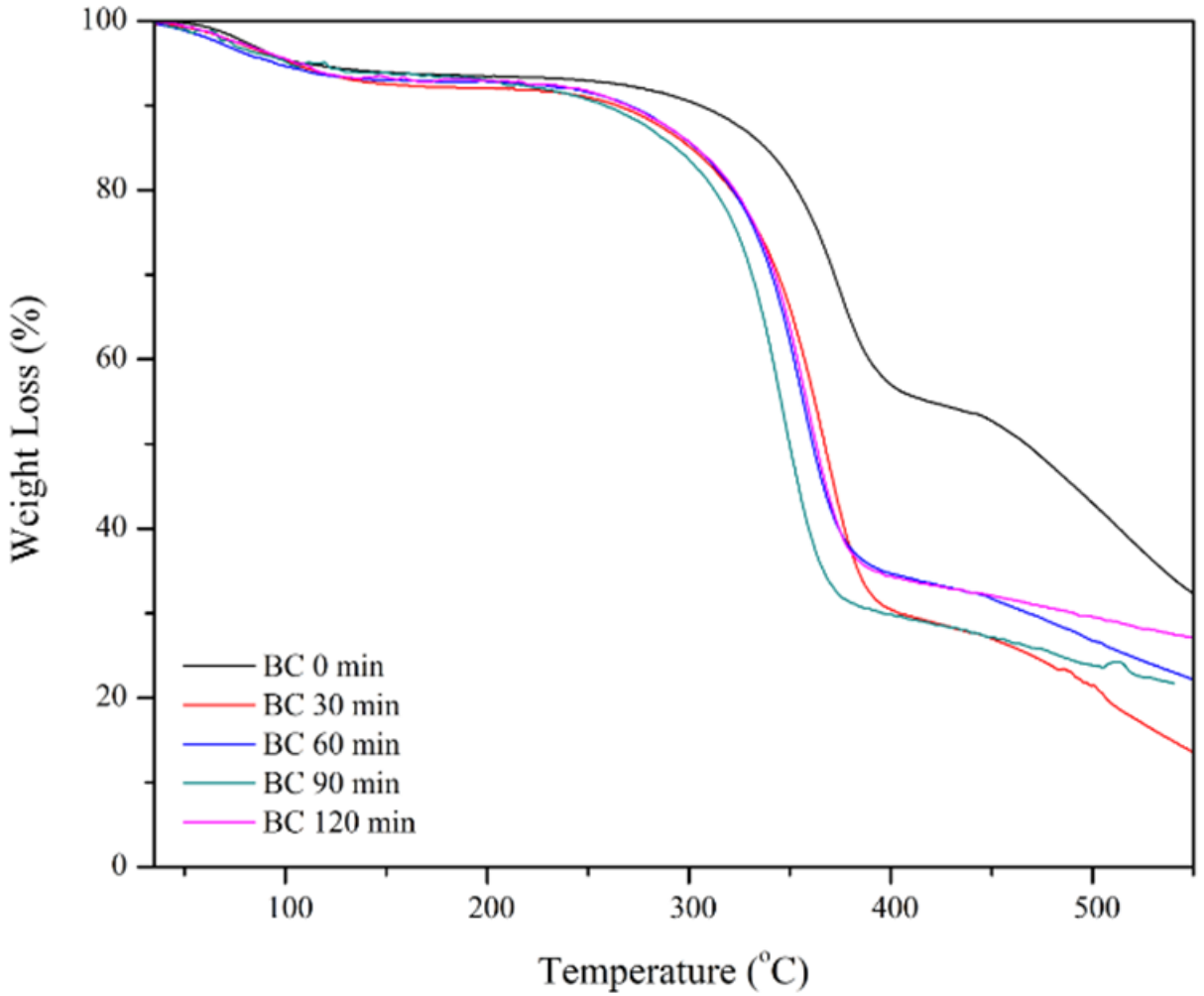
# Tahapan menulis Manuscript untuk Jurnal Internasioanal

# Tahapan menulis Manuscript

1. Data yang sudah diolah
2. Metode
3. Hasil
4. Diskusi
5. Kesimpulan
6. Pendahuluan
7. Abstrak
8. Judul
9. Kata Kunci
10. Ucapan Terima Kasih
11. Referensi

## 1. Data yang sudah diolah

- Data yang berupa tabel atau gambar harus jelas dan font harus terbaca.
- Buat gambar dengan resolusi yang besar.
- Untuk data dalam tabel, usahakan angka dibelakang seragam
- Sajikan tulisan yang membahas fenomena yang muncul dalam gambar / table
- Jangan ada gambar / tabel bisu



## 2. Metode

- Gambaran secara detail tentang bagaimana penelitian ini dapat dilaksanakan dan diselesaikan
- Jelaskan metodologi secara rinci; jika tidak, sebutkan metode dan kutip karya yang diterbitkan sebelumnya
- Sertakan juga frekuensi observasi, jenis data apa yang direkam, dll.
- Umumnya menggunakan kalimat pasif dan sifatnya lampau (tergantung bidang kajian ilmu)

Contoh

## 2.2. Experiment

### 2.2.1. Extraction the OPEFB fibers

OPEFB fibers were extracted from oil palm empty fruit bunch cooked during 6 h. The extracted fibers were cleaned and cut about 1 cm long, then they were mixed into solution of 25% NaOH (from the weight of the dried fibers) for making pulping with a high-pressure reactor. This compound in the reactor was heated at 170 °C and 8–9 bars respectively for 2 h. Finally, we produce soft OPEFB fiber in form of pulp with pH of about 12. Then, it was neutralized with distilled water until pH 7. The OPEFB fiber was blended in wet condition using blender for 30 min. The pulp was cast in a pulp paper into screen printing, and then dried until becoming a paper. Diameter of the treated OPEFB fiber was about 6 μm.

### 2.2.2. Measuring chemical compositions

Chemical composition of OPEFB fibers before and after being pulp was tested to determine change of content of cellulose, hemicellulose, and lignin in the fiber by using ASTM 1104–56, Technical Association of the Pulp and Paper Industry (TAPPI) standard T9M-54, and TAPPI T13M-54 respectively. Dried OPEFB fibers of 5 g was tested for measuring the holocellulose content, and then, 2 g of those was verified of cellulose content. Meanwhile disparity between holocellulose and cellulose was lignin content in OPEFB fibers.

### 2.2.6. SEM observation

Hitachi 3400 N series was a kind of SEM equipment used for observation fracture surface of OPEFB paper. Voltage while observation of the surface of tested sample was 15 kV.

### 2.2.7. X-Ray diffraction

X-ray diffraction (XRD – PANalytical Xpert PRO) measurements were performed by using CuKα radiation (λ = 0.1542 nm) at a scan from 10 to 30°. The operation voltage and current were 40 kV and 35 mA respectively.

### 2.2.8. FTIR

FTIR characterization was performed by using "The Perkin Elmer Frontier". The aim of FTIR characterization was to determine functional group of bio-composites (starch + OPEFB fiber). The dried samples were formed in sheet film. All samples were scanned at a frequency range of 4000–600 $cm^{-1}$.

## 3. Results and discussions

## 3. Hasil

- Sajikan temuan Anda secara objektif, dan jelaskan apa yang ditemukan
- Tunjukkan bahwa hasil baru Anda berkontribusi pada pengetahuan ilmiah
- Ikuti urutan logis berdasarkan tabel dan gambar yang menyajikan temuan untuk menjawab pertanyaan atau hipotesis
- Gambar harus memiliki deskripsi singkat (legend), memberikan informasi yang cukup kepada pembaca untuk mengetahui bagaimana data dihasilkan
- Tidak ada referensi

# Contoh

*3.5. Tensile strength (TM), tensile modulus (TM) and elongation at break (EL)*

Average TS, TM, and EL of the biocomposite for various vibration times are shown in Fig. 6a–c. The value of TS and TM improved markedly, and EL decreased as the biocomposite became strong, rigid and more brittle after ultrasound exposure. Up to 30 min the stress strain relationship improved rapidly with vibration duration but further vibration appeared to provide no improvement to these values. The average TS, TM, and EL in the untreated samples 3.41 MPa, 49.96 MPa and 22.20%, respectively. After 30 min of vibration TS increased 83%. A further 60 min vibration only increased the TS about 13.48% to an average of 7.07 MPa. TM markedly improved up to 30 min of vibration then the rate of increase was reduced reaching a maximum level (127.65 MPa) at 60 min; a 155.5% improvement compared to the nonvibrated sample. Fig. 6c shows EL of the biocomposite for different vibration times. The EL decreased as duration of treatment increased from

## 4. Diskusi

- Jelaskan arti hasil Anda dalam konteks apa yang sudah diketahui tentang subjek tersebut
- Tunjukkan bagaimana hasil berhubungan dengan hipotesis, ekspektasi dan literatur yang dikutip sebelumnya
- Jangan memperluas kesimpulan Anda melebihi apa yang secara langsung didukung oleh hasil Anda - hindari spekulasi yang tidak semestinya
- Hindari kata "bisa"; "akan"; "harus", "mungkin" dll

# Contoh

bility after ultrasonication was attributed to well WHF dispersion, and better interfacial bonding between WHF and matrix [51]. More compact microstructure after vibration results in improvement for thermal resistance [23]. Furthermore, it is necessary to note that significant increase in thermal resistance is clearly observed from vibration of 0 min up to 30 min. However, it became lower for vibration 60 min that probably indicates a constant level of the thermal stability achieved in 30 min duration.

### 3.5. *Tensile strength (TM), tensile modulus (TM) and elongation at break (EL)*

Average TS, TM, and EL of the biocomposite for various vibration times are shown in Fig. 6a–c. The value of TS and TM improved markedly, and EL decreased as the biocomposite became strong, rigid and more brittle after ultrasound exposure. Up to 30 min the stress strain relationship improved rapidly with vibration duration but further vibration appeared to provide no improvement to these values. The average TS, TM, and EL in the untreated samples 3.41 MPa, 49.96 MPa and 22.20%, respectively. After 30 min of vibration TS increased 83%. A further 60 min vibration only increased the TS about 13.48% to an average of 7.07 MPa. TM markedly improved up to 30 min of vibration then the rate of increase was reduced reaching a maximum level (127.65 MPa) at 60 min; a 155.5% improvement compared to the nonvibrated sam-

22.20% with no vibration to 18.45% after 60 min. This change in mechanical properties may be due to the ultrasonication vibrating all the substances within the biocomposite, leading the WHF to separate and to distribute homogeneously throughout the matrix. Furthermore, vibration also reduces the gaps between the matrix and the fibers. The improved mechanical properties of the biocomposite are a result of both the homogeneously dispersed WHF in the tapioca starch matrix and the strong hydrogen bonds between fiber and matrix resulting from their closer proximity. This is supported by the SEM photographs of the fractured surfaces which shows evidence of better interfacial adhesion (Fig. 1d), and uniform fiber dispersion within the matrix (Fig. 1f). Previous studies have also indicated that ultrasonic treatment improved the mechanical properties of composites [22,24,52].

### 3.6. *Moisture absorption*

Generally, a starch based biocomposite has high moisture absorption due to the hydrophilic nature of starch [24]. Therefore, it is salient to observe the effect of vibration duration on moisture absorption in these 10% WHF starch based biocomposites. Fig. 7 shows the moisture absorption of each sample after 6 h in a moist chamber. All samples absorbed moisture rapidly until saturation point. However, the nonvibrated samples display the highest rate of absorption (%/time) and also have the highest moisture absorp-

# Results and Discussions

Figure / Table

Describe a Figure / Table

Why? "The Reason" => Back up with another supporting data or related reference (similar research/phenomenon)

After explain a reason, please compare your result with similar previous research

*Note: Data 1, 2, 3, 4 etc. must support each other*

## 5. Kesimpulan

- Menjawab permasalahan atau tujuan
- Kesimpulan Anda harus menjelaskan tentang temuan penelitian ini.
- Jelaskan batasan pekerjaan Anda.
- Jelaskan implikasi atau aplikasi pekerjaan Anda.
- Sebaiknya ditulis dalam bentuk paragraph, bukan per item (tergantung jurnal target).

# Contoh

## 4. Conclusions

This study investigated properties of tapioca starch based biocomposites reinforced by a 10% by volume fraction of WHF formed with different periods of (40 kHz, 250 W) ultrasonic vibration. The vibrated biocomposites were more compact, stronger, more rigid, more thermal and moisture resistant, and more brittle after ultrasonication. SEM photographs demonstrated that vibration resulted in better interfacial bonding between WHF and the matrix, and this was evidenced by shifts of —OH stretching in the FTIR curves. XRD demonstrated that the crystal structure of the biocomposite was also changed by vibration. TS and TM values of sample vibrated for 30 min were improved by 83% and 108% and EL was decreased by 15% compared to the non-vibrated sample. Further vibration after this point resulted in minimal changes to these mechanical

## 6. Pendahuluan

- Nyatakan dengan jelas:
- Masalah sedang diselidiki
- Latar belakang yang menjelaskan masalahnya
- Alasan dilakukannya penelitian

Problem & Solution

(1-2 paragraph)

- Meringkas penelitian terdahulu yang relevan

Literature review
In relevant with
the research
(1-2 paragraph)

- Nyatakan bagaimana karya Anda berbeda dengan karya yang diterbitkan

Explain a
gap in previous
research
(1 paragraph)

- Jelaskan temuan anda (novelty)

Novelty
(1 paragraph)

## 6. Pendahuluan

- Gambarkan secara singkat eksperimen, hipotesis, pertanyaan penelitian; desain atau metode eksperimental umum

About research
(1 paragraph)

*Note: Usually the point above are in one paragraph. This point become a big attention for editor, reviewer and reader*

# Contoh

Masalah Umum

## 1. Introduction

Degradable bioplastic materials show potential as an environmental pollution-reducing replacement for synthetic polymers. Polysaccharide based bioplastics provide promise for food protection and preservation applications [1]. The use of biopolymers based on polysaccharides substance provides promise for innovative applications in food protection and preservation [2]. However, starch based thermoplastic has low strength and thermal resistance, high moisture absorption, low resistance to microbial activity [3–5]. Many attempts to overcome these weaknesses have been trialed. Mixing starch with ramie crystallites and cellulose nanofibers from cassava bagasse has been found to improve the mechanical properties and moisture resistance of biocomposites [6,7]. When mixed with plant fibers the resulting biocomposite could provide an attractive substitute for many synthetic polymers [8]. The fiber of the water hyacinth plant with its high cellulose content is one attractive reinforcement material for starch biocomposites, as it is fast growing and abundantly available [9,10]. Some previous reports have used these fibers with polyester to produce composites with viable mechanical properties [10–13].

The introduction of air bubbles and agglomeration in the starch matrix during pouring decreased mechanical properties of the biocomposite [14–16]. Last works reported that applying of ultrasound during preparing sample has created good filler dispersion and minimized agglomeration in matrix [15,17,18]. Previous studies have shown that applying ultrasound during sample preparation improved performance of the biocomposite, because agglomeration could be minimized and good filler dispersion created [19,20]. Ultrasound process was found superior in terms of its efficiency of breaking the strong agglomerates of MWCNTs along with their homogeneous distribution in the epoxy matrix [20]. Ultrasonication created good dispersion of cellulose nanofibers in polyvinyl alcohol, yielding high mechanical properties of the composite [17,21]. A previous study reported that SEM fractured surface was smooth which signals good dispersion and homogeneity in the composite [21]. Even an increase in concentration of the nanofibers up to 10% did not lead to the emergence of signs of aggregation of fibers in a micron-scale. In all cases, no signs of fiber pull-out could

# Contoh

This process yielded films with good transparency, improved tensile strength and moisture resistance, and stronger structure [24].

An ultrasonic bath generates mechanical forces as a result of cavitation. The collapse of the microbubbles created by cavitation produces sound waves which propagate through the solution resulting in strong shear forces [5,18,25,26]. Several works have reported the effect of intensity and time of ultrasound during formation on the performance of a range of composites [5,21,23,27–32]. However, no investigations of the impact of ultrasound duration in a starch based biocomposite sonicated during gelatinization exist. There is insufficient information on the effect of vibration of gelatinized biocomposites. Therefore, in this present research, the effect of various vibration durations during gelatinized on the properties of a 10% WHF pulp and tapioca starch biocomposite was studied. The benefit of this study is to discover the duration of 40 kHz, 250-W ultrasonic bath radiation necessary to optimize both the mechanical properties of gelatinized 10% WHF pulp and tapioca starch, and energy consumption. The properties of the biocomposite measured were tensile testing, thermal stability, and moisture absorption. Meanwhile, X-ray diffraction (XRD), Fourier transform infrared spectroscopy (FTIR), SEM photograph of the surface was used to identify chemical features, interactions of all functional groups, and defects in the biocomposite.

Novelty and Explain this research

In the last paragraph of introduction

## 7. Abstrak

1. Ringkaslah secara singkat (kira-kira 200-400 kata) – latar belakang, tujuan, metode, hasil, dan kesimpulan

2. Buat secara singkat dan jelas

3. Pembaca dapat memutuskan apakah akan membaca keseluruhan artikel atau tidak

# Contoh

A B S T R A C T

This paper characterizes properties of biocomposite sonicated during gelatinization. The biocomposite consisted of tapioca starch based plastic reinforced by 10% volume fraction of water hyacinth fiber (WHF). During gelatinization, the biocomposite was poured into a rectangular glass mold then vibrated in an ultrasonic bath using 40 kHz, 250 W for varying durations (0, 15, 30, and 60 min). The resulting biocomposite was then dried in a drying oven at 50 °C for 20 h. The results of this study indicate that a biocomposite with optimal properties can be produced using tapioca starch and WHF if the gelatinizing mixture is exposed to ultrasound vibration for 30 min. After this vibration duration, tensile strength (TS) and tensile modulus (TM) increased 83% and 108%. A further 60 min vibration only increased the TS at 13% and TM at 23%. Moisture resistance of the biocomposite after vibration increased by around 25% reaching a maximal level after 30 min. Thermal resistance of the vibrated biocomposites was also increased.

## 8. Judul

1. Menjelaskan isi manuscript dengan jelas dan tepat termasuk kata kuncinya
2. Spesifik mencerminkan isi naskah
3. Jangan gunakan singkatan
4. Sebaiknya gunakan "title case" bukan huruf kapital semua

## 9. Kata kunci

1. Kata kunci digunakan untuk mengindeks artikel
2. Kata kunci merupakan label bagi setiap naskah / manuscript
3. Jumlah kata kunci setiap jurnal berbeda tergantung jurnal target

10. Ucapan terima kasih

- Ucapan terima kasih kepada orang-orang yang berkontribusi kepada naskah misalnya translater, proofreading dll.
- Ucapan terima kasih kepada pemberi dana riset atau hibah atau beasiswa

## 11. Referensi

- Gunakan sumber artikel 10 tahun terakhir. Disarankan 5 tahun terakhir.
- Disarankan kutipan 80% dari jurnal ilmiah yang dapat ditracking. Syukur kalau artikel bereputasi dan dari jurnal target.
- Kutipan diri (self citation) disarankan. Akan tetapi, gunakan kutipan diri sewajarnya.
- Gunakan reference manager seperti mendeley, endnote dll.

# Kiat Diterima Publikasi Internasional

1. Memilih pembimbing yang punya track record publikasi internasional

- Lihat track record publikasi dari pembimbing --> ex: gunakan database Google Scholar (nasional) atau Scopus (internasional)
- Minimal ada salah satu dari komisi pembimbing yang memiliki kapasitas publikasi di jurnal internasional
- Kesesuaian karakter kita dan pembimbing (faktor non-teknis)
- "Siapa yang tidak punya tidak akan bisa memberi"

## 2. Kualitas penelitian yang baik

- Tekankan bahwa penelitian ini penting dan menarik, serta nilai kebaruannya --> di Pendahuluan
- Metodologi penelitian yang valid --> gunakan metode2 yang masih digunakan saat ini
- Rancangan percobaan yang benar berikut jumlah ulangan yang cukup
- Data yang mencukupi standar publikasi (baik kualitas maupun kuantitas)

## 3. Kualitas tulisan yang baik

- Bagi editor dan reviewer: kualitas tulisan mencerminkan kualitas science yang ada di dalamnya
- Perhatikan format secara seksama (guide for authors) --> setiap jurnal berbeda
- Penggunaan bahasa Inggris yang baik --> logika penggunaan bahasa sebagaimana orang *native* menggunakannya
- Hindari plagiarisme --> ex: copy paste dari berbagai jurnal

4. Berlatih secara terus-menerus dalam menulis paper standar jurnal

- "Practice makes perfect"
- Banyak membaca jurnal (nasional/internasional)
- Latihan menulis terus-menerus
- Membantu kolega senior (semester atas) untuk publikasi dapat membantu kita latihan menulis

5. Pilih jurnal (internasional) yang sesuai

- Sebaiknya yang mempunyai impact factor (jumlah sitasi/jumlah artikel; IF full list), atau setidaknya terindeks di Scopus
- Turn-over time dari jurnal --> dapat dilihat di artikel
- Bertanya pada kolega yang berpengalaman sebagai penulis, reviewer atau editor dari jurnal internasional di bidang yang terkait
- Hati2 dengan jurnal internasional abal-abal

## 6. Merespon komentar reviewer dan editor secara positif dan konstruktif

- Dimulai dari berbaik sangka: anggap bahwa editor dan reviewer bermaksud untuk meningkatkan kualitas paper kita
- Jawab reviewer dan editor poin-per-poin
- Jika kita tidak sepakat dengan masukan --> berikan argumen yang kuat dan berhati-hati dalam menyampaikan, penuh respek --> tidak ofensif atau bahkan counter-attack

# Bagaimana kalau ditolak?

- Belum tentu karena kualitas paper kita yang tidak baik
- Secara umum rejection rate jurnal internasional berkualitas memang tinggi (ex: Science, rejection rate 90%)
- Biarkan setidaknya 24 jam --> marah pada editor dengan berbagai alasan (tidak adil, bias, dsb.) tidak akan membantu, bahkan mencemari reputasi kita
- Cari jurnal lain --> akomodir masukan-masukan dari reviewer dan editor sebelumnya jika sesuai, re-format, dan submit baru
- Kesempatan untuk meningkatkan kemampuan menulis kita

# Alasan mengapa ditolak

1. Gagal dalam "technical screening"

- Plagiarisme, duplikasi publikasi, submisi paralel
- Artikel tidak lengkap --> kurang satu atau lebih elemen
- Bahasa Inggris kurang baik
- Tabel atau gambar tidak dapat dimengerti
- Tidak mengikuti "Guide for Authors"
- Daftar pustaka tidak lengkap atau sangat usang

2. Tidak sesuai dengan "aims and scope" dari jurnal

3. Artikel tidak mensitasi studi terkait lainnya yang sebetulnya sangat penting

4. Prosedur dan atau analisis data bermasalah

- Tidak ada kontrol grup/perlakuan kontrol
- Prosedur yang dilakukan tidak dikenal atau tidak standar atau sudah tidak digunakan lagi
- Statistik yang digunakan tidak valid

5. Permasalahan di alur paper --> argumen yang dibangun tidak logis, tidak terstruktur atau tidak valid



TERIMA KASIH / *THANK YOU*