



The 4th Pharmacy International Conference Universitas Muhammadiyah Purwokerto (PIC-UMP)

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Purwokerto, December 2th, 2023

Letter of Invitation

Dear Author:

Yudha Rizky Nuari

On behalf of Faculty of Pharmacy, Universitas Muhammadiyah Purwokerto, we cordially invite you that your abstract (IS-PPT-L01), entitled:

" Preformulation Study of Surfactants for Dispersing *Mangifera indica* Leaf Ethanol Extract in Thermosensitive Gel "

We cordially invite you to attend the conference offline as an invited speaker at The 4th PIC-UMP in Purwokerto, Indonesia. The 4th PIC-UMP scheduled to be held in Purwokerto on Saturday, December, 9, 2023. It would be our honour to have your talk based on your expertise and research work during the event.

We believe that your contribution to this conference will be very beneficial and, in this regard, we would like to welcome you to join our conference.

We look forward to see you in Purwokerto, Indonesia.

Thank You.

Best regards,



apt. Dwi Hartanti, Ph.D
4th UMP-PIC Chairperson



CERTIFICATE

proudly awarded to

Yudha Rizky Nuari

as **Oral Presenter**

*in the 4th Pharmacy International Conference and
Annual Meeting of Asosiasi Perguruan Tinggi Farmasi Muhammadiyah dan 'Aisyiyah
held in Purwokerto, Indonesia, 8-9th December 2023*

SK PD IAI Jawa Tengah Nomor : Kep.161/PD-IAI/Jawa Tengah/IX/2023
Narasumber 3 SKP; Moderator/Panita 1 SKP; Peserta 3 SKP



Prof. Dr. apt. Dyan Aryani Perwitasari, Ph.D.
Chair of APTFMA



apt. Dwi Hartanti, Ph.D.
Chair of The 4th PIC

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Abstract Form (up to 250 words)

*Oral/Poster Presentation

Preformulation Study of Surfactants for Dispersing *Mangifera indica* Leaf Ethanol Extract in Thermosensitive Gel

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Introduction: The leaf of *Mangifera indica* contains flavonoids and mangiferin which showed positive effects on wound healing of diabetic ulcer. In a formula of thermosensitive gel from *Mangifera indica* leaf ethanol extract, the used of suitable surfactant is required to ensure the high solubility of the active pharmaceutical ingredient (API) within the gel system, thereby optimizing the efficacy. This study aims to determine the ideal surfactant for a thermosensitive hydrogel formula of *Mangifera indica* leaf ethanol extract for diabetic ulcer.

Methods: The leaf of *Mangifera indica* was firstly extracted by means of maseration using 70% ethanol. The extract was then standardized on specific parameters and was identified for total flavonoid and mangiferin. Afterwards, the standardized extract was dispersed on various surfactants before undergone solubility test to select which surfactant provides high solubility of flavonoid by using spectrophotometry method and positive response for mangiferin with RP-HPLC.

Results: Identification on standardized *Mangifera indica* leaf ethanol extract showed that it contains flavonoids and mangiferin as compared to the standards. Among surfactants (Tween 20, Tween 80, Miranol, PEG 400, Kolliphor[®] EL) employed in this study, Tween 20 demonstrated the highest solubility of both flavonoids. All surfactants give positive respon for mangiferin identification as analyzed using RP-HPLC.

Conclusions: This study indicates Tween 20 is a preferable surfactant to be further used in a thermosensitive gel formula for diabetic ulcer.

Keywords 3-5 words: Diabetic Ulcer, Extract, Gel, *Mangifera indica*, Surfactant.

Presenter : Author-3³ **Email:** from Author-3³

✂ Please refer to below

Please submit an abstract in a maximum of 250 words. The main title is recommended to be written in Times New Roman 12pt font size with body style. Please only capitalize the first letter. Except the title, all the text had better to be written in Times New Roman 10pt font size. The abstract should not contain any table, graph, or image. Please write a brief introduction (included objective), method, results, and conclusion of your work in a structured manner. Your presentation may describe work on topics of (1) Herbal medicine and drug discovery (Code:HMDD), (2) Pharmacology and clinical pharmacy (Code:PCP), (3) Pharmaceutics and pharmaceutical technology (Code:PPT), (4) Social behavior and administration pharmacy (Code-SBA), or (5) Microbiology and biotechnology (Code:MB). Please strictly use this template when preparing your abstract. Please provide 3-5 keywords that are alphabetically written.



The 4th Pharmacy International Conference

**unnecessary strikethroughs*

December 9, 2023 | Faculty of Pharmacy, Universitas Muhammadiyah Purwokerto, Indonesia