

## *A simple and inexpensive simultaneous UV spectrophotometric method to determine Metformin and Glimepiride in fixed dose combinations tablet*

Zilhadia

Syarif Hidayatullah State Islamic University Jakarta, Indonesia



### *Abstract*

Type 2 diabetes mellitus is one of the most common metabolic diseases, with an increasing prevalence worldwide and a global pandemic. Metformin is the first agent used to lower blood glucose in type 2 diabetic patients. However, using the combination with the sulfonyl urea group, especially glimepiride has recently increased with the benefits of improving patient compliance and cost effectiveness. The purpose of this study was to validate the method of determining metformin/glimepiride fixed dose combinations taken at Pramuka market (the largest drug market in Jakarta) using an inexpensive and easy method, namely UV-Vis spectrophotometry. The maximum wavelength of metformin HCl was 237 and glimepiride was 228 nm. The maximum wavelengths of the two compounds were so close that a simultaneous method was carried out. As per ICH guidelines, the validation indicators measured are linearity, Limit of Detection (LOD), Limit of Quantification (LOQ), accuracy and precision.

### *Speaker Publications:*

1. "Protein Profiles of Beef (*Bos indicus*), Pork (*Sus domesticus*), and Sausages By Using SDS-PAGE (Sodium Dodecyl Sulphate Polyacrylamide Gel Electrophoresis) Method"
2. "Differentiation of Beef Gelatin and Pig Gelatin in Vitamin C Gummy Using the Combination Method of Fourier Transform Infrared Spectroscopy (FTIR) and Principal Component Analysis (PCA)"
3. "Comparison of SYBR Green Method and Hydrolysis Probe in DNA Analysis of Cow Gelatin and Pig Gelatin Using Real Time Polymerase Chain Reaction"
4. "Analysis of Pork Contamination on Beef Meatballs Sold in Tanjung Priok using Real-Time Polymerase Chain Reaction (RT-PCR)"
5. "Goatskin Gelatin as a Binder in the Formulation of Paracetamol Tablets using the Wet Granulation Method"

[21<sup>st</sup> World Conference on Pharmaceutical Chemistry and Drug Design](#); Webinar, December 16, 2020.

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### *Biography:*

Zilhadia has completed his PhD from Faculty of Pharmacy Universitas Indonesia. She is a Lecturer and Dean of Faculty of Health Sciences, Syarif Hidayatullah State Islamic University since 2019. She has published several papers in reputed journals and as presenter in several international conferences.