

## POCER1914: Elucidation of Gallic Acid Degradation Pathway from *Labisia Pumila* via Mass Spectroscopy Technique

Afiqah Yeop<sup>a,b</sup>, Sook Fun Pang<sup>c</sup>, Sureena Abdullah<sup>a,b</sup>, Mashitah M. Yusoff<sup>c</sup>, and Jolius Gimbun<sup>a,b\*</sup>

<sup>a</sup>Centre of Excellence for Advanced Research in Fluid Flow (CARIFF), Universiti Malaysia Pahang, Tun Razak Highway, 26300 Gambang, Pahang, Malaysia

<sup>b</sup>Faculty of Chemical and Natural Resources Engineering, Universiti Malaysia Pahang, Tun Razak Highway, 26300 Gambang, Pahang, Malaysia

<sup>c</sup>Faculty of Industrial Science and Technology, Universiti Malaysia Pahang, Tun Razak Highway, 26300 Gambang, Pahang, Malaysia

\*E-mail: [jolius@ump.edu.my](mailto:jolius@ump.edu.my)

### ABSTRACT

Thermal degradation kinetics and mechanism of gallic acid was investigated at temperatures ranging from 60 to 120 °C with a heating time of 90 min. The ultra-performance liquid chromatography coupled with quadrupole time-of-flight mass spectrometer was used to elucidate the degradation mechanism of gallic acid in the heated sample. The degradation kinetics of gallic acid shows a good fit with the 1st order model with correlation coefficients of  $R^2 \geq 0.96$ . The kinetics rate constant ( $k$ ) were 0.0011, 0.0038 and 0.0076 min<sup>-1</sup> at the temperature of 60, 90 and 120 °C, respectively. This finding in this work may serve as a useful guide to minimize the gallic acid degradation and formation of unwanted by-products during processing of *L. pumila*.

### KEYWORDS

*Labisia pumila*; thermal degradation kinetics; mass spectrometry

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