

**INVESTIGATION OF ANTIOXIDATIVE CONSTITUENTS  
FROM *Murraya koenigii* LEAVES (CURRY LEAVES) AND  
ITS ANTIBACTERIAL ACTIVITY AGAINST PLANT DISEASE-  
CAUSED MICROBE**

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**Final Year Project Report Submitted in  
Partial Fulfilment of the Requirements for the  
Degree of Bachelor of Science (Hons.) Chemistry  
in the Faculty of Applied Sciences  
Universiti Teknologi MARA**

**JULY 2019**

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## ABSTRACT

### INVESTIGATION OF ANTIOXIDATIVE CONSTITUENTS FROM *MURRAYA KOENIGII* LEAVES (CURRY LEAVES) AND ITS ANTIBACTERIAL ACTIVITY AGAINST PLANT DISEASE-CAUSED MICROBE

The study was carried out on the leaves of *Murraya koenigii* which belongs to *Rutaceae* family that can be found abundantly all around Asia especially India. This genus of species comprises variety of medicinal value. The objective of this study is to isolate the antioxidative constituents of *M.koenigii* by using phytochemical analysis of methanol extract that indicated the most abundance presence of tannins followed by triterpenoids, flavonoids and Cardiac glycosides. The next phytochemical analysis which used certain spraying on three extracts which are hexane, ethyl acetate (EA) and methanol was also done in order to identify the antioxidative compounds existed. The selected isolated compounds are labelled as E4 and H4 from EA and hexane respectively. They are being further analysed by using FTIR and  $^1\text{H}$  NMR spectroscopy to predict their structures. As for the result, E4 might be an antioxidative aromatic phenolic glycosides and H4 as an antioxidative aromatic terpenoid glycosides. As for the next objective, the effectiveness of the extracts toward plant disease-caused microbes by inhibiting the growth of *Erwinia chrysanthemi* is also measured and proven through their zones of inhibition. The most effective extract is EA extract since it has the biggest inhibition zone between the three extracts which is at 11.0 mm.