ULTRASOUND AND ENZYMATIC MEDIATED EXTRACTION OF VITEXIN AND ISOVITEXIN COMPOUNDS FROM FICUS DELTOIDEA LEAVES

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We hereby declare that we have checked this thesis and in our opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Master of Engineering in Chemical.

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Date:
STUDENT’S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citation which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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NUR AIMI SYAIRAH BINTI MOHD ABDUL ALIM

Thesis submitted in fulfilment of the requirements for the award of the degree of
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FEBRUARY 2017
Dedicated to my parents and siblings
for always standing by my side and nurturing me with love and support
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<tr>
<td>µ</td>
<td>micro</td>
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<tr>
<td>A</td>
<td>Ampere</td>
</tr>
<tr>
<td>eV</td>
<td>Electron volts</td>
</tr>
<tr>
<td>Hz</td>
<td>Hertz</td>
</tr>
<tr>
<td>m/z</td>
<td>Mass-to-charge ratio</td>
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<tr>
<td>Pa</td>
<td>Pascal</td>
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<tr>
<td>s</td>
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<td>Watt</td>
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<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>AE</td>
<td>Aqueous extraction</td>
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<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>ASTM</td>
<td>American Society for Testing and Materials</td>
</tr>
<tr>
<td>ATCC</td>
<td>American Type Culture Collection</td>
</tr>
<tr>
<td>BEH</td>
<td>Ethylene Bridged Hybrid</td>
</tr>
<tr>
<td>DAD</td>
<td>Diode Array Detector</td>
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<tr>
<td>EC</td>
<td>Enzyme Commission</td>
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<tr>
<td>EnAE</td>
<td>Enzymatic-assisted extraction</td>
</tr>
<tr>
<td>FE-SEM</td>
<td>Field Emission-Scanning Electron Microscopy</td>
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<tr>
<td>HPLC</td>
<td>High Performance Liquid Chromatography</td>
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<tr>
<td>i.d.</td>
<td>Inner diameter</td>
</tr>
<tr>
<td>MS</td>
<td>Mass Spectrometry</td>
</tr>
<tr>
<td>RPC</td>
<td>Reversed-phase column</td>
</tr>
<tr>
<td>rpm</td>
<td>Revolutions per minute</td>
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<tr>
<td>sp.</td>
<td>species</td>
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<td>UAE</td>
<td>Ultrasound-assisted extraction</td>
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<tr>
<td>UAEnE</td>
<td>Ultrasound-assisted enzymatic extraction</td>
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<tr>
<td>var.</td>
<td>variety</td>
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<td>WHO</td>
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