



**FAKULTI PENGURUSAN DAN INDUSTRI HALAL**

<b>PROGRAM</b>	<b>Diploma Pengurusan Industri Halal</b>
<b>COURSE NAME</b>	<b>Introduction to Halal Ingredient in Food Processing</b>
<b>COURSE CODE</b>	<b>DHH 4113</b>
<b>CREDIT HOUR</b>	<b>3</b>
<b>SYNOPSIS</b>	This subject covers on methods involved in food processing from selections of the raw material to selection of the type of unit operations used in the food industry.
<b>COURSE STRUCTURE</b>	
<b>CHAPTER</b>	<b>TOPICS</b>
<b>1</b>	<b>Raw Material, Ingredients and Additives</b>  1.1 Halal Raw Material 1.1.1 Source 1.1.2 Selection 1.1.3 Sourcing and Importation 1.1.4 Raw Material Handling 1.1.5 Transportation  1.2 Halal Food Ingredients 1.2.1 Animal sources 1.2.2 Plant sources 1.2.3 Biotechnology sources 1.2.4 Intermediate Products  1.2 Halal Food Additives 1.2.5 Definition 1.2.6 The use and register of Halal food additive 1.2.7 Table of functional classes 1.2.8 Definitions and technological function 1.2.9 E-Numbers, guide on selection of Halal food
<b>2</b>	<b>Packaging</b>  2.1 Introduction 2.1.1 Function of packaging 2.1.2 Golden rules for food packaging 2.1.3 Packaging food in the Halal environment  2.2 Categories and function 2.2.1 Types of packaging 2.2.2 Packaging materials 2.2.3 Advantages and disadvantages  2.3 Packaging methodology 2.3.1 Aseptic packaging 2.3.2 Modified Atmosphere



	<ul style="list-style-type: none"><li>2.3.3 Vacuum packaging</li><li>2.4 Halal packaging<ul style="list-style-type: none"><li>2.4.1 MS 2565:2014</li><li>2.4.2 Requirements</li></ul></li></ul>
<b>3</b>	<b>Halal Food Processing</b> <ul style="list-style-type: none"><li>3.1 Halal Food Chain (Halal – From Farm to Plate)</li><li>3.2 Why Food Processing</li><li>3.3 Unit Operations</li><li>3.4 Preservation</li><li>3.5 Methods of preservation</li></ul>
<b>4</b>	<b>Equipment</b> <ul style="list-style-type: none"><li>4.1 Preliminary operations<ul style="list-style-type: none"><li>4.1.1 Cleaning</li><li>4.1.2 The Islamic cleansing, sorting, grading and peeling</li></ul></li><li>4.2 Conversion operations<ul style="list-style-type: none"><li>4.2.1 Size reduction</li><li>4.2.2 Mixing</li><li>4.2.3 Emulsification</li><li>4.2.4 Filtration</li><li>4.2.5 Membrane separation</li><li>4.2.6 Solid-liquid extraction</li><li>4.2.7 Mechanical expression</li></ul></li><li>4.3 Preservation operations<ul style="list-style-type: none"><li>4.3.1 Thermal processing</li><li>4.3.2 Processing by removal of heat</li><li>4.3.3 Ancillary techniques</li></ul></li></ul>
<b>References</b>	<ul style="list-style-type: none"><li>1. Yunes Ramadan Al-Teinaz, Stuart Spear, Ibrahim H. A. Abd El-Rahim. (2020).The Halal Food Handbook</li><li>2. DeMan, J. M., Finley, J. W., Hurst, W. J., &amp; Lee, C. Y. (2018). Principles of food chemistry (Vol. 478, p. 446). Gaithersburg: Aspen Publishers.</li></ul>