



**FAKULTI PENGURUSAN DAN INDUSTRI HALAL**

<b>PROGRAM</b>	<b>Diploma in Halal Product Manufacturing</b>
<b>COURSE NAME</b>	<b>Food Preservation</b>
<b>COURSE CODE</b>	<b>DHM 3033</b>
<b>CREDIT HOUR</b>	<b>3</b>
<b>SYNOPSIS</b>	This subject covers preservations and additives involved in Halal product processing will be explained and discussed.
<b>COURSE STRUCTURE</b>	
<b>CHAPTER</b>	<b>TOPICS</b>
<b>1</b>	<b>Introduction</b>  1.1 Definition of food preservation and additives 1.2 Unit operation in food processing 1.3 Quality assurance in food processing
<b>2</b>	<b>Basic Principle of Food Processing</b>  2.1 Moisture Removal 2.2 Heat Treatment 2.3 Low temperature treatment 2.4 Acidity Control 2.5 Traditional Nonthermal Processing 2.6 Nonthermal Processing Innovation
<b>3</b>	<b>Preservatives</b>  3.1 Definition and sub groups 3.2 Antimicrobial chemicals 3.3 Antioxidants and other preservatives
<b>4</b>	<b>Fermentation</b>  4.1 Principle and type of fermentation process 4.2 Application in industry 4.3 Recent fermentation technology



<b>5</b>	<b>Refrigeration and Freezing</b>  5.1 Principle and type of refrigeration and freezing 5.2 Application in industry 5.3 Recent refrigeration and freezing technology
<b>6</b>	<b>Drying and Dehydration</b>  6.1 Principle and type of drying and dehydration 6.2 Application in industry 6.3 Recent drying and dehydration technology
<b>7</b>	<b>Thermal processing</b>  7.1.Principle and type of thermal processing 7.2.Application in industry 7.3.Recent thermal processing technology
<b>8</b>	<b>Canning and aseptic processing</b>  8.1.Principle of canning and aseptic processing 8.2.Application in industry 8.3.Recent canning and aseptic processing technology
<b>9</b>	<b>Microwave processing</b>  9.1.Principle of microwave processing 9.2.Application in industry
<b>10</b>	<b>Pasteurization</b>  10.1.Principle of pasteurization 10.2.Application in industry
<b>11</b>	<b>Irradiation</b>  11.1.Principle of irradiation 11.2.Application in industry
<b>12</b>	<b>Packaging</b>  12.1.Introduction and definition to packaging 12.2.Form of packaging 12.3.Packaging requirements and selection for products 12.4.Packaging machineries 12.5.Type of packing
<b>13</b>	<b>Other techniques of preservations</b>



<b>References:</b>	<ol style="list-style-type: none"><li>1. Rahman, M. S. (2020). Handbook of Preservation. Boca Raton: CRC Press</li><li>2. Robert S. Igoe. (2011). Dictionary of Food Ingredients. Springer</li><li>3. Peter S. Murano. 2009. Understanding Food Science and Technology.</li></ol>
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