


<b>FDQ Unit No</b>	<b>P128</b>
<b>Title</b>	<b>Principles of plate heat exchangers in food manufacture</b>
<b>Level</b>	<b>2</b>
<b>Credit value</b>	<b>2</b>
<b>Learning Outcomes</b>	<b>Assessment Criteria</b>
<b>The learner will:</b>	<b>The learner can:</b>
1. Understand the technology of heat transfer	1.1. Describe the key features of conduction 1.2. Describe the key features of convection 1.3. Describe the key features of radiation.
2. Understand the function of plate heat exchangers	2.1. Outline the typical applications of plate heat exchangers in food manufacture 2.2. Describe how parallel flow and counter current flow works 2.3. Describe how plate fouling occurs and its impact on heat exchanger performance.
3. Understand the function of plate heat pasteurisation	3.1. Describe what is meant by a Pasteurisation Unit (PU) 3.2. Outline the typical process flow through a plate pasteuriser 3.3. Describe what happens in the heating, holding & cooling sections of a pasteuriser 3.4. Describe the key process controls on a pasteuriser.
<b>Additional information about the unit</b>	
Unit purpose and aim(s)	This unit supports workforce and/or vocational development for those who need to understand the principles of plate heat exchangers, in a food or drink business or in a learning environment. The unit is designed for use primarily by operatives and others who carry out these workplace activities. It is also designed for those who plan to enter the food and drink industry or employees who wish to expand on their existing knowledge and understanding. The aim of the unit is to assess underpinning knowledge and understanding to recognised National Occupational Standards.
Unit expiry date	30 April 2015

Details of the relationship between the unit and relevant national occupational standards or other professional standards or curricula (if appropriate)	This unit of assessment relates directly to Improve Sector Performance Standards (approved as National Occupational Standards) knowledge unit PO.213S Control conditioning in food manufacture, PO.222K Understand how to control processes in food manufacture.
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>This unit is designed to assess the underpinning knowledge and understanding of learners in the workplace context, for understanding the principles of plate heat exchangers. It can be assessed on or off the job.</p> <p>The learner must demonstrate their current knowledge and understanding, to meet all assessment criteria. Assessment methods appropriate to the needs of the learner must be used to generate satisfactory evidence of knowledge and understanding.</p> <p>The Improve Assessment Strategy for Proficiency Qualifications in Food and Drink sets out the overarching assessment requirements.</p>
Support for the unit from a SSC or appropriate other body (if required)	 <a href="http://www.improve.org.uk">food &amp; drink sector skills council</a>
Location of the unit within the subject/sector classification system	04 Engineering and Manufacturing Technologies
Name of the organisation submitting the unit	FDQ on behalf of Improve Ltd
Availability for use	Shared
Unit available from	1 May 2010
Unit guided learning hours	16
Unit Category	Underpinning Knowledge (UK)
SPS Reference	BW.220K
WBA Reference	K/601/5217