OBJECTIVE:

 In this experiment students will determine the heat transfer coefficient which helps show the performance of the heat exchanger. The objective of this experiment is to show indirect heating and cooling by transfer of heat from one fluid stream to another. A solid wall separates the fluid streams. The devices used in this experiment are created by Armfield Limited, Ringwald, Hampshire England for use in physics and engineering laboratories. The devices are the HT30XC Heat Exchanger Unit and HT32 unit (Plate Heat Exchanger).

INTRODUCTION:

 The way a Plate Heat Exchanger works is that the hot and cold fluids flow on alternate sides of the plates. The stream passes in series across the plates three times. When there is a temperature difference across the metal plates it results in the transfer of heat between the two streams. Thus, as the streams pass through the plates, the cold water will be warmed and the hot water will be cooled.

