

Product Name :
Catalytic Reactors**Product Code :**
ALABS-A174-020**Description :****Catalytic Reactors**

- A benchtop unit comprising a vacuum formed ABS plastic plinth with integral electrical console on to which is mounted the packed bed reactor columns, feed pump, optical sensor and optional Flow Injection Analysis (FIA) system.
- The unit is supplied as standard with two reactor columns for chemical catalysis.
- A third column can be optionally added to the system for biological (enzymic) catalysis.
- A heated water supply to the column jackets allows automatic control of reaction temperature to a set point value.
- Feed flow rate can be varied between 0 and 15 ml/min. The FIA pump can be adjusted to give flow rates up to 2.5 ml/min.
- All electrical circuits are fitted with appropriate protection devices.
- The console has two digital meters. The first, associated with the controller, shows the temperature of water supplied to the column jackets, and the second shows the optical sensor

reading which provides a measure of product concentration. Corresponding signals are routed to the I/O port for connection to a PC. Description:

The introduces students to the fundamentals of packed bed catalytic reactors. It is a benchtop unit available with either two or three reactor columns. Using two columns with a chemical catalyst allows a different particle size exchange resin to be used in order to study the effect of particle size on reactor kinetics. It is possible to use a third column to investigate biological catalysis, using the enzyme invertase, and compare this with chemical catalysis. An optional flow injection analysis (FIA) module is available. This module is positioned on the CEU plinth and provides an easy on-line measurement of product yield, eliminating the need for manual assays. The module is also useful for teaching the FIA technique and demonstrating the advantages of this measurement method in continuous processes.



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