

Problem 4.2

Problem Purpose

This problem will help you determine whether you have mastered the learning objectives for this unit.

Problem Statement

Reaction (1) below takes place in the liquid phase at 60 °C. A glass cylinder, 10 cm in diameter and 15 cm tall was filled to 75% of its capacity and the apparent rate of generation of Z was measured to be 24 mol L⁻¹ s⁻¹. Later it was discovered that the reaction was not homogeneous, but instead it was catalyzed by the glass walls of the reactor. Calculate the rate of reaction (1) per unit catalyst surface area with respect to A, B and Z.

