# AFCoKaRE Practice Problem 36.1

*Purpose*: This problem will allow you to practice the quantitative analysis of a reactor using the segregated flow model.

*Problem Statement*: The stirred tank reactor from AFCoKaRE Practice Problem 11.5 is going to be used to convert A to Z isothermally. The reaction is second order in A with a rate coefficient of 0.127 L mol$^{-1}$ min$^{-1}$. A liquid phase solution containing 2 mol L$^{-1}$ of A and no Z will be fed to the reactor at a rate of 1 gal min$^{-1}$. Use a (late mixing) segregated flow model to calculate the conversion of A that can be expected.