

# pyDiffusionFDM Regression Tests

John P. Ortiz

July 21, 2023

## 1 diffusionCoupon

This test essentially performs a 1-D diffusion coupon experiment.

Dirichlet B.C. at  $x=0$

Neumann (no-flux) B.C. at  $x=L$ .

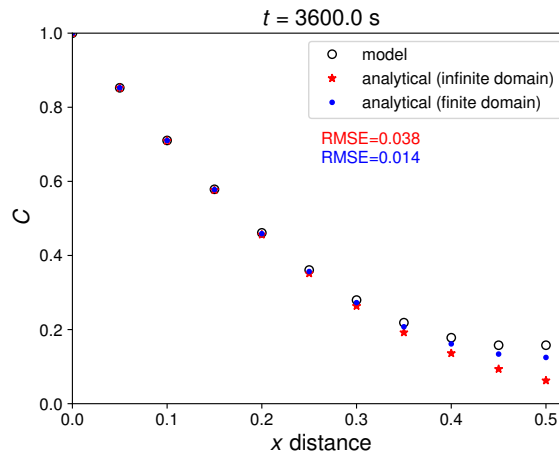


Figure 1: Comparison of concentration profiles to two analytical solutions, one with semi-infinite domain and one with a finite domain using a summation of image sources.

Add more info later...

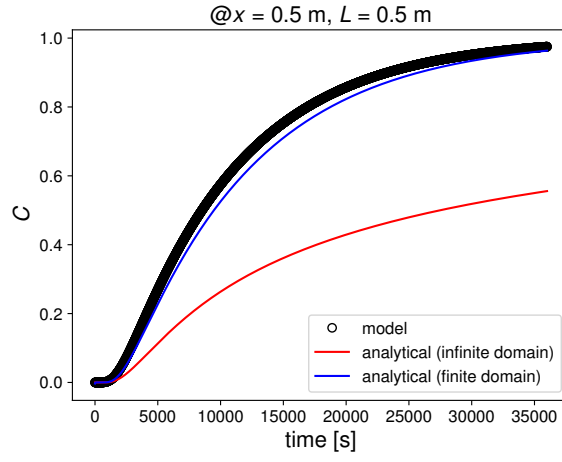


Figure 2: Comparison of breakthrough curves to two analytical solutions, one with semi-infinite domain and one with a finite domain using a summation of image sources.