Abstract

In this work, we studied the behavior of Cauchy reaction diffusion equation with time - fractional Caputo - Fabrizio derivative. The fractional model of Cauchy reaction diffusion equation is obtained by replacing the partial time derivative of concentration with fractional order Caputo - Fabrizio derivative. The iterative scheme is used to solve the resulting equation [1].

Basic literature related to proposed problem is included in chapter 1. Chapter 2 contains the introduction and different types of Cauchy reaction diffusion equation. Chapter 3 contains the solutions of different types of proposed problem and stability analysis of the solutions. This chapter also consists of graphical representations and discussions of concentration $C(y, t)$ with respect to space y and time t for different values of fractional parameter μ [1].