Figure(2) distribution of $NO3^-$ concentration

, the results showed th numerical solution with explicit finite difference is gradually along spatial distance in aquifer of ground water. The decreased numerical solution predicts the solute concentration as a function of time and space if a seepage velocity, adsorption rate, and dispersion coefficients are prescribed. They are useful for solving similar field problems

8- Conclusions:

In this paper, MATLAB has been used to solve the computational algorithm for finite difference, unsaturated flow problems within soil physics. These two problems demonstrate the versatility of the finite difference algorithm in handling one dimensional transport equation with source / sink terms and can be applied to other areas of science that involve convective and diffusion processes. In addition the MATLAB library a DQE and ODE approach to time integration that can be readily applied in MATLAB algorithms. These approaches could be used to gain better accuracy around steep wetting fronts and will explored in future work, finite difference discretization in explicit form provides a relatively easy approach to the numerical solution of transport equations.

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