1014-65-124 **Ming Cui*** (mingcui@sdu.edu.cn). *An alternating-direction finite element method combined with a modified method of characteristics for the problem of the pollution of groundwater in double porous media.*

We consider numerical methods for the mathematical model for the problem of the pollution of groundwater in double porous medium. A mixed finite element method is adopted to give a direct approximation of the velocity, the concentration is approximated by finite element alternating direction method combined with the modified method of characteristic and the absorption concentration is approximated by a standard Galerkin method . Optimal error estimates in L^2- norm and H^1-norm are obtained. (Received July 30, 2005)