TIME-DEPENDENT NUMERICAL SIMULATIONS OF THE MOTION OF MISCIBLE DROPLETS IN HOMOGENEOUS POROUS MEDIUM ARE PRESENTED. BOTH THE INFLUENCES OF CONVENTIONAL FLOW PARAMETERS, SUCH AS THE MOBILITY RATIOS, DIMENSIONLESS FLOW RATES AND DROPLET SIZE (PECLET NUMBER) AND DYNAMIC KORTEWEG STRESSES ARE ANALYZED SYSTEMATICALLY.

VORTICITY-STREAMFUNCTION FORMULATION IS APPLIED TO MAKE THE EFFECTS OF VELOCITY DIVERGENCE CAUSED BY THE CONCENTRATION GRADIENT IMPLICITLY IN THE GOVERNING EQUATIONS.


Keywords : MISCIBLE DROPLETS, PECLET NUMBER , KORTEWEG STRESSES
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