**ABSTRACT**

An analytical study of chemical reaction and thermal radiation on the unsteady two-dimensional oscillatory flow of a viscous, incompressible, electrically conducting optically thin fluid, through a porous medium bounded by an infinite vertical plate is considered. The effect of various flow parameters like Schmidt number, chemical reaction, Grashof numberand modifiedGrashof number on velocity profile, temperature, concentration, wall shear stress, and the rate of heat and mass transfer are obtained, using the regular perturbation technique. Numerical evaluation of the analytical solutions was performed and the results are presented graphically