In our study; Surface tension driven convection flows of two different Prandtl numbers fluids in the rectangular container configuration have been investigated. The test fluid was heated by one long vertical wall and was cooled another long vertical wall placed mutual of the prism shaped container. In the studies of heat and mass transfer effects on buoyancy was examined carefully. The surface tension convection flow field was described using numerical flow field basis. As a result of our work; the streamlines, isotherms, and velocity field of surface tension convective motion change when the physical properties of fluids are varied.