T-history method to determine thermo-physical properties of mixture salts ($Na_2SO_4 \cdot 10H_2O + NH_4Cl +$ Borax + Bentonite)

다오반, 류욱연, 최호석*
충남대학교
(hchoi@cnu.ac.kr*)

The temperature-history method is a simple method of determining the melting point, heat of fusion, specific heat and thermal conductivity of phase-change materials (PCMs) is presented. It has been compared with other methods, such as conventional calorimetric methods (CCM), differential thermal analysis (DTA) and differential scanning calorimetry methods (DSC), it has the following salient features: the experimental unit is simple, able to measure the heat of fusion, specific heat and thermal conductivity of several samples of PCMs simultaneously and allows one to observe the phase-change process of each PCM sample. In this study, we used T-history method to determine thermo-physical properties of mixture salts (sodium sulfate hydrate, ammonium chloride, borax and Bentonite) such as heat capacity, latent heat, thermo-conductivity of PCM.