Abstract
The Cheshmeh Hafez Cu – Pb – Zn deposit is located in Troud – Chahshirin mountain range in Southeastern Damghan. In this province, the calc-alkaline volcanism and associated mineralization are closely related to major faults Anjilo and Troud (NW-SE). The exposed rocks in the study area consist of volcano clastic sequence of sandstone, tuff, volcano breccias and mostly andesitic and andesitic-basalt flows at Cheshmeh Hafez area. Mineralization in the Cheshmeh Hafez veins occurred in three main stage. Stage 1: consist of Galena, Sphalerite, Pyrite, Calcopyrite and Stage 2: consist of Galena, Sphalerite, Pyrite, Calcopyrite, Digenite and Bornite. Quartz and Calcite are gangue minerals in this area and Stage 3: consist of barren Quartz and Calcite veins. Alterations in Cheshmeh Hafez area are consisting of Proplilitization, Sericitization, Argillic and Silicification. According to Fluid – inclusion studies, homogenation temperatures fall within the range of 150 – 300 °C with salinities ranging from 5.8 to 18.0 Wt% NaCl eq.