The S-isotope composition ($\delta^{34}S$) is determined by SO_2 EA-combustion-IRMS method. The measurement was performed by The GV Isoprime isotope ratio mass spectrometer along with the Eurovector Elemental Analyser (EuroEA3028-HT) in the Center for Stable Isotope Biogeochemistry (CSIB) at Department of Integrative Biology, University of California at Berkeley. The amount of bulk powder samples containing as small as 5 μg sulfur or pure sulfate/sulfide samples are thermochemically decomposed with copper wires at 1020°C to yield SO_2 gas for sulfur isotope analyses. Certain quantities of H_2O and CO_2 are also produced during this conversion depending on the sample natures. H_2O is removed by passing through a $Mg(ClO_4)_2$ trap, while CO_2 is eluded out through a dilutor. Several replicates of one international standard NBS127 and two lab standards were measured along with samples in each batch run for the data calibration and quality control. The external analytical precision is better than 0.2‰ for $\delta^{34}S$.