# Chemically defining the building blocks of the Earth

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Chondrites are undifferentiated sediments of material left over from the earliest solar system and are widely considered as representatives of the unprocessed building blocks of the terrestrial planets. The chondrites, along with processed igneous meteorites, have been divided into two broad categories based upon their isotopic signatures; these have been termed the CC and NC groups and have been interpreted as reflecting their distinctive birth places within the solar system. The isotopic distinctiveness of NC and CC meteorites document limited radial-mixing in the accretionary disk. The enstatite and ordinary chondrites are NC-type and likely represent samples from inner solar system (likely < 4 AU). Measurement and modeling of ratios of refractory lithophile elements (RLE) in enstatite chondrites establish these meteorites as the closest starting materials for the bulk of the silicate Earth and the core. Comparing chondritic and terrestrial RLE ratios demonstrate that the Bulk Silicate Earth, not the core, host the Earth's inventory of Ti, Zr, Nb, and Ta, but not the full complement of V.