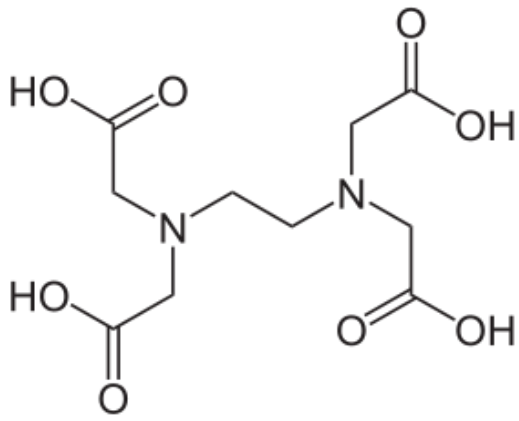
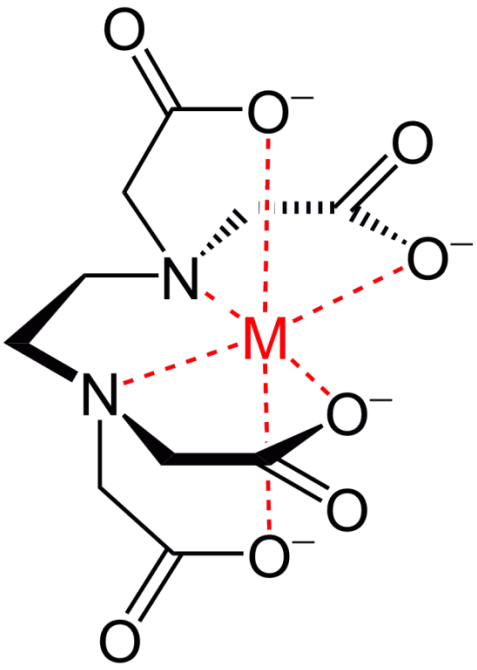


Ethyldiaminetetraacetic acid, also known as EDTA is used to chelate metal ions. EDTA belongs to a class of synthetic compounds known as polyaminocarboxylic acids It has a negative ionic charge, known as an anion, - EDTA4. The important ions are highlighted on yellow. These cations bond with anions to form chelates; ie K+ (potasium anion) will bond with the EDTA cation.



The ions from EDTA completely wrap up the entire metal ion all 6 positions. EDTA bonds really well with Magnesium and Calcium as well as many other metal ions like Iron. In fact it appears that Fe is the most finicky element to keep soluble with pH. EDTA is a great stabilizing agent that keeps iron soluble in pH fluctuations. The unusual property of EDTA as a chelating agent is its ability to chelate (aka complex metal ions) in 1:1 metal to EDTA complexes (If one is familiar with the abilities of chelates, this is a very strong proportion).