

Bis(1,10-phenanthroline-N,N<sup>?</sup>)copper(II) tetrathionate and  
tris(1,10-phenanthroline-N,N<sup>?</sup>)copper(II) tetrathionate pentahydrate

Freire, Eleonora

Baggio, Sergio

Baggio, Ricardo

Garland, Maria Teresa

© 1998 International Union of Crystallography The structures of  $[\text{Cu}(\text{C}_{12}\text{H}_8\text{N}_2)_2(\text{S}_4\text{O}_6)]$ , (I), and  $[\text{Cu}(\text{C}_{12}\text{H}_8\text{N}_2)_3](\text{S}_4\text{O}_6) \cdot 5\text{H}_2\text{O}$ , (II), are reported. Compound (I) consists of infinite polymeric chains where copper displays a typical (4+2) coordination and  $\text{S}_4\text{O}_6$  connects  $\text{Cu}(\text{phen})_2$  (phen is phenanthroline) units through rather long  $\text{Cu}\cdots\text{O}$  contacts. Compound (II), instead, has a purely ionic character displaying  $[\text{Cu}(\text{phen})_3]^{2+}$  and  $\text{S}_4\text{O}_6^{2-}$  monomeric units. Equatorial and apical bonds in the copper coordination spheres have mean values of 2.003 (5)/2.467 (12) and 2.056 (3)/2.311 (13) Å for (I) and (II), respectively. Some short  $\text{O}\cdots\text{O}$  contacts in (II) suggest the existence of hydrogen bonding involving some of the water molecules of hydration.