

## Crystal Structure of Bis(2-ethylimidazole)diazidocopper(II)

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The reaction of  $\text{CuCl}_2$ , 2-ethylimidazole(L) and  $\text{NaN}_3$  afforded the mononuclear complex  $\text{Cu(L)}_2(\text{N}_3)_2$ . The structure of the dark green complex was determined by X-ray crystallography. Crystal data at 293K are  $a=15.929(3)\text{\AA}$ ,  $b=12.455(2)\text{\AA}$ ,  $c=7.281(2)\text{\AA}$ ,  $\beta=105.75(2)^\circ$ ,  $C2/c$ ,  $V=1390.2(4)\text{\AA}^3$ ,  $Z=4$ ,  $D_c=1.624\text{ g/cm}^3$ ,  $D_o=1.640\text{ g/cm}^3$ ,  $\lambda(\text{Mo } K_\alpha)=0.71069\text{\AA}$ ,  $R=0.049$ , and  $\omega R=0.125$  for 1269 observed reflections. The crystal structure forming a distorted square planar shows that the Cu(II) atom is coordinated by two azido N atoms and two imidazole N atoms. The distance between Cu(II) and azido N atom is  $1.988(4)\text{\AA}$ . In addition, that between Cu(II) and imidazole N atom is  $1.995(3)\text{\AA}$ . The angle between Cu(II) and two imidazole N atoms is  $91.32^\circ$ , and that between Cu(II) and two azido N atoms is  $88.5^\circ$ . We found that the complex builds up one-dimensional networks along with intermolecular hydrogen bonds between imidazole N-H group and azido N atom.