# ABSTRACT

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Copper is one of the important trace elements in the body. It regulates various enzymatic pathways. This work monitors the chelating and reducing activity of isochinoline alkaloids of the family Amaryllidaceae. The alkaloids of Amaryllidaceae have a large number of effects such as analgesic, narcotic, antiarrhythmic, antihypertensive, bronchodilatory, chemotherapeutic, antiparasitic, uteretonic, locally anesthetic, mydriatic and many other significant effects. An important representative is galanthamine hydrobromide, which is therapeutically used and is an inhibitor of acetylcholinesterase. Galanthamine type alkaloids (galanthamine, galanthamine hydrobromide, chlidanthine), lycorine type (lycorine, galanthine), haemanthamine type (haemanthnamine, vittatine) and montanine type (montanine) were studied. The methodology of the work was to determine the chelating and reducing activity with the use of the hematoxylin indicator and bathocuproindisulfonic acid, at different pH or in dimethylsulfoxide. Of the alkaloids studied, galanthamine and chlidanthin showed copper-chelating activity. Only chlidanthine had the highest copper-reducing activity, the only test substance that has a hydroxyl group on the benzene ring. The relationship of activity and structure is related to the number and position of the hydroxyl groups

**Keywords: alkaloids, copper, chelation, reduction.**