

EVALUATION OF THE DEBITTERING WASTEWATER FROM *Lupinus mutabilis* Sweet AS A CORROSION INHIBITOR OF ADMIRALTY BRASS IN ACID MEDIA

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1 INTRODUCTION

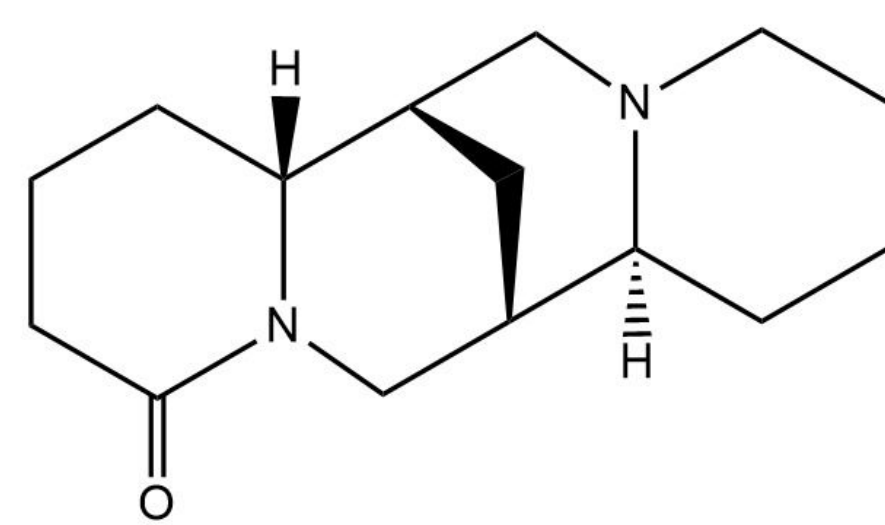


Figure 1: Lupanine Quinolizidine alkaloids

Lupinus mutabilis Sweet (Chocho) is a fruit plant belonging to Lupinus family, which is a native South America origin. The phytochemical analysis of *Lupinus* genus shows secondary metabolites, such as fatty acids, esters, sterols, isoflavones, and alkaloids (2). Furthermore, *Lupinus* genus is characterized by the presence of abundant quinolizidine alkaloids (QA). In *Lupinus mutabilis* specie is reported the presence of the following QA: Lupanine (46%) (Fig.1), Sparteine (16%), 3β-hydroxylupanine (12%), and 13α-hydroxylupanine (7%) (3). It has been reported that alkaloids, such as Lupanine and Sparteine have shown effects as corrosion inhibitors in steel and aluminum representing a new option to prevent corrosion problems (3). The main use of this specie is in food industry, that produces a considerable amount of cooking wastewater, where alkaloids are present. This project proposes to obtain extracts of *L. mutabilis* Sweet from wastewater resulting of cooking of chocho, which will be phytochemically characterize by spectroscopic methods, and evaluated as corrosion inhibitors by electrochemical methods.

2 METHODOLOGY

