## ABSTRACT

Citrullus lanatus seed oil has very important biologically active secondary metabolites. Which can act as excellent curatives, and can be very effectively, used as anti- protozoal anti-inflammatory, anti-hypertensive, anti-acne, and anti-cancer agents. It is obvious from literature that Citrullus lanatus seed oil has a number of phytochemicals responsible for its biological activity against various sicknesses.

GC-MS is used for chemical characterization of Citrullus lanatus seed oil extractions and methanolic extractions of different varieties of Citrullus lanatus seeds. This research is aimed to know the Phytochemical present in the seeds oil of Citrullus lanatus and its methanolic extract, checking their antioxidant properties by different methods i.e., comparison of total phenolic contents, total flavonoids, free radical scavenging activity, and metal chelating activity. This research also describes which varieties of Citrullus lanatus seeds have maximum antioxidant activities.

Keywords: Citrullus lanatus; biologically active; Phytochemical; Total phenolic content; antioxidant, free radical scavenging.