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Antioxidant activity of different parts from Annona squamosa, and Catunaregam nilotica methanolic extract.

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Abstract

BACKGROUND: We extracted phenolic compounds from Annona squamosa (leaves, bark, roots and seedcake), and Catunaregam nilotica (leaves, bark and seedcake) using methanol and their antioxidant activity was evaluated employing various established in vitro systems.

MATERIAL AND METHODS: Annona squamosa (leaves, bark, roots and seedcake), and Catunaregam nilotica (leaves, bark and seedcake) were used in the study. Antioxidant activity was estimated using oxygen radical absorbance capacity, MTT assay and DPPH assays, and polyphenols profile was determined by HPLC method.

RESULTS: The total phenolic content was determined by Folin-Ciocalteu method and the highest amounts were 171.5, 170.4, 169.5, and 167.9 g/kg plant extract as GAE for A. squamosa roots, C. nilotica bark, C. nilotica leaves, and A. squamosa bark, respectively. The leaves extracts of the two trees showed high flavoniod content. The results showed that C. nilotica and A. squamosa extracts displayed antioxidant activities, with IC(50) values ranging from 7.81 to 62.5 and from 7.81 to 125.0 µg/ml, respectively using 1,1-diphenyl-2-picrylhydrazyl (DPPH) assay. The different parts extracts from two trees showed good antioxidant activity evaluated by oxygen radical absorbance capacity and MTT assay systems.

CONCLUSION: These results suggested that Annona squamosa and Catunaregam nilotica phenolic compounds could be utilized as a natural antioxidant.