

## A Preliminary Study on Bioactivities of *Agave vera - cruz* Leaf Extract

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*Agave vera-cruz* is a perennial plant with large, spine-tipped leaves and short thick stems. It belongs to the family Agavaceae. It appears to be well established in Badulla, Nuwara Eliya and Kandy districts. Fibre obtained from this plant is used to make ropes, baskets and cloths. Freshly ground leaves of *Agave vera-cruz* are currently used as a piscicidal agent in fishing by remote farmers in the Knuckles region. The present study is an attempt to evaluate bioactive properties of *Agave vera-cruz*. Antioxidant, cytotoxic and phytotoxic properties were investigated.

Plant materials were collected from Wattappola in Paranapattiya area. Freeze-dried plant materials were ground into a powder and extracted into methanol (MeOH). Concentrated crude extract was subjected to bioassay. Phytotoxic activity against *Lactuca sativa*, cytotoxic activity against *Artemia salina* and antioxidant activity were evaluated. Fractionation involved the use of VLC chromatography using Merck 9385 (40-63  $\mu$ m) silica gel, gravity column chromatography using 7734 Merck silica gel (63-200  $\mu$ m) and analytical thin layer chromatography.

LD<sub>50</sub> value for cytotoxic bioassay was 675 ppm for the MeOH extract. IC<sub>50</sub> value for the DPPH radical assay was 62.0 ppm. IC<sub>50</sub> value for shoot inhibition was 1000 ppm and that for root inhibition was 1800 ppm. These results show that there are some allelopathic compounds present in *Agave vera-cruz*.