Compound **6** was obtained as a yellowish white powder (yield 13 mg), m.p. (208-211°C)**,** TLC using silica gel G 254 F: R_f= 0.39 in solvent system: *n*-butanol:acetic acid:water, 40:10:50 (v/v) upper layer. UV-Visible λmax (nm) MeOH: 329, 300(sh.), 243(sh.), 217 nm; MeOH+$AlCl_3$: 359, 311(sh.) nm, 262, 226; MeOH+$AlCl_3$+HCl: 329, 297 (sh.), 244 (sh.), 218 nm. Notable features of the UV spectra included a prominent peak at 329 nm and a shoulder at 300 nm, characteristic of the phenylpropanoids [29]. Shift with $AlCl_3$ (30 nm) and $AlCl_3$/ HCl also suggested the presence of *O*-dihydroxyl system.

By comparison of m.p., co-TLC, UV, superimposable IR with authentic sample, ^{1}H-NMR and ^{13}C-NMR data (Table 4) with the published data, compound **6** was identified as 5-Caffeoylquinic acid (chlorogenic acid) [30-31]. This is the first report for the isolation of chlorogenic acid from *Inula crithmoides* L.

Some studies have shown potential beneficial properties of chlorogenic acid to humans such as antioxidant, and hepatoprotective activities [32]. Dicaffeoylquinic acids derivatives as chlorogenic acid are responsible for hepatoprotective potential of some herbal extracts and pure isolates [33-34].

4. CONCLUSION:

In vitro and *in vivo* hepatoprotective studies of the methanolic extracts of three Egyptian plants namely, *Inula crithmoides* L. (*Asteraceae*), *Pluchea dioscoridis* (L.) Desf. (*Asteraceae*), and *Phyllanthus reticulates* Poir. (*Euphorbiaceae*) were carried out. The results revealed that *Inula crithmoides* L. possessed the highest hepatoprotective activity among the tested plants. Bioassay-guided fractionation was carried out and the results revealed that the hepatoprotective activity of *Inula crithmoides* L. could be attributed to its content of dicaffeoylquinic acids and their derivatives as chlorogenic acid. Medicinal plants can represent a cheap source for preparing valuable pharmaceutical drugs that are becoming of global importance as hepatoprotective drugs.

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