

Evaluation of a Phytopharmaceutical preparation containing Cynara Extract

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As part of a research project on the quality control of herbal drugs on the Egyptian market, we developed suitable guidelines to ensure quality, safety and efficiency of this preparation.

The preparation under study, Cyncholine capsules, contains Cynara dry extract, Mentha dry extract and heavy magnesium oxide provided by Mepaco – Phytopharmaceuticals, Cairo, Egypt. Reference materials are chlorogenic acid, caffeic acid, pesticide standards, heavy metals standards, “Sigma” TLC plates, “Merck” Animals “albino rats”. Enzymes for liver function (GOT, GPT, ALT, LDH). “Boehringer” Methods: 1 – Analysis of caffeoyl quinic acid derivatives by TLC & HPLC. 2 – Analysis of potential contaminants in the preparation. 3 – Pharmacological & histopathological study to evaluate the efficiency of the preparation.

The percentage of caffeoyl quinic acid derivatives was found 0.5 % calculated as chlorogenic acid. The drug is free from pesticide residues and heavy metals are within the limits as well as the microbiological assays. Concerning the pharmacological study, it was shown that the increase of MDA and LDH induced by CCl₄ toxicity were significantly reduced in rats when given “Cyncholine” capsules especially at a dose of 200mg / kg injected peritoneally indicating the antioxidant effect of the drug, in meantime the increase of serum transferase enzymes induced by CCl₄ were significantly reduced in rats when given doses of 100 and 200 mg/kg indicating a prophylactic effect of the drug for liver functions in a dose dependent manner. Histopathological study reveals that the degree of the change of the liver is less pronounced when the rats administered “Cyncholine” at a dose of 200 mg/kg than that of the CCl₄ control, this is explained by the formation of pseudolobules with fibrosin.

Our conclusion from the previous study confirm the good quality, safety and efficiency of the product for the indications on Label claim of the preparation.