

Contributed and Selected

PHYSIOLOGICAL ACTIVITY OF ACETIC FLUIDEXTRACT OF DIGITALIS.

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Recently a lot of Acetic Fluidextract of Digitalis was returned to us with the statement that "it was of unsatisfactory physiological activity." From the records I found that the preparation had been made in 1912 from digitalis leaves which I had previously tested and found to be of satisfactory physiological activity.

Five cc. of the fluidextract were diluted to 50 cc. with physiological salt solution and various amounts of this dilution injected into eight different guinea pigs with the following results:

Pig No. 1, Weight 350 gm.

Injected—1.0 cc. of dilution (0.1 cc. of acetic fluidextract).

Result—No toxic action noted.

Pig No. 2, Weight 268 gm.

Injected—1.2 cc. of dilution (0.12 cc. of acetic fluidextract).

Result—No toxic action noted.

Pig No. 3, Weight 285 gm.

Injected—1.5 cc. of dilution (0.15 cc. of acetic fluidextract).

Result—No toxic action noted.

Pig No. 4, Weight 290 gm.

Injected—2.0 cc. of dilution (0.2 cc. of acetic fluidextract).

Result—No toxic action noted.

Pig No. 5, Weight 350 gm.

Injected—1.0 cc. of dilution (0.1 cc. of acetic fluidextract).

Result—No toxic action noted.

Pig No. 6, Weight 268 gm.

Injected—1.2 cc. of dilution (0.12 cc. of acetic fluidextract).

Result—No toxic action noted.

Pig No. 7, Weight 285 gm.

Injected—1.5 cc. of dilution (0.15 cc. of acetic fluidextract).

Result—No toxic action noted.

Pig No. 8, Weight 290 gm.

Injected—2.0 cc. of dilution (0.2 cc. of acetic fluidextract).

Result—No toxic action noted.

0.1 cc. of a fluidextract of Digitalis, U. S. P. (1.0 cc. of the 1-10 dilution) should kill a 250 gm. pig within two hours after the development of typical symptoms of digitalis poisoning. As there was some question if any acetic fluidextract of Digitalis would be of corresponding physiologic activity two fluidextracts were freshly prepared from the same ground digitalis leaves. One fluidextract was

made according to the U. S. P. method, the other with acetic acid. Each of these samples were diluted to ten volumes with physiological salt solution and injected into guinea pigs, with the following results:

Pig No. 9, Weight 280 gm.

Injected—1 cc. of dilution (0.1 cc. of acetic fluidextract).

Result—No action.

Pig No. 10, Weight 309 gm.

Injected—1.5 cc. of dilution (0.15 cc. of acetic fluidextract).

Result—No action.

Pig No. 11, Weight 233 gm.

Injected—2 cc. of dilution (0.2 cc. of acetic fluidextract).

Result—No action.

Pig No. 12, Weight 275 gm.

Injected—1 cc. of dilution (0.1 cc. of Fluidextract of Digitalis, U. S. P.)

Result—Salivation but pig did not die.

Pig No. 13, Weight 305 gm.

Injected—1.5 cc. of dilution (0.15 cc. of Fluidextract of Digitalis, U. S. P., made from leaves from store.)

Result—Convulsions, but pig did not die till next morning.

Pig No. 14, Weight 325 gm.

Injected—2 cc. of dilution (0.2 cc. of Fluidextract of Digitalis, U. S. P.)

Result—Severe convulsions. Dead in 30 minutes.

It may be readily seen from the results above that the acetic fluidextract of digitalis was markedly inferior in physiological activity to the U. S. P. product made from the same leaves.

In order to determine if the acetic fluidextract had any physiological activity, calcium carbonate and magnesium carbonate were shaken with a portion of the acetic fluid and after most of the effervescence had ceased the liquid was filtered. 1 cc. of this filtrate was now injected into a guinea pig which weighed 320 gm. No convulsions were noticed. Even salivation, frequent defecation and urination were not observed. The pig died after two days, but post mortem did not show heart in firm systole or blood vessels engorged.

Summary and Conclusion.

The physiological activity of acetic fluidextract of digitalis is undoubtedly markedly less than the fluidextract made by U. S. P. method. In all probability the glucosides are promptly broken down by the acetic acid.

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A RECENT ADULTERANT OF MANACA.

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The supply of crude manaca on the drug markets of the United States, at the present time, consists largely of an unidentified adulterant or substitute. This form (Fig. II) has recently been noted in all samples examined in the proportions of from seventy-six to one hundred percent. It is claimed by importers