

Ashraf_qahwach@yahoo.com

(تاريخ الاستلام 2010 / 4 / 12 ؛ تاريخ القبول 2010 / 7 / 6)

)

(30/

0.1 . (0.08,0.36, 0.64)

/ {300 200 100 50 25 ()}

. %54,%36,%19,%15,%13,%0

7.5, 0)

(3 2 1)

/ (15,

/ 15

. 3

. % 19.4

Study of Cholinesterase Activity in Adult Ewes Treated by the Anthelmintic Drug Levamisole

**Ashraf S. Alias Masod H. Megdad Mohammad H. Ali
Yaser A. Esmail**

*Department of Physiology Biochemistry and Pharmacology
College of Veterinary Medicine
Mosul University*

ABSTRACT

The aim of this study was to examine the toxic effects of levamisole in adult ewes, using a modified electrometric method to measure the cholinesterase (ChE) activity in whole blood, plasma and erythrocyte. The normal mean ChE activity (Δ pH / 30 min) was the highest in the erythrocyte (0.64) , followed by the whole blood (0.36) and then in plasma (0.08). In Vitro, levamisole at concentrations (0,25,50,100,200,300) $\mu\text{m/L}$ caused significant inhibition of erythrocyte ChE by (0%, 13%, 15%, 19%, 36% and 54%) respectively. Adult ewes were divided into three groups each group contained 40 animal. The animals were treated with levamisole by doses of (0, 7.5, 15mg/Kg B.W) by mouth and after zero (1,2,3)h blood sample(erythrocyte) was drawn to measure cholinesterase (ChE) activity. The activity was significantly decrease (%19.4) compared to the control. in activity of cholinesterase in the group that was treated by levamisole 15 mg/kg B.W and these results indicate the ability of levamisole to inhibit ChE activity.

Keywords: Cholinesterase, Ewe, Electrometric method, Levamisole.