

EFFECT OF SODIUM HYDROXIDE TREATMENT ON CHEMICAL COMPOSITION AND *In vitro* DIGESTIBILITY FOR DRIED CRUDE OLIVE CAKE .

Shaker A. Hassan*

Zayed S. Abdel-Rahman**

Faisal T. Awawdeh***

* Dept. of Animal Res. - Agric. Univ. of Baghdad- Iraq. College of Agric.

** Ministry of Education- Amman- Jordan.

*** National and Extension Center for Res. Baqa - Jordan.

ABSTRACT

Olive cake product was treated with 4% NaOH using three levels of moisture (0, 10, and 20% of DM) and three incubation period (0, 15, 30 days) and three temperature (0, 20 and 40°C) to study the effect of NaOH treatment on *in vitro* dry and organic matter digestibility (IVDMD and IVOMD respectively). The results indicated that treatments had highly significant ($P < 0.01$) in increasing in the IVDMD, IVOMD and pH content, from 34.91, 40.53 gm/Kg DM and 6.99% to 37.7, 42.79 gm/Kg DM and 7.92% respectively, and highly significant effect on ($P < 0.01$) increasing OM, from 905.43 gm/Kg DM, to 923.00 gm/Kg DM,. The levels of lignin were significantly decreased in the treated cakes (191.67 g/kg DM) compared to control (244.85 g/kg DM). The sodium hydroxide at this level enhanced both the IVDMD and IVOMD compared to the control. The best results from treatment was obtained with 20% moisture, 30 days incubation period, 40°C temperature. The overall nutritive value of olive cake was significantly enhanced in response to sodium hydroxide treatment.