# **Titre d’article**: Effect of Pistacia lentiscus L. Vegetable Oil on Growth Performance and Coccidiosis in Broiler Chickens: In vitro and In vivo Assessment

**Abstract :**

This study aims to assess the ability of vegetable oil of *Pistacia lentiscus* L. (lentiscus oil) in stimulating growth performance of broiler chickens and protecting them against coccidiosis. For this purpose, an *in vitro* test was first carried out to evaluate the destructive effect of this oil on *Eimeria spp oocysts*. On the other hand, an *in vivo* study was carried out to evaluate, once again, the capacity of the vegetable oil of *Pistacia lentiscus* L. in stimulating broilers growth performance and reducing the coccidiosis clinical signs. Thus, day old chicks were randomly divided into four equal groups: (1) uninfected and not-supplemented control (NI NS); (2) uninfected and supplemented (NI S); (3) infected and not supplemented (I NS); (4) infected and supplemented (IS). Each group was divided into three replicates containing each of them two subjects. The experimental groups (2 and 4) are supplemented with lentiscus oil by force-feeding at the rate of 1 mL per day from the 18th day until the end of the experiment. The chicks of the third and the fourth group are inoculated orally with sporulated oocysts (6.5 × 105 oocysts of *Eimeria spp*) on the day 20 of age. The results showed that lentiscus oil has an anticoccidial dose-dependent effect as shown by oocysts counting and released substances measurement at 273 nm. The growth performance of the (NI S) group was found better with an improvement percentage of 9.14% compared to the control (*p* < 0.05). Likewise, the weight gain of the (I S) group seems slightly higher than that of the control one (1316 g and 1235 g, respectively) (*p* < 0.05). In conclusion, the vegetable oil of *Pistacia lentiscus* L. has shown, not only, a promising growth effect in broiler chickens, but also, it seems to have a protective effect against coccidiosis sequels caused by *Eimeria acervulina* infection.