

## **In vitro Antioxidant and Antibacterial Activities of Methanol Extracts of *Tamus communis* L. from Algeria**

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**Abstract :** The present study was conducted to evaluate the in vitro antioxidant and antibacterial properties of methanolic extracts from roots of *Tamus communis* L. (TCRE), which is a plant used in traditional medicine in Algeria. The antioxidant potential of pattern was evaluated using tow complementary techniques, inhibition of free radical DPPH and the test of  $\beta$ -Carotene/linoleic acid. The antioxidant test indicates that non-polar fractions of TCRE (chloroform and ethyl acetate fractions) were more active than the polar fractions. Among these fractions, the chloroform extract appear in the DPPH test an IC<sub>50</sub> of (18.89  $\mu$ g/ml) comparable to that of BHT (18.6  $\mu$ g/ml). This fraction was able to inhibiting the oxidation of  $\beta$ -Carotene with a percentage of inhibition (89.84 %). In antibacterial test, non-polar fractions showed antibacterial activity very important compared with the polar fractions. These fractions have inhibited the growth of four from nine bacterial strains, causing zones of inhibition from 08 to 23 mm of diameter.

**Keywords :** antioxidant activity, antibacterial activity, *Tamus communis* L., polar fractions

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