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OR18 - Study of the antimicrobial activity of essential oils from the leaves of male and female *Pistacia lentiscus* against pathogenic microorganisms causing diseases in livestock

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Pistacia lentiscus is a dioecious plant which grows spontaneously and is widely distributed in the central Maghreb, widely used by local populations in traditional medicine. The essential oil extracted from its leaves and its components are widely used as antimicrobial agents. This work aims to analyze the chemical composition of essential oils extracted from the leaves of male and female *Pistacia lentiscus* and evaluate their antibacterial activity against pathogenic microorganisms causing diseases in livestock, and which may be responsible for collective food poisoning.

The extraction of the essential oil was carried out by hydro-distillation on dried leaves. The results showed a higher yield of extracted oil for female leaves than for male leaves. The organoleptic and physicochemical analysis of mastic essential oils revealed results in compliance with AFNOR standards.

The analysis of the chemical composition was also carried out by gas chromatography coupled with mass spectrometry (GC/MS) and the results showed relatively significant variations between the two sexes, with average percentages of several major compounds and minors which differ considerably.

The study of antimicrobial activity by disk diffusion technique was carried out on a set of pathogenic strains responsible for diseases in livestock. It showed a sensitivity of certain strains to the essential oils tested, while others appeared resistant.

Keywords: *Pistacia lentiscus*, essential oil, antimicrobial activity, contamination, animal communities.