

# A Review On API As A Lemon Eucalyptus Herbal Mosquito Repellent

Sanket Vidhate V<sup>1</sup>, Digvijay Tikkal S<sup>2</sup>, Saurav Barde S<sup>3</sup>, Krushna Mhase V<sup>4</sup>, Asst Prof. Sabale K<sup>5</sup>

Students, Department of Pharmacy<sup>1,2,3,4</sup>

Guide, Department of Pharmacy<sup>5</sup>

Mrs. Saraswati Wani College of Pharmacy, Ganegaon, Maharashtra

Affiliated to Dr Babasaheb Aambedkar Technological University, Lonore, Raigad

**Abstract:** *Oil of lemon eucalyptus (OLE) and its principal active derivative, p-menthane-3,8-diol (PMD), are widely used plant-derived mosquito repellents marketed as natural alternatives to synthetic repellents such as DEET and picaridin. This review synthesizes current knowledge on the botany and chemistry of lemon eucalyptus, mechanisms of action, laboratory and field efficacy data, formulation approaches, safety and regulatory considerations, and gaps for future research. Overall, PMD-containing products offer protection comparable to low-to-moderate concentrations of DEET in many studies and are an evidence-backed option for adult use; however, limitations include shorter duration in some settings, potential for skin sensitization, and restricted recommendations for young children. The review highlights areas where standardized clinical and field studies are still needed to support wider use and optimized formulations.*

**Keywords:** oil of lemon eucalyptus, OLE, p-menthane-3,8-diol (PMD), mosquito repellent, efficacy, safety, formulation, CDC, botanical insect repellents

