Larvicidal Effects of the Major Essential Oil of Eugenia Uniflora (Myrtaceae) L. against Aedes Aegypti L.

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Aedes aegypti is one of the main vectors that cause public health problems since it is the transmitter of dengue, yellow fever, and chikungunya fever. The first deserves attention for the way it manifests itself - through four serotypes. Dengue has generated a series of clinical problems, and today it is estimated that 50-100 million people are infected annually with dengue worldwide[1]. The Eugenia uniflora is a plant from the Myrtaceae family - the eighth largest distributed throughout Brazil. It is typical of the Cerrado biome, and used in folk medicine to combat diseases such as hypertension, inflammation and hiperglicemia. Due to the non-availability of an effective vaccine for dengue and the raising use of natural products to increase the arsenal of methods for vector control, the present work aims to produce the essential oil from the Surinam cherry and test its larvicide potential against Aedes aegypti. Mature leaves of this plant were used in the amount of about 45 g, and a distillation was made by the steam distillation method. For the separation of the product (oil + water), an organic solvent was used. After this, the separation of the solvent was made using a rotary evaporator apparatus, and the oil in its pure form was mixed with DMSO (dimethyl sulfoxide) 2% v/v, and then applied to the larvae in separate test tubes. The essential oil of E. uniflora presented larvicidal activity at a concentration of 2 mg/mL.

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