



Formulation, Proximate Composition and Anti-Tubercular Potential of Medicated Cookies Against *Mycobacterium tuberculosis* H37Rv Sensitive to Rifampicin, Streptomycin and Isoniazid

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SUMMARY. Cookies are mostly consumed by people in snacks and leisure time to control hunger and get energy. There are varieties of cookies available commercially prepared with wheat flour, sugar, baking powder, ghee and flavors. In this research project, we have formulated medicated cookies using *Carica papaya* L. leaf aqueous extract. Different concentrations of *C. papaya* leaf aqueous extract were incorporated in cookies and the best batch was screened, based upon sensory quality analysis, physiochemical evaluation and proximate composition of the cookies. The selected batch was evaluated for biochemical quality analysis and *in-vitro* anti-tubercular activity against *Mycobacterium tuberculosis* H37Rv sensitive to Rifampicin, Streptomycin and Isoniazid. It has been concluded that the aqueous extract of leaves of *C. papaya* used in the preparation of medicated cookies possess significant anti-tubercular activity as supported by *in vitro* study results using Swiss albino rats tubercular model infected with H37Rv *mycobacterium*.

RESUMEN. Las personas consumen principalmente galletas en bocadillos y en su tiempo libre para controlar el hambre y obtener energía. Hay variedades de galletas disponibles comercialmente preparadas con harina de trigo, azúcar, levadura en polvo, ghee y sabores. En este proyecto de investigación, hemos formulado galletas medicadas utilizando extracto acuoso de hoja de *Carica papaya* L. Se incorporaron diferentes concentraciones de extracto acuoso de hoja de *C. papaya* en las galletas y se seleccionó el mejor lote, basándose en el análisis de calidad sensorial, la evaluación fisicoquímica y la composición próxima de las galletas. El lote seleccionado fue evaluado para análisis de calidad bioquímica y actividad antituberculosa *in vitro* contra *Mycobacterium tuberculosis* H37Rv sensible a rifampicina, estreptomicina e isoniazida. Se ha concluido que el extracto acuoso de hojas de *C. papaya* utilizado en la preparación de galletas medicadas posee una actividad antituberculosa significativa, como lo avalan los resultados del estudio *in vitro* utilizando un modelo tuberculoso de ratas albinas suizas infectadas con *Mycobacterium* H37Rv.

KEY WORDS: biochemical quality analysis, cookies, *in -vitro* anti-tuberculin activity, physiochemical evaluation, sensory quality analysis.

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