

THE POTENTIAL EFFECT OF DIFFERENT TYPES OF FLAXSEED (*Linum usitatissimum*) EXTRACT ON THE CELL VIABILITY OF ORAL FIBROBLASTS HUMAN CELL LINE

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ABSTRACT

Herbal medication and natural products have been successfully demonstrated to have general health beneficial effects. The bioactivities of flaxseed (*linum usitatissimum*) extract have been reported, as previous studies have shown that *l. usitatissimum* extract has many health and beneficial effects such as antimicrobial, anti-oxidant and anti-inflammatory effect. *L. usitatissimum* extract makes a great skin wound healing agent in addition to that it has good effect on the oral cavity in treating ulcers and general oral health benefits. *L. usitatissimum* is extracted using ethanol in three different concentration via soxhlet method, gas chromatography mass spectrum (GC-MS) is used to illustrate the components of *l. usitatissimum* extract. 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide (MTT) assay is used to assess the oral fibroblasts cell viability in three different time lines. The results illustrate the major component present in *l. usitatissimum* extract and the effect of the different ethanol concentrations of flaxseed extract on oral fibroblasts human cell line. *L. usitatissimum* extract show proliferating effect, the 70% flaxseed ethanolic extract produced the highest proliferating effect on fibroblast cells at 24 hours followed by 100% followed by 90% ethanol flaxseed extract, at 48 hours and 72 hours 100% ethanoic extract produced the highest proliferating effect followed by 70% then 90% ethanol flaxseed extract. The results show proliferating effect by *l. usitatissimum* extract on human oral fibroblast cell line.

Keywords: *L. usitatissimum*, GC-MS, MTT