

OR-28**In-Vitro Antibacterial Activity of Processed Moringa Oleifera Seed Extract: Kill-Time Study**

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Earlier research conducted on *moringa oleifera* seed extract not only reveals its excellent coagulant property; it also being proven to possess antibacterial activity against microorganism. An antibacterial agent 4 (α -L- rhamnopyranosyl) benzyl isothiocyanate, a plant synthesized derivatives of benzyl isothiocyanates has been identified as the active antibacterial agent present in the seed. In this study, the mode of antibacterial action was determined using the kill-time study on *e.coli* and *pseudomonas aeruginosa* bacterial strains. The minimum inhibitory concentration (MIC) assay was done using macrodilution broth. MIC values were varied from 0.0125mg/ml to 0.1mg/ml. Kill-time assay was carried out based on standard procedure. The growth of the microbes was monitored for every 30 minutes by viability counting on agar plate. Log reduction of viable cells counts ranged from 0 to 3.6 log₁₀ for *e.coli* and 1log₁₀ to 4log₁₀ for *p.aeruginosa*. The results of the kill-time study revealed that the extract was bactericidal against *e.coli* and *p.aeruginosa* within 30 minutes of contact resulting in about 90% elimination of the strains. Most of the microbes were killed at high MIC value of 0.1 mg/ml, which might suggest that the seed extract exhibits concentration-dependent killing.

Keywords: Benzyl isothiocyanates, *Moringa oleifera*, kill-time, *e.coli*, *p. aeruginosa*.
