

## ABSTRACT

Drug resistant pathogenic microorganisms account for the highest proportion of death today. This study was aimed at extracting essential oils (EOS) from mint. Sensitivity tests of selected pathogenic microorganism were also carried out. EOS were extracted using distillation method. Phytochemical screening of the essential oils for the presence of tannins, alkaloids, glycosides, flavonoids, resins, phenols and steroids was carried out using standard procedures. Sensitivity test of *Staphylococcus aureus* (ATCC 25923), *Klebsiella pneumoniae* (clinical isolate), *Escherichia coli* ((ATCC 25922), *Erwinia carotovora* (ATCC 33244), *Xanthomonas campestris* (ATCC 33913) and *Bacillus subtilis* (ATCC 6633) to the EOS was carried out using agar well diffusion technique. The minimum inhibitory concentration of the test pathogens by the essential oils was carried out using two-fold serial dilution. The yield of essential oils varied from  $1.0\pm 0.01\%$  in first replicate to  $3.0\pm 0.03\%$  in the fourth replicate. All the tested phytochemical compounds were present in the EOS of mint. There was no significant difference between the zones of inhibition of the three replicates ( $F=0.34$   $P=0.74$ ). In addition, there was no significant difference between the MIC's of the three replicates ( $F=0.33$   $P=0.72$ ). Mint from Egerton University has EOS that can be extracted using distillation method. The EOS were bioactive against the selected bacterial pathogens which creates a need for their mass production.

**Keywords:** Egerton, sensitivity, pathogenic bacteria.