

Antibacterial activity of raw and processed meskit (*Prosopis juliflora*) pods' extracts

ABSTRACT

The methanolic crude extracts of raw and processed *Prosopis juliflora* pods were assessed for their antibacterial activity using well-diffusion method on *Escherichia coli*, *Klebsiella* spp., *Staphylococcus aureus*, *Streptococcus* spp., and *Bacillus* sp. Tests showed that raw pods' extract has higher zone of inhibition compared with soaked and roasted pods' extracts with diameter ranged between 13 and 20 mm against all tested bacteria except for *Klebsiella* spp. There was with more inhibition of Gram-positives than Gram-negatives. However, roasted pods extract inhibited *Streptococcus* spp and *Bacillus* only with an inhibition zone of 10 and 6 mm, respectively. Dilution experiments showed that the minimum inhibitory concentration (MIC) of raw pods' extract was as follows; *S. aureus* (250 mg/ml), *Streptococcus* spp. (62.5 mg/ml) *Bacillus* spp. (125 mg/ml) and *E-coli* (125 mg/ml). Results indicated that the MIC of 62.5 mg/ml of raw pods' extract is equivalent to effects of Gentamicin (30 mg) and Kanamycin (30 mg) against *Streptococcus* spp. It was concluded that the raw and soaked *P. juliflora* pods extracts could be a potential source for antibacterial agents. However, roasting of *Prosopis juliflora* pods extremely reduced the strength of antibacterial activity.

Keyword: *Prosopis juliflora*; Processed pods; Antibacterial activity; Pathogenic bacteria