



Calcium oxalate crystallization inhibition by *Pedalium murex* and *Tribulus terrestris* fruit extracts

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Abstract : Urinary calculi are one of the most common disorders of the urinary tract seen all around the world. It is mainly due to the supersaturation of urine. Although there are many medical treatments there is no satisfactory drug to treat them. Urinary calculus is mainly composed of calcium oxalate (CaOx) which is formed due to the higher concentration of stone forming salts in urine. This study is aimed to look for an alternative treatment using *Pedalium murex* and *Tribulus terrestris* fruit ethanol extracts. To confirm the antiurolithiatic activity the extracts were tested in artificially prepared urine samples. The inhibitory effect of the extracts on CaOx was measured using UV-Vis spectrophotometer at 620 nm over various concentrations of extracts 200, 400, 600, 800 and 1000 µg/ml. A significant inhibitory effect on CaOx nucleation, crystal growth and aggregation in the urine sample was found. Maximum inhibition of nucleation of 84.5 % was observed for *Pedalium murex* and 81.3 % for *Tribulus terrestris* at concentration of 2600 µg/ml.

Key words: Urinary calculi, *Pedalium murex*, *Tribulus terrestris*, antiurolithiatic activity, UV-Vis spectrophotometer, CaOx crystallization.