



ABSTRACT

Synthetic sunscreen formulations used by the consumers sometimes have chemical components that give a variety of adverse effects. Therefore the use of natural substances extracted from plants has recently been considered as potential sunscreen resources. The present study aimed for the screening of some ornamental and herbal plants for their antisolar properties. Leaf extracts of the plants were prepared in methanol for determination of absorption spectrum profile using UV-VIS spectrophotometer in wavelength range 200 nm – 400 nm. The *in vitro* sun protection factor (SPF) of extracts at absorbance from 290 nm – 320 nm, was determined applying the Mansur equation. All the extracts showed a prominent absorbance at UVA region, while good absorbance at UVB region and moderate absorbance at UVC region. The photo absorptive property of the various extracts was compared with that of Avobenzone. It was observed that all of the tested plants showed some UV protection potentials with guava extract showing the highest SPF number of 4.273 while bougainvillea showed the lowest SPF number of 2.763. Inclusion of guava extract in petroleum jelly as a base in the development of sunscreen product gives a higher calculated SPF value as compared to a commercial product.

Key terms: Sunscreen, Ultraviolet radiation, UV spectrophotometry, Sun Protection Factor (SPF)