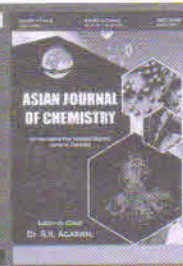


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## Probing the Effect of Adulterants on the UV-Visible Absorption Behaviour of Fruit Extracts

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The effect of adulterants on the UV-visible absorption behaviour of pomegranate and orange fruit extracts has been investigated. It was observed that adulterated fruit extracts exhibited significant changes in their peak absorption wavelengths and intensities. The intensity of the characteristic absorption peak of the pomegranate extract was observed to increase almost linearly with the mixing proportion of apple extract. However, the two characteristic absorption peaks of pomegranate exhibited opposite trend: the peak at lower (higher) wavelength side was increased (decreased) on increasing the mixing proportion of apple extract. The orange extract when adulterated by the extract of sweet lime, the change in its UV-visible profile was appeared weaker in comparison to that of pomegranate and apple mixtures. Prominently, the UV-visible absorption-based distinction has been observed to be significantly affected by the proportions of water content present in the fruit extracts. On changing the concentration of water content, remarkable changes in the intensity/peak positions of UV-visible absorption of fruit extracts were observed. The present results would be helpful in the estimation of adulteration in the edible horticultural extracts for quality assessments.

**Keywords:** UV-visible spectroscopy, Fruit extracts, Adulteration, Dilution.