



Research article

Extraction of natural dye from waste flowers of *Aster (Aster chinensis)* and studying its potential application as pH indicator

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Abstract

Disposal of synthetic dyes has become a cause of concern due to its deleterious effects on environment and living systems. Due to this, efforts are now being made to replace these harmful dyes with natural dyes obtained from plant sources. Our study was aimed to extract natural dye from waste flowers of *Aster chinensis* and further test its application as pH indicator in acid-base titrations. Dark and light pink hued petals of waste aster flowers were used. Their applicability as natural indicators were studied in various acid-base titrations such as strong base-strong acid, strong base-weak acid, weak acid-strong base, weak base-strong acid and strong acid-weak base. These titrations were also performed separately using standard synthetic indicators such as phenolphthalein and methyl red. The end points obtained using natural and synthetic indicators were compared. Natural dyes extracted from dark and light pink coloured aster flowers produced visually distinct colour change at the end points of the studied titrations. These end point values were in correspondence with those obtained from standard pH indicators for the respective titrations. The present study displayed a practical procedure for obtaining suitable extract from waste flowers of aster that can be further used as an accurate, economic and environment friendly replacement for synthetic pH indicators in titrimetric analysis. Additional studies to test other industrial applications of these aster extracts are warranted.