عنوان مقاله:

Areca catechu seed extract as improvised acid-base indicator in titrimetric Analysis: An environmental benign approach

محل انتشار:

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نویسندگان:

Narasimha Raghavendra - *Department of Chemistry K.L.E. Society's P. C. Jabin Science College (Autonomous) Vidyanagar, Hubballi, India*

Leena V Hublikar - *Department of Chemistry K.L.E. Society's P. C. Jabin Science College (Autonomous) Vidyanagar, Hubballi, India*

Soumya R Chitnis - *Department of Chemistry K.L.E. Society's P. C. Jabin Science College (Autonomous) Vidyanagar, Hubballi, India*

Rachel A Joseph - *Department of Chemistry K.L.E. Society's P. C. Jabin Science College (Autonomous) Vidyanagar, Hubballi, India*

Deeksha S Sheelimath - *Department of Chemistry K.L.E. Society's P. C. Jabin Science College (Autonomous) Vidyanagar, Hubballi, India*

Paravati S Pattan - *Department of Chemistry K.L.E. Society's P. C. Jabin Science College (Autonomous) Vidyanagar, Hubballi, India*

خلاصه مقاله:

At present, the synthetic compounds are wide choice as indicators in various acid-base titrations. Due to strict environmental regulations, search for eco-friendly compounds as an effective indicator for various acid-base titrations was started. The current vocation highlights the exploit of Areca catechu seed extract as an efficacious indicator for various acid-base titrations and to determine their Ka values. The Areca catechu seed is easily available and easy to extract. The extraction performed by using the Soxhlet extraction apparatus. UV-Vis spectroscopy, FT-IR spectroscopy, XRD and physical properties (density, viscosity, surface tension and refractive index) and qualitative phytochemical screening was performed for the proper identification of the Areca catechu seed extract. The Areca catechu seed extract exhibits sharp colour change at the end point during the various acid-base titrations. The specific contrast between their colors in both the acid and alkali media made species present in the Areca catechu seed extract suitable for the eco-friendly indicator for four acid-base titrations. The end point obtained by the extract of Areca catechu seed coincide with end point obtained by standard synthetic indicator. Areca catechu seed is found to be economical, useful, accurate, simple and eco-friendly in nature.

کلمات کلیدی:

Indiactor, Titration, Physical property