

ISOLATION AND CHARACTERIZATION OF COMPOUNDS FROM MORUS ALBA L. BY SPECTROSCOPIC METHODS

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ABSTRACT

A mixture of Archidonic acid, Oleantriemoic acid and Dihydroxy oleanoic acid were isolated from the aqueous ethanolic extract of leaves of Morus alba L. (Moraceae) by Flash Chromatography Method. The effort was to separate and purify major phytoconstituents from this well-known plant i.e. Morus alba L. Leaves. M.alba revealed that the plant is highly effective against diseases like diabetes, urinary incontinence, dizziness, insomnia due to anaemia, neurasthenia, hypertension, premature graying of the hair etc. Its leaves mainly contain alkaloids, polyphenols, flavonoids and anthocyanins and fatty acids that are responsible for various health benefits. The structures of the isolated compounds were determined unambiguously by extensive spectroscopical studies. Preparative isolation of phytoconstituents from M. alba L. Leaves, their characterization done by spectroscopic methods. The chromatographic separation of the mixture afforded three M.alba compounds. The compounds were characterized as fatty acids on the basis of extensive spectral data analysis. The current study provides relatively more direct evidence explaining the various more phytochemical investigation about M. alba. Various methods were used for preparation, isolation & characterization of phytoconstituents like MPLC, HPTLC, ¹HNMR, ¹³CNMR, UV, Soxhlet apparatus, Rotary Evaporator, FTIR, Mass spectroscopy etc. Result: M.alba three fatty acids compounds were reported for the plant. Their structures were characterized as Archidonic acid, Oleantriemoic acid and Dihydroxy oleanoic acid. Conclusion: The result concluded that M.alba contained various Fatty acids. Thus, focussing the research towards these kinds of Compounds.

Keywords: Morus Alba, Spectroscopic Analysis, Chromatography, Fatty acids