A Phytochemical Qualitative Analysis of Homoeopathic Mother Tincture BellisPerennis

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Abstract

Background: Phytochemicals area class of bio active molecules found in medicinal plant extracts. Bellisperennis or common daisy belongs to asteracea family which is known as a common plant, used in folk medicine and homoeopathy. The list of bioactivities reported for this plant includes anti-inflammatory, antispasmotic, antiexudatic, expectorant, diuretic. This plant is used as a homeopathic remedy that is utilized for the treatment of various medical conditions. The goal of this study intends to analyse the phytochemical components of homoeopathic mother tincture Bellisperennis.

Materials and Methods: Homoeopathic mother tincture Bellisperennis is obtained and phytochemical qualitative analysis is done.

Results: It reveals the presence of Alkaloids, Flavonoids, Tannins, Terpenoids, and absence of Saponins, Anthocyanin in homoeopathic mother tincture Bellisperennis.

Conclusion: Many earlier studies gathered which confirmed of phytochemicals to be bioactive. Homoeopathic preparation of mother tincture also has phyto chemical constituents.

Further studies like phytochemical quantitative analysis, GCMS Techniques and other Chromatography techniques are to be conducted.

Keywords: Bellisperennis, Homeopathic Mother Tincture, Phytochemical Analysis, Qualitative analysis

Introduction

Medicinal plants are useful for curing human diseases and play an important role in healing due to phytochemical constituents.[1] Medicinal plants have been used in health care since time immemorial. A growing understanding of the significance of medicinal plants has emerged in recent years, and the kingdom of plantsoffers a treasure trove of possible medications. Medications derived from plants are widely accessible, less costly, safe, effective, and rarely cause adverse effects.[2] The bioassay results provide some basis to justify the common use of B. perennis extracts in folk medicine as treatments for respiratory disorders, rheumatism, cancer, certain skin diseases and inflammatory conditions.[4]

Many of these important pharmaceutical functions of common daisy may arise from antioxidant features originate from its phenolic content and quantity. It has been determined to have therapeutic impacts like wound healing, anxiolytic, antitumor, antibacterial, antifungal, antihyperlipidemic, antioxidant, postpartum anti-hemorrhagic, pancreatic lipase inhibitor, and cytotoxic activities.[5] In this present study, Bellisperennis homoeopathic mother tincture was analysed for phytochemical components such as alkaloids, flavonoids, tannins, terpenoid, saponin, and Anthocyanins.

Materials and Methods

Homoeopathic preparation of Bellisperennis Mother Tincture obtained from GMP Certified SimiliaHomoeo Laboratory Pvt Ltd.

Phytochemical Screening Qualitative Analysis

Qualitative analysis was done for Bellisperennis homoeopathic mother tincture to identify the presence of the phytoconstituents by standard procedure.

TestforAlkaloids:

Mayer's Test: The extract was evaporated in a test tube. To the residue dilute HCL was added, shaken well and filtered. To the 2-3 ml of filtrate Mayer's reagent was added. Formation of yellow precipitate showed the presence of alkaloids.

TestforFlavonoids:

Alkaline reagent test: 2 ml of 2.0% NaOH was mixed with extract; concentrated yellow colour was produced. This result showed the presence of flavonoids.

TestforTannins:

Lead Acetate Test: On addition of lead acetate solution to the extract white precipitate appeared.

Test for Saponin:

Foam Test: Crude extract was mixed with 5ml of distilled water in a test tube and it was shaken vigorously. The formation of stable foam was taken as an indication for the presence of saponins.

TestforTerpenoidsTo the test solution 2ml chloroform was added with few drops of conc. Sulphuric acid (3ml) at the side of the test tube. An interface with a reddish-brown coloration is formed if terpenoids constituent is present.

Salkowski Test: To 2 ml of sample, 2 ml of chloroform and2 ml of conc. H_2SO_4 was added. The solution was shaken well. As a result, chloroform layer turned red and acid layer showed greenish yellow fluorescence.

Anthocyanins : 2ml of aqueous extract was taken to which 2N HCl was added and it was followed by the addition of ammonia, the conversion of pink-red turns blue-violet indicates the presence of anthocyanins.

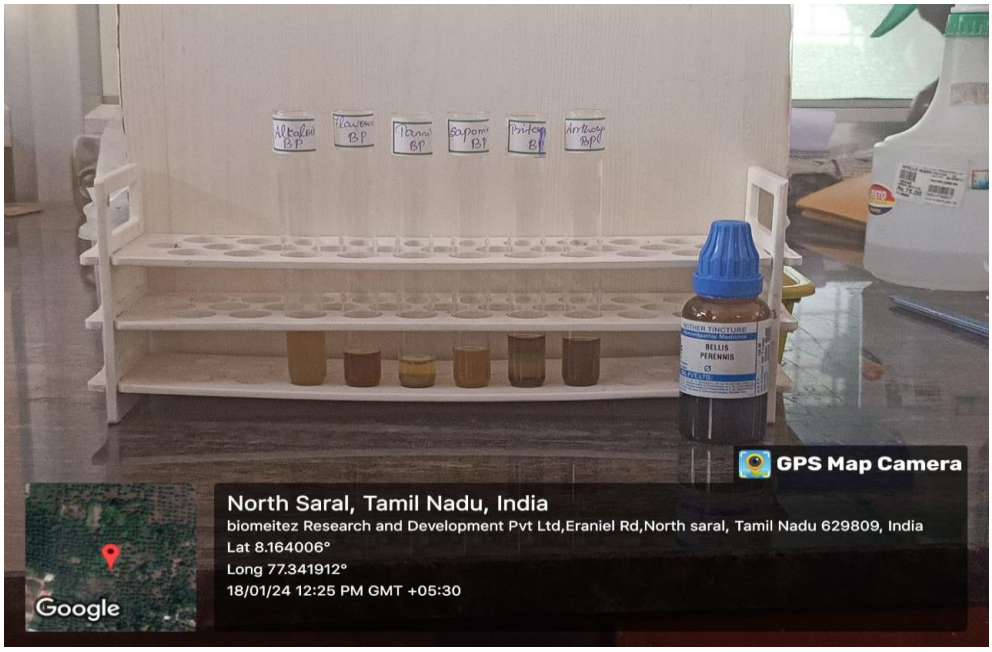
Results

Phytochemical qualitative analysis of Bellisperennis mother tincture revealed the presence of Alkaloid, Flavonoid, tannin, terpenoids and absence of saponins,and Anthocyanin.

Table1: Phytochemicals in BellisPerennis Mother tincture

PHYTOCHEMICAL CONSTITUENTS	MOTHER TINCTURE
ALKALOIDS	+
FLAVONOIDS	+

TANNINS	+
SAPONIN	-
TERPENOIDS	+
ANTHOCYANIN	-



Discussion:

The phytochemical analysis of the mother tincture of Bellisperennis revealed the presence of secondary metabolites such as alkaloids, flavonoids, saponins, and tannins. These compounds are known for their therapeutic potential and align with the reported traditional uses of Bellisperennis. The findings are consistent with previous studies that reported the presence of flavonoids and saponins in Bellisperennis extracts, which are linked to its anti-inflammatory and analgesic properties.The presence of flavonoids suggests a potential mechanism for the anti-inflammatory activity of Bellisperennis, making it a valuable remedy in managing conditions involving inflammation. The combination of flavonoids and alkaloids in the mother tincture may contribute to the modulation of inflammatory pathways, supporting its traditional use in treating bruises, sprains, and musculoskeletal pain. While this study highlights the qualitative presence of phytochemicals, quantitative analysis is needed to determine the exact concentration of these compounds.

Conclusion:

The phytochemical qualitative analysis of the homoeopathic mother tincture Bellisperennis reveals the presence of various bioactive compounds, including alkaloids, flavonoids, tannins, saponins, glycosides, and phenolic compounds. These secondary metabolites are known for their potential therapeutic properties, such as anti-inflammatory, antioxidant, and analgesic effects, which align with the traditional use of Bellisperennis in homoeopathy.

The findings of this study emphasize the scientific basis for the efficacy of Bellisperennis tincture in managing inflammatory conditions, pain, and wound healing. The presence of these phytochemicals supports its role in modulating biological pathways associated with inflammation and oxidative stress. Future studies, including quantitative phytochemical analysis and in vivo pharmacological evaluations, are recommended to further explore its mechanism of action and therapeutic potential.

Overall, this study provides a foundational understanding of the phytochemical composition of Bellisperennis tincture and underscores its value in integrative medicine.

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