

Ákos Máthé
Irfan Ali Khan *Editors*

Medicinal and Aromatic Plants of India, Vol. 3

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Chapter 8

Chlorophytum borivillianum L.



Sahil Hussain , Arun Kumar , Kuldeep Singh, and Muhammad Arif

Abstract Medicinal plants play a very significant role in the life of communities ranging from medicine to foods, drinks, cosmetics and some others in our daily uses. *Chlorophytum borivillianum*, in Hindi, is known as ‘Safed Musli’. It is a famous species, called “White Gold” or ‘Divya Aushadhi’, of the family Asparagusaceae. As a traditional Indian plant, it is widely cultivated throughout India. It is used as an herbal drug with unique medicinal properties to cure many diseases, since ancient times in Ayurvedic, Siddha, Unani and Homeopathic formulations. Phytoconstituents to support its various health benefits reported from the tuberous roots of *C. borivillianum* are Saponins, Glycosides, Polysaccharides, Alkaloids, Proteins, Carbohydrates, Flavones, Vitamins, Phenols, Resins, Minerals with sugars like fructose, xylose, glucose, sucrose, mannose, and galactose. This substance has traditionally been utilized for its immunomodulatory, antioxidant, aphrodisiac, lactation-enhancing, anticancer, antidiabetic, anti-arthritic, anti-inflammatory, antimicrobial, anthelmintic, analgesic, cardioprotective, cholesterol-lowering, antiviral, and health-restorative properties. It is used in managing lipid metabolism and promoting overall health.

Keywords *Chlorophytum borivillianum* · Phytoconstituents · Herbal food · Bioactive compounds

8.1 Introduction

The main components of more beneficial natural medications are frequently derived from medicinal plants. Through these medicinal plants and herbs, various active constituents are still extracted in large amounts to till date. *Chlorophytum borivillianum* shown (Fig. 8.1) is a well-established remedial plant belonging family Liliaceae with assorted therapeutic applications in the Ayurvedic system of medicine

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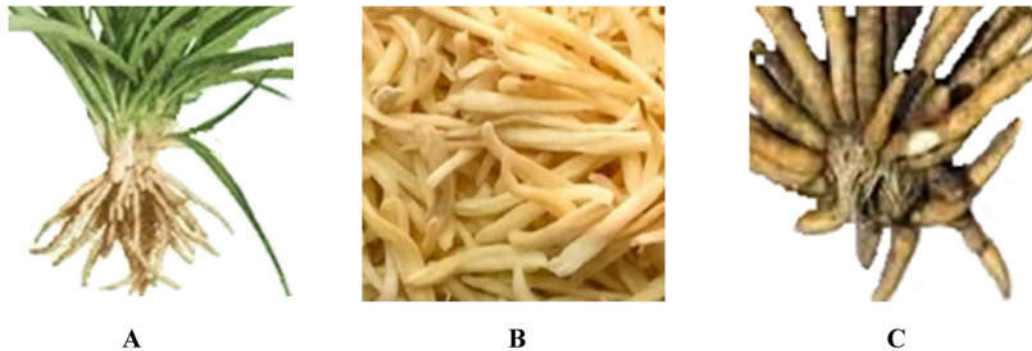


Fig. 8.1 *Chlorophytum borivilianum* (a) Plant, (b) Root, (c) Dried Root

(Purohit et al. 1994). This plant species was first described in India in 1954 and since then it has become extinct owing to overexploitation. It holds the sixth position among the 28 essential medicinal plants that the National Medicinal Plants Board of India emphasizes safeguarding and promoting. In India, it is mostly found in North Gujarat, Southern Rajasthan, and West Madhya Pradesh. This plant may be found growing in a broad range of environments in nature, from exposed rocky areas to shaded, humus-rich forest soil (Singh and Chauhan 2003). The economic part of this plant is its root which is generally used in many traditional folk medicines for dozens of years.

8.2 Geographical Distribution

Safed Musli, originally native to subtropical and tropical regions of Africa, was introduced to India from South Africa, in 1954. *C. borivilianum* thrives in various habitats and landscapes, primarily cultivated in forested areas across the globe. It is commonly found at elevations of up to 1500 meters and is distributed in tropical Africa, Australia, and the Americas. The plant's main geographical regions include Western Madhya Pradesh, North Gujarat (specifically the Dang forests), Southern Rajasthan, and the subtropical Himalayas from Chennai, Kumaon, Bengal, Khasia hills, Kokan, Assam, Kanara, the West Peninsula to Kanyakumari (Manjunatha et al. 2004). It can also be located in the Himalayan valleys, Satpuda, Aravalli, Vindhya, Haryana, Kolhapur, Pune, and Raigad in Maharashtra. Optimal growth conditions for this plant involve sandy loamy soil, and cultivation typically takes place between April and May (Verma et al. 2020; Acharya et al. 2008a, b; Grover 2021).

8.3 Taxonomic Characteristics

Kingdom: Plantae, Clade: Tracheophytes, Clade: Angiosperms, Clade: Monocots, Order: Asparagales, Family: Asparagaceae, Subfamily: Agavoideae, Genus: *Chlorophytum*, Species: *borivilianum*.