1.1 INTRODUCTION

India has a rich legacy of conventional medicine constituting with its different components like Ayurveda, Siddha and Unani. The development of these conventional systems of medicines with the perspectives of safety and quality will help not only to preserve the conventional legacy but also to lessen the use of natural products in healthcare (Mukherje et al., 2006). Such drugs are very prone to adulteration if the supply of crude drug is poor. This adulteration could be prevented by various pharmacognostic parameters. Pharmacognostic study is the preliminary step in the standardization of crude drugs. The detailed pharmacognostic evaluation gives priceless information regarding the morphology, microscopical and physical characteristics of the crude drugs.

The standardization of a crude drug is essential part of establishing its right identity. Prior to any crude drug is included in herbal pharmacopoeia, pharmacognostic as well as other standard parameters have to be established (Abere et al., 2007). Therapeutic efficacies of medicinal plants depend upon the quality and quantity of chemical constituents. It has been established that chemical constituents of a plant species vary with regard to climate, seasons and geographical localities (Bapodara et al., 2011). A number of different bases are used for morphological studies and a natural variation in these characteristics play a significant role for preliminary evaluation of crude drugs. The basis of investigation by evaluation of microscopic characters is that there are always sufficient differences in the same type or different types of plants as far as the cell characteristics are concerned (Mukherjee, 2002).
In some plants toxic constituents are also present therefore, it is essential to evaluate their quality, safety and efficacy. Right identification and quality assurance of the starting material is therefore, an essential prerequisite to ensure reproducible quality of herbal medicine, which contributes to its safety and efficacy (Joshi et al., 2004; Chanda et al., 2010). In most of the cases of herbal medicine, misuse starts with wrong identification. Many of the traditional systems have records where one common vernacular name is given to two or more entirely different species (Dineshkumar, 2007).

Plants are potent biochemists and have been components of phytomedicine since times immemorial. Plant based natural constituents can be derived from any part of the plant like bark, leaves, flowers, roots, rhizome, fruits, seeds that is, any part of the plant may contain active components. The methodical screening of plant species with the purpose of discovering new bioactive compounds is a regular work in many laboratories. Plants are collected either randomly or by following leads supplied by local healers in geographical areas where the plants are found (Parekh et al., 2006).

Fresh or dried plant materials can be used as a source for the extraction of secondary plant components. Extraction methods used pharmaceutically involves the separation of medicinally active portions of plant tissues from the inactive/inert components by using selective solvents. During extraction, solvents diffuse into the solid plant material and solubilize compounds with similar polarity (Ncube et al., 2008). The extract obtained after extraction, contains complex mixture of many secondary metabolites, for example alkaloids, glycosides, terpenoids and flavonoids (Handa et al., 2008).
In India, Malaysia and Thailand, about 150 wild plants species have been identified as sources of emergency food (Nesamvuni et al., 2001). Most of rural people dependent on the surrounding forests for their day-to-day needs. Proximate and nutrient analysis of wild edible plants plays a crucial role in assessing their nutritional significance (Pandey et al., 2006). The considerable use of wild edible rhizome species by the local people in their diet impelled us to carry out the present nutrient analysis. In spite of the various medicinal uses attributed to this plant, there is no pharmacognostical report on the rhizome of the plant till date. There are also no data available on the anatomical and other physicochemical standards required for the quality control of its crude drug. Hence, the present investigation has been undertaken to determine the pharmacognostical standards for authenticating the plant material of rhizome of *Curcuma pseudomontana* J. Graham.