



PHYTOCHEMICAL SCREENING OF BARK OF *LITSEA GLUTINOSA* (MAIDA CHHAL)

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ABSTRACT: In present investigation preliminary phytochemical screening of extract of bark powder of *Litsea glutinosa* was carried out. The bark powder was subjected to aqueous, methanolic and ethanolic extraction followed by qualitative screening for major phytochemicals. Investigation confirmed the presence of alkaloids, flavonoids, glycosides, phenols, tannins and saponins. Results of qualitative tests of tannin, phenol, flavonoids and terpenoids were better with methanolic extracts. Whereas, tests of alkaloid and glycosides were better with ethanolic extract. Analysis of variance revealed that investigated populations of the *L. glutinosa* (maida) were differed significantly for flavonoids content.

Keywords: *Litsea glutinosa*, phytochemicals, screening

Citation: Tripathi A, Ganesh, Pardhi Y, Saxena HO, Mohammad N (2017) Phytochemical screening of bark of *Litsea glutinosa* (Maida Chhal). Indian J Trop Biodiv 25(1): 88-92

Received on : 11 May 2017

Accepted on : 30 May 2017

Published on : 30 Jun. 2017

Maida chhal i.e. Indian Laurel (*Litsea glutinosa* Lour) is an evergreen or deciduous tree, 3-15 m tall

belonging to the family Lauraceae. The genus *Litsea* Lam. comprises 44 species in India. It is found throughout in the country ascending up to an altitude of 1400 m in the Himalayas (Sukh Dev, 2006). It is native to India, Southern China, Malaysia, Australia and the Western Pacific islands. It has been introduced and is established in Mauritius, Réunion and Mayotte (GISD 2012).

The bark of *L. glutinosa* constitutes the common demulcent drug sold in Indian market under the name of Maida Lakri. It is mucilaginous, feebly balsamic and mildly astringent. Sap of fresh bark or its decoction is prescribed as a remedy for diarrhea, rheumatism, and as an aid to longevity. In addition, in current uses, a paste prepared by grinding bark with water is used as a plaster in cases of sprain, bruises, wounds, inflammation, back pain, rheumatic and gouty joints, bone fractures etc. It has analgesic, antiseptic and emollient effects (Kirtikar and Basu 1981; Devi and Meera 2010). In China, the oil contained in the seed (50%) is used to make soap (Huang Puhua et al. 2008). More recently, *L. glutinosa* has been investigated as a source of essential oils, arabinosylans and other components with antiseptic properties (Prusti et al. 2008; Qin WenHui et al., 2012; Das et al., 2013). The bark is also used in animal health care. Among the veterinary uses, application of bark-paste on the limb

fracture and on the wound of the necks of bullocks is prominent. In the latter case, the fresh bark is mashed and applied hot on the affected part. This application is continued twice a day for 2-3 days (CSIR, 1992).

The phytochemical constituents of bark of *L. glutinosa* have been shown to possess effective antibacterial and antifungal activity (Hosamath, 2011). Numerous species of *Litsea* contain several biologically-active compounds like alkaloids (Zhang et al., 2012), flavonoids (Lee and Zhang 2005), steroids (Choudhury et al., 2013), terpenes, triterpenoids and essential oils (Wang et al 1999; Choudhury et al 1996). Numerous studies have shown its efficiency as anticancer (Ho et al 2010), cytotoxic and anti-HIV agents (Agrawal et al., 2011).

Present study was undertaken to screen the bark samples of *Litsea glutinosa* collected from Madhya Pradesh and Chhattisgarh for major phytochemicals and estimate the amount of flavonoids in different accessions.

MATERIALS AND METHODS

Collection of material

Genetics and Plant Propagation Division of the Tropical Forest Research Institute, Jabalpur has collected bark samples of *Litsea glutinosa* from Seoni, Balaghat, Marvahi, Kondagaon, Amarkantak, Chhindwara, Rewa, Dhamtari and Jagdalpur during collection of propagules for establishment of germplasm conservation bank. Extract of these bark samples were subjected to