

Project Title:**Bioprospecting of Essential Oils. SEED/TIME/020/2014**

Name of Principal Investigator	Dr. Vineet Kumar, Forest Research Institute, Dehradun.
Co-Principal Investigator	Dr. Pradeep Sharma, Forest Research Institute, Dehradun
Thrust Area	Balancing Forest use & Conservation
Project Area	Dehradun, Chakrata and Dhanaulti in Uttarakhand
Total cost of Project	Rs.21,64,000/-
Date of Start	16 January 2017
Date of Completion	15 January 2020
Achievements	✓ Isolation of the essential oils from identified species - <i>Eucalyptus citridora</i> and <i>Cymbopogon citratus</i> leaves were collected and authenticated -Essential oil was extracted from the leaves of <i>Eucalyptus citridora</i> and <i>Cymbopogon citratus</i> in 1.05 and 1.17 % yield respectively.
	✓ Physical-chemical characterization of essential oils -GC-MC analysis of the essential oil extracted from the <i>Eucalyptus citridora</i> and <i>Cymbopogon citratus</i> was carried out, and the constituents identified.

Project Goal

To promote bioprospecting of essential oils as an alternate livelihood option for the local communities in mountain areas thereby reducing the emphasis on traditional crops.

S.No.	Approved Objectives	Objectively Verifiable Indicators
01.	Isolation of the essential oils from identified species	List of species identified for essential oil extraction
		List of essential oils isolated
		List of facilities developed
		List of technologies applied
		List of trainings imparted
02.	Physical-chemical characterization of essential oils	List of essential oils characterized
		Details of physical-chemical characterization
		List of equipment/facilities developed
03.	Purification and separation of constituents	List of essential oils whose constituents were purified and separated
		Details of the purification and separation of constituents
		List of technologies applied
04.	Structural analysis of constituent compounds	List of constituent compounds whose structural analysis done
		Details of the structural analysis

Other indicators	No. of institutions created/linkages developed
	No. of awareness workshops conducted
	Family income increment
	No. of participants
	No. of technologies adopted
	No. of training manuals distributed
	No. of documentations