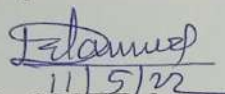




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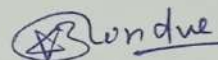
CERTIFICATE

This is to certify that the work incorporated in the project report entitled "Extraction of caffeine from coffee sample and Synthesis, characterization of caffeine Complexes $[M(\text{caf})_4X_2]$ $M = \text{Mn(II)}, \text{Co(II)}, \text{Fe(II)}, \text{Ni(II)}$ $X = \text{Cl}$; caf : caffeine and to study their applications" submitted by Dhaygude Vaibhav Mahadev, Roll No 16161. for the partial fulfilment of practical course CHO 5406 for the degree of master of science in **Organic chemistry**. The project was carried out in excellent/satisfactory manner under my supervision in Department of chemistry, Tuljaram Chaturchand college, Baramati.


11/5/22

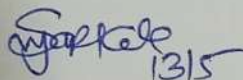
Prof. M.R. Dalave

(Project guide)



Prof. R. S. Bhondawe

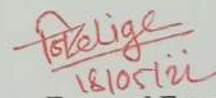
(PG Co-ordinator)


13/5

Prof. S.R. Kale

Head

Department of chemistry


18/05/22

External Examiner



Project Report on

**Extraction of caffeine from coffee sample and Synthesis,
characterization of caffeine Complexes $[M(\text{caf})_4X_2]$ $M = \text{Mn(II)},$
 $\text{Co(II)}, \text{Fe(II)}, \text{Ni(II)}$ $X = \text{Cl}$; caf : caffeine and to study their
applications**

Project report submitted to

The department of chemistry

TULJARAM CHATURCHAND COLLEGE,

BARAMATI

DIST-PUNE

As partial fulfilment of M.sc degree

2021-2022

By

Mr. Dhaygude Vaibhav Mahadev

Under the guidance of

Prof. M.R. Dalave