

**DEPARTMENT OF CHEMISTRY**  
**PACIFIC ACADEMY OF HIGHER EDUCATION AND**  
**RESEARCH UNIVERSITY, UDAIPUR**

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**Prof. RAMESHWAR AMETA**  
Professor

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**CERTIFICATE**

It gives me immense pleasure in certifying that the thesis entitled “**PHYSICO-CHEMICAL ANALYSIS OF GROUND WATER FROM TWO TALUKAS (BHARUCH AND ANKLESHWAR) OF BHARUCH DISTRICT**” submitted by **BHAVIN P. PATELIYA** is based on the research work carried out under my guidance. He has completed the following requirements as per Ph.D. regulations of the University;

- (i) Course work as per University rules.
- (ii) Residential requirements of the University.
- (iii) Regularly presented Half Yearly Progress Report as prescribed by the University.
- (iv) Published/ accepted minimum of two research paper in a refereed research journal.

I recommend the submission of thesis as prescribed/ notified by the University.

Date:

**(Prof. RAMESHWAR AMETA)**  
Supervisor

# DEPARTMENT OF CHEMISTRY

SHETH L.H. SCIENCE COLLEGE MANSA

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**Prof. KARTIK B. VYAS**

Professor

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I recommend the submission of thesis as prescribed/ notified by the University.

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# DECLARATION

I, **BHAVIN P. PATELIYA S/o Mr. PARASHOTTAMBHAI** resident of **CM-89, Opposite Lakhubha Holl, Kaliyabid, Bhavnagar, Gujarat - 364001** hereby declare that the research work incorporated in the present thesis entitled **“PHYSICO-CHEMICAL ANALYSIS OF GROUND WATER FROM TWO TALUKAS (BHARUCH AND ANKLESHWAR) OF BHARUCH DISTRICT”** is my original work. This work (in part or in full) has not been submitted to any University for the award or a Degree or a Diploma. I have properly acknowledged the material collected from secondary sources wherever required. I solely own the responsibility for the originality of the entire content.

Date :

**(BHAVIN P. PATELIYA)**

Place:

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I, **BHAVIN P. PATELIYA**, hereby declare that the Pacific Academy of Higher Education and Research University Udaipur, Rajasthan shall have the rights to preserve, use and disseminate this dissertation/thesis entitled **“PHYSICO-CHEMICAL ANALYSIS OF GROUND WATER FROM TWO TALUKAS (BHARUCH AND ANKLESHWAR) OF BHARUCH DISTRICT”** in print or electronic format for academic / research purpose

Date :

**(BHAVIN P. PATELIYA)**

Place:

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Date :  
Place:

**(BHAVIN P. PATELIYA)**

# PREFACE

Physico-chemical analysis of the ground water collected from the Bharuch district of Gujarat with respect to three different seasons such as Winter, Summer and Monsoon. Two talukas such as Ankleshwar and Bharuch of Bharuch district, (Gujarat) were selected for the measurement of physico-chemical parameters such as concentration of different ions like chloride, fluoride, nitrate, calcium, sulphate and magnesium, pH, Chemical oxygen demand (COD), Biological oxygen demand (BOD), total alkalinity, dissolved oxygen (DO), total dissolved solid (TDS). Analysis was done for Ankleshwar and Bharuch Taluka of Bharuch district, Gujarat with 15 different stations from each taluka. All the parameters measured were compared with the standard value for the potable water and our objective to do this is to make peoples of these regions aware in terms of quality of water they are using. Also, they will be able to do needful work to improve the quality of water. This presented doctoral thesis is also very useful for the researchers for enhancing their research work and also for the peoples who want to check the quality of potable water.

In the present work there are thirty different station from the two taluka of Bharuch district were selected as given below:

## **1. ANKLESHWAR TALUKA:**

SARTHAN, TELVA, PILUDRA, UMARWADA, JETALI, PIPROD, AVADAR, PARDI MOKHA, SANGPOR, KOSAMADI, PANOLI, KHAROD, MOTALI, ANDALA AND UTIYADARA

## **2. BHARUCH TALUKA:**

ADOL, AMDADA, AMLESHWAR, BAMBUSAR, BHUVA, CHOLAD, DABHALI, GHODI, HALDAR, KARELA, KELOD, OSARA, SAMLOD, SEGVA AND SHAHPURA



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