

**Isolation and characterization of nitrilase of thermophilic  
*Pseudomonas* sp. KNB-2, isolated from industrial waste  
disposal site of Kirti Nagar, New Delhi**

*A Major Project dissertation submitted*

*in partial fulfilment of the requirement for the degree of*

**Master of Technology**

**In**

**Industrial Biotechnology**

*Submitted by*

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## **CERTIFICATE**

This is to certify that the M. Tech.(Industrial Biotechnology) dissertation entitled **“Isolation and characterization of nitrilase of thermophilic *Pseudomonas* sp. KNB-2, isolated from industrial waste disposal site of Kirti Nagar, New Delhi”**, submitted by **Sandeep Kumar Pathak (Roll No. 2K13/IBT/04)** in partial fulfillment of the requirement for the award of the degree of Master of Technology, Delhi Technological University (formerly Delhi College of Engineering, University of Delhi), is an authentic record of the student’s own work carried out by himself. The information and data enclosed in this report is original and has not been submitted elsewhere for honoring of any other degree.

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## **DECLARATION**

I hereby declare that the M. Tech major project dissertation entitled, "**Isolation and characterization of nitrilase of thermophilic *Pseudomonas* sp. KNB-2, isolated from industrial waste disposal site of Kirti Nagar, New Delhi**" submitted by me to Delhi Technological University, Delhi in partial fulfillment of the requirement for the award of the degree of M. Tech Industrial Biotechnology is a record of bonafide work carried out by me under the guidance of **Dr. Monica Sharma**, Assistant Professor, Department of Biotechnology, Delhi Technological University, New Delhi.

I, further declare that the work reported in this report has not been submitted, and will not be submitted, either in part or in full, for the award of any other degree or diploma of this University or of any other institute or university.

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## ***Acknowledgments***

*At the very onset, I would like to express my sincere gratitude to my supervisor Dr. Monica Sharma, Assistant Professor, Department of Biotechnology, Delhi Technological University, for her guidance, continuous support, and expertise throughout this study.*

*I am also thankful to Prof. D. Kumar, Head, Department of Biotechnology, Delhi Technological University Delhi, and previous Head Dr. B.D. Malhotra for the excellent opportunities and facilities provided for postgraduate education.*

*Thanks to all my seniors Dr. Rajkumar Bidlan, Dr. Saroj Kumar, Dr. Satish Kumar, Dr. Abhishek Saini, Dr. Saurabh Kumar and Dr. Vineet Kumar Goswami for their advices and support during my research work. I am also thankful to Mr. Chhail Bihari and Mr. Jeetendra for their help during experimental work.*

*I am also thankful to my family and friends including, Monika, Sakshi, Ruchi, Ashok & Brijesh who helped me for all the ways in my project work.*

*I am especially thankful to Mr. Anil Kumar, Mr. Rajesh and Mr. Sandeep for their assistance to maintain all chemicals requirements in my project work.*

*Place: New Delhi*

*Date: 15/07/2015*

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## CONTENTS

	TOPIC	PAGE NO
	<i>LIST OF FIGURE</i>	(i)
	<i>LIST OF TABLE</i>	(ii)
	<i>LIST OF ABBREVIATION</i>	(iii)
1.	ABSTRACT	1
2.	INTRODUCTION	2
3.	REVIEW OF LITERATURE	5
	3.1. Nitriles and nitrilase super family enzymes	5
	3.2. Biosynthesis of nitrile compounds	7
	3.3. Nitrilases	8
	3.3.1. Structural property of nitrilase	10
	3.3.2. Catalytic property of nitrilase	11
	3.3.3. Mechanism of catalytic reaction	12
	3.3.4. Source of thermophilic nitrilase	14
	3.3.5. Classification of nitrilase	18
	3.3.6. Characterization of nitrilase	19
	3.3.7. Application of nitrilase	27
4.	METHODOLOGY	29
	4.1 Sample Collection	29
	4.2 Isolation of thermophilic nitrilase bacteria	29
	4.3 Cell and colony characterisation	29
	4.4 Production of nitrilase producing bacteria	30
	4.5 Enzyme activity determination assay	30
	4.6 dry cell weight	31
	4.7 Optimization of culture conditions for the production of nitrilase by <i>pseudomonas</i> sp. knb-2	32
	4.8 Optimization of reaction conditions for nitrilase activity (whole cells)	34
	4.9 Isolation and characterization of nitrilase of knb-2 stain	35
5	RESULTS AND DISCUSSION	41
	5.1 Isolation and screening of thermophilic bacterial isolates for nitrilase activity	41
	5.2 Effect of nitriles and amides on nitrilase production	42

5.3	Optimization of production condition for nitrilase producing bacterial strain	43
5.4	Optimization of reaction conditions for nitrilase activity (whole cells)	47
5.5	Isolation and characterization of nitrilase of pseudomonas sp. KNB-2	49
6	CONCLUSION	54
7.	FUTURE PROSPECTIVE	55
8	REFERENCES	56
9	APPENDIX	61

## LIST OF FIGURES AND TABLES

### FIGURES

Sr.No.	FIGURE	DESCRIPTION	page no.
1.	1.	Structure of nitriles occurring in nature	2
2.	2.	Nitrile hydrolysis by single and intermediate root	3
3.	3.	Types of reactions catalyse by nitrilase super family	7
4.	4.	Biosynthesis of nitrile compounds	8
5.	5.	Structure of nitrilase	11
6.	6.	Catalytic mechanism of nitrilase	12
7.	7.	Mechanism of nitrile hydrolysis	13
8.	8.	Gram staining of strain showing pink colour and rod shape	41
9.	9.	Graph of nitrilase activity in different inducers	42
10.	10.	Graph of Specific activity curve in different medium	43
11.	11.	Graph of Specific activity and growth curve at different pH	44
12.	12.	Graph of specific activity and growth curve at different temperature	45
13.	13.	Graph of specific activity and growth curve at different benzonitrile concentration	46
14.	14.	Graph of specific activity at different buffer system and pH	47
15.	15.	Graph of specific activity in different substrate	48
16.	16.	Graph of specific activity graph at different Benzonitrile (substrate) concentration	49
17.	17.	Graph of specific activity at different incubation temperature	50
18.	18.	Graph of Specific activity of sonicated cells induced by different substrate	51
19.	19.	Graph of Specific activity of different fraction	52
20.	20.	SDS PAGE analysis of crude sample showing nitrilase activity	53
21.	21.	SDS PAGE of 47 kDa and 43 kDa protein bands	53

## TABLES

SNO.	TABLE	DESCRIPTION	PAGE NO
1.	1.	List of nitrilase possessing bacteria	17
2.	2.	Distribution of nitrilase producing organism in nature	19
3.	3.	List of nitrilase producing organisms and their corresponding substrate	20
4.	4.	Optimum pH and maximum pH stability of nitrilase	21
5.	5.	Substrate specificity of nitrilase	24
6.	6.	Nitrilase optimum temperature and temperature stability	25
7.	7.	Molecular characterization of purified nitrilase enzyme	28
8.	8.	Application of nitrilase in production of commodity chemicals and fine chemicals.	29
9.	9.	Compositions of media screened for nitrilase production by <i>Pseudomonas Sp. KNB-2</i>	34
10.	10.	Composition of gel solution for a 1mm thick gel	39
11.	11.	Composition of sample solubilising buffer	39
12.	12.	Composition for 10ml solution	39
13.	13.	Composition of electrophoretic buffer	40
14.	14.	Composition of staining solution	40



## LIST OF ABBREVIATION

ACN	Acetonitrile
ACR	Acrylonitrile
ACD	Acetamide
AD	Acrylamide
AHA	Acetonitrilehydrolysing activity
BSA	Bovine serum albumin
BZ	Benzonitrile
DTT	Dithiothreitol
EDTA	Ethylene diaminetetraacetic acid
EC	Enzyme class
IAA	Indole-3-acetic acid
IAN	Indole-3-acetonitrile
HPLC	High performance liquid chromatography
KDA	Kilodaltons
M	Molar
MM	Mili molar
NHASE	Nitrile hydratase
NIT	Nitrilase
NO	Nitric oxide
OD	Optical density
PEG	Polyethylene glycol