

INDEX

TOPICS	page no.
<u>Chapter 1: LITERATURE REVIEW.....</u>	6
(a) Introduction	
(b) Where does arsenic come from?	
(c) Sources of arsenic	
(d) Arsenic toxicology	
(e) Arsenic levels in India	
<u>Chapter 2: WHY NANO?.....</u>	13
(a) Why nano materials are superior as compared to existing materials.	
(b) Why iron nano materials are selected	
(c) Gamma- Fe_2O_3 [$\gamma\text{-Fe}_2\text{O}_3$] (Maghemite)	
(d) Titanium dioxide [TiO_2]	
<u>Chapter 3 : PREPARATION TECHNIQUES</u>	17
(a) Mechanical milling	
(b) Gentle chemical route	
<u>Chapter 4 : X RAY DIFFRACTION ANALYSIS.....</u>	20
(a) Basics of XRD	
(b) Results and discussion	
1. XRD pattern of $\gamma\text{-Fe}_2\text{O}_3$	
2. XRD pattern of TiO_2 nanoparticles	
3. XRD pattern of TiO_2 micron size particles	
(c) Single line approximation	

(d) Table for particle size and strain

CHAPTER 5 : FOURIER TRANSFORM INFRA RED SPECTROSCOPY

(FTIR)26

(a) Basics of FTIR

(b) Results and discussion

CHAPTER 6 : Arsenic removal from ground water.....31

(a) introduction

(b) Methods and materials

(c) Atomic absorption spectroscopy

(d) Freundlich adsorption isotherm

FUTURE PLANS37

REFERENCE.....38