

### **Table of Contents**

Abstract	i
Revision Control	ii
Preamble	iv
Table of Contents	ix
List of Figures	xiii
List of Tables	XV
Acronyms & Abbreviations	xvii

#### Chapters

Executive Summary	1.1
About Barium Nitrate	1.1
Barium Nitrate Production Process	1.2
Economic Analysis	1.3
About Barium Nitrate	2.1
Commercial Forms & Applications	2.2
Barium Nitrate Production Routes	2.3
Process Overview	3.1
Technology Maturity Assessment	3.1
Product(s) Description	3.3
Inputs Description	3.3

# Intratec

Industrial Site Configuration	4.1
Process Unit	5.1
Block Flow Diagram	5.2
Description	5.4
Site Infrastructure	6.1
Assumptions	6.1
Description	6.2
Process Consumptions & Labor Requirements	7.1
Key Input & Output Figures	7.1
Labor Requirements	7.2
Capital Costs Summary - United States	8.1
Assumptions	8.2
Total Capital Investment	8.3
Operating Costs Summary - United States	9.1
Assumptions	9.2
Operating Variable Costs	9.3
Total Operating Cost	9.3
Product Value Summary - United States	10.1
Production Costs Summary - United States	11.1
Barium Nitrate Production Cost Datasheet	11.1
Economic Remarks	11.1
Analysis Methodology Summary	12.1
References	13.1
Methodology References	13.1
Analysis References	13.2



### Appendixes

Utilities Consumption Details * Only in Detailed & Premium Editions *	A.1
Materials & Utilities Pricing Data - United States * Only in Detailed & Premium Editions *	B.1
Analysis Pricing Basis	B.1
Historical Prices	B.1
Capital Costs Details - United States * Only in Detailed & Premium Editions *	C.1
Fixed Capital Cost Details	C.1
Working Capital Details	C.3
Additional Capital Requirements Details	C.4
Operating Costs Details - United States * Only in Detailed & Premium Editions *	D.1
Utilities Costs Details	D.1
Operating Fixed Costs Details	D.2
Depreciation	D.3
Product Value Details - United States * Only in Detailed & Premium Editions *	E.1
Corporate Overhead Costs Details	E.1
Return on Capital Employed (ROCE)	E.1
Plant Cost Breakdowns * Only in Premium Edition *	F.1
ISBL Construction Cost Breakdown	F.1
OSBL Construction Cost Breakdown	F.3
Plant Cost Breakdown per Discipline	F.14
Plant Capacity Assessment - United States * Only in Premium Edition *	G.1
Capital Cost for Different Capacities	G.1
Operating Cost for Different Capacities	G.3
Project Implementation & Construction Schedule * Only in Premium Edition *	H.1
Process Flow Diagrams & Equipment List * Only in Premium Edition *	1.1
About Intratec	J.1



J.1
J.2
K.1
L.1



## **List of Figures**

- 1.1 Process Schematic Diagram
- 2.1 Barium Nitrate Production Routes Diagram
- 4.1 Industrial Site Configuration
- 5.1 Block Flow Diagram Manufacturing Process
- 6.1 Area 90 Storage Installations
- 6.2 Area 91 Utilities Facilities
- 6.3 Area 92 Support & Auxiliary Buildings
- 8.1 Capital Investment Composition
- 8.2 Capital Investment Summary
- 9.1 Operating Costs Composition
- 9.2 Operating Costs Summary
- 10.1 Product Value Composition
- 10.2 Product Value Summary
- 12.1 Intratec Commodity Production Costs Reports Development Methodology
- B.1 Historical Prices
- C.1 Plant Cost Summary
- D.1 Cost Distribution of Utility Consumption
- F.1 Process Unit (ISBL) Construction Cost by Functional Unit
- F.2 Site Infrastructure (OSBL) Construction Cost by Area
- F.3 Storage Installations Construction Cost per Piece of Equipment
- F.4 Utilities Facilities Construction Cost per Piece of Equipment



- F.5 Support & Auxiliary Buildings Construction Cost per Piece of Equipment
- F.6 Plant Construction Cost Summary
- F.7 Direct Construction Costs by Discipline
- F.8 Indirect Costs Summary
- G.1 Capital Investment Versus Plant Capacity
- G.2 Operating Cost Versus Plant Capacity
- H.1 Implementation & Construction Schedule
- I.1 Convention for Process Equipment Tags
- I.2 Symbols for Lines
- I.3 Equipment Symbols Reactors & Vessels
- I.4 Equipment Symbols Heat Exchangers
- I.5 Equipment Symbols Compressors & Pumps
- I.6 Equipment Symbols Columns
- I.7 Equipment Symbols Solids Processing
- I.8 Process Flow Diagram



### List of Tables

- 1.1 Barium Nitrate Production Cost Summary
- 3.1 Process Technology Maturity Scale
- 7.1 Raw Materials Consumption
- 7.2 Products Generation
- 7.3 Labor Requirements
- 8.1 Capital Investment Summary
- 9.1 Operating Variable Costs
- 9.2 Operating Costs Summary
- 10.1 Product Value Composition
- 11.1 Barium Nitrate Production Cost Datasheet
- 12.1 Production Cost Datasheet Template
- A.1 Net Utility Consumption Rates (per metric ton of Barium Nitrate)
- A.2 Net Utility Generation Rates (per metric ton of Barium Nitrate)
- B.1 Materials & Utilities Prices (United States, XXXX)
- C.1 Plant Cost Estimate Accuracy Range (USD Million)
- C.2 Owner's Cost Details
- C.3 Fixed Capital
- C.4 Working Capital Details
- C.5 Additional Capital Requirements Details
- D.1 Net Utilities Details
- D.2 Operating Fixed Costs Details



#### E.1 Corporate Overhead Costs Details

- F.1 Process Unit (ISBL) Construction Cost by Functional Unit
- F.2 Area 90 Storage Installations: Scope Description
- F.3 Area 91 Utilities Facilities: Scope Description
- F.4 Area 92 Support & Auxiliary Buildings: Scope Description
- F.5 Site Infrastructure (OSBL) Construction Cost by Piece of Equipment
- F.6 Plant Construction Cost by Discipline
- G.1 Capital Investment Analysis for Different Capacities (USD Million)
- G.2 Operating Cost & Product Value Analysis for Different Capacities (/mt)
- H.1 Project Phases Schedule
- I.1 Diagram Legend Utilities
- I.2 Diagram Legend Equipment Type