

**PROJECT PROFILE – SUMMARY SHEET**

<b>Project Introduction</b>
1. Project title: <b>Production of zeolite nanoparticles</b>
2. Products/Services: <b>Production of zeolite nanoparticles)</b>
3. Location: Free zone <input type="checkbox"/> Economic special zone <input type="checkbox"/> Industrial Estate <input checked="" type="checkbox"/> Main Land <input type="checkbox"/>
4 Project description:  The main goal of establishing this factory is producing the zeolite nanoparticles to supply local consumption. In regard to carried studies, optimal capacity of capacity plan, equal to 2000 ton zeolite nanoparticle considering 300 days of work in a year and 8- hour shift in a day. In the first phase, the goal is gaining regional market in Lorestan Province and perspective of this plan in future, is to meet consuming needs of adjacent provinces.
5. Annual capacity: 2000 tons.

<b>Project Status</b>	
6. Local / internal raw material access inside of country or province: 100% of the materials are supplied in the country .	
7. Sale: Anticipated internal market: 100% Anticipated export market: ...%	
8. Construction Period (from beginning of activity to commercial activity): 24 months	
<b>Schedule</b>	Beginning of activity: In-site beginning of activity: End of project: Commercial activity beginning:

### 9. Project Status:

- Feasibility study available? Yes  No
- Required land provided? Yes  No
- Legal permissions (establishment license, environment, etc) taken? Yes  No
- Partnership agreement concluded with local/foreign investor? Yes  No
- Financing agreement concluded? Yes  No
- Agreement with local / foreign contractor(s) concluded? Yes  No
- Infrastructural utilities (electricity, water supply, telecommunication, fuel, road, etc) procured? Yes  No
- List of know-how, machinery, equipment, as well as seller / builder companies defined? Yes  No
- Purchase agreement for machinery, equipment and technology concluded? Yes  No

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### Financial Structure

#### 10. Finance

Description	Required Local Currency			Required Foreign Currency (Thousand Dollar)	Total in Thousand Dollar
	Million Rials	Rate	Equivalent in Thousand Dollar		
Fix Capital	47,367	87000 Rials for each Dollar	544	1,222	1,766
Working Capital	3,789		44	0	44
<b>Total Investment</b>	<b>51,156</b>		<b>588</b>	<b>1,222</b>	<b>1,810</b>

- Value of local equipment/machinery: 9 thousand dollars
- Value of foreign equipment/machinery: 1025 thousand dollars
- Value of foreign technology: ..... thousand dollars
- Value of local technology: ..... Million dollars
- Net Present Value (NPV): 237876 Million Rials for 10 Years, discount rate: 20%
- Internal Rate of Return (IRR): 48,87%
- Payback Period (PP): 50%

### General Information

11. Project Type: Establishment  Expansion and completion

#### 12. Company Profile:

- Name (legal /natural persons):
- Current activity of company:
- Address:

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-Tel:	Fax:
-E-mail:	Web site:
-Legal structure of company: private sector <input type="checkbox"/> public sector <input type="checkbox"/> other <input type="checkbox"/>	

*Please attach follow documents if available*

- Pre-feasibility study
- Feasibility study
- Legal permissions (establishment license, foreign currency quota, environment, etc)

## **Plan name: Production of zeolite nanoparticles**

### **Product introduction**

The aim of establishment of this factory is production of zeolite nanoparticles in Lorestan province. Desired product in this plan is production of zeolite nanoparticles in order to disinfect stockyards and hencoops. As it is clear from its title, this product is used to disinfect stockyards and hencoops.

Due to novelty of studying product of the plan, any ISIC code has not been considered and Tariff code for this product, yet.

### **Introduction of product applications**

The desired products are zeolite nanoparticles which are used to disinfect stockyards and hencoops.

### **Proposed places for plan**

According to benefits of establishment in industrial estates and areas, industrial estates of Lorestan province are suggested for conducting the project.

### **Raw ,auxiliary and packing materials**

Required raw materials of production unit of gas safety valves are as follows:

#### **Raw ,auxiliary and packing materials**

No	Raw , auxiliary and packing materials	Unit	Consumption rate per year	Spoilage	Sum of raw and consuming materials	Unit price (Rial)	Annual cost (m/r)
1	zeolite stone	ton	1,100	0	1,100	13,000,000	14,300
2	limestone	ton	700	0	700	10,000,000	7,000
3	chemical substances	ton	200	0	200	60,000,000	12,000
4	plastic dishes	number	100	0	100	76,000	8
5	other annual consumable items	ton	100	0	100	84,000,000	8,400
<b>Total</b>	-	-	-	-	-	-	<b>41,708</b>

### Sales plan

Sales price just outside of factory is as follows. Regarding local needs and little share of production of factory from total production of the country, it is supposed that manufactured goods are marketable in the country.

#### Sales plan

Description	First year	Second year	Third year	Forth year	Fifth year
<b>Production percent</b>	<b>70%</b>	<b>80%</b>	<b>90%</b>	<b>90%</b>	<b>90%</b>
zeolite nanoparticles sales/m.r	140,000	160,000	180,000	180,000	180,000
capacity/ton	1400	1600	1800	1800	1800

### Annual nominal and practical capacities

Annual production capacity of this unit, based on 300 working days, is planned 2000 tons in a year. About the number of shifts of work, it's necessary to explain that regarding zeolite nanoparticles, 1 shift is required for machinery.

Practical capacity of this plan, regarding the unpredicted factors of stop working and also repair and maintenance, is considered 1800tons in a year with 90% efficiency of nominal capacity.

### Production method and desired technology

Production method of zeolite nanoparticles is as follows:

1. Turning limestone into lime powder by crusher
2. Preparing suspension makers
3. Converting zeolite stone into powder
4. Purification of zeolite powder by chemical dissolution
5. Production of nanoparticles from zeolite powder by nano reactor
6. Mixing lime powder , suspension makers and zeolite nanoparticles
7. Packing

### The plan investment costs

The fixed plan investment costs is estimated to be 153,639,81 million Rials and the working capital is estimated to be 3,788,74 million Rials.

**The plan investment costs**

Description	Required				Total (million rials)	percent age
	currency (dollar)	rial equivalent	rial (m.r)	required total(m.r)		
Land	0	0	2,800	2,800	2,800	2%
Landscaping	0	0	1,157	1,157	1,157	1%
Building	0	0	25,420	25,420	25,420	16%
Machinery and equipment	0	101,212	800	102,012	102,012	65%
Installations	0	0	2,843	2,843	2,843	2%
Laboratory equipment and supplies	0	0	4,000	4,000	4,000	3%
Vehicles	0	0	4,500	4,500	4,500	3%
Workshop equipment	0	0	91	91	91	0%
Service and administrative equipment	0	0	918	918	918	1%
Unexpected and miscellaneous	0	5,061	2,126	7,187	7,187	5%
<b>Total fixed assets</b>	<b>0</b>	<b>106,272,60</b>	<b>44,655,09</b>	<b>150,927,69</b>	<b>150,927,69</b>	<b>96%</b>
Pre-exploitation costs	0	0	2,712,12	2,712,12	2,712,12	2%
<b>Total fixed investment costs</b>	<b>0</b>	<b>106,272,60</b>	<b>47,367,21</b>	<b>153,639,81</b>	<b>153,639,81</b>	<b>98%</b>
Working capital	0	0	3,788,74	3,788,74	3,788,74	2%
Other assets	0	0	0	0	0	0%

Description	Required				Total (million rials)	percent age
	currency (dollar)	rial equivalent	rial (m.r)	required total(m.r)		
<b>Total plan investment costs</b>	<b>0</b>	<b>106,272,60</b>	<b>51,155,95</b>	<b>157,428,55</b>	<b>157,428,55</b>	<b>100%</b>

### The plan production costs

The annual production costs are estimated to be 84606,72 million Rials.

#### Production costs

No	Description	Cost (million rials)	cost in practical capacity (million rials)
1	Raw, auxiliary and packing materials	41,708	37,537
2	Production salary and wage	8,938	8,670
3	Water, electricity, fuel and communication	897	825
4	Insurance	286	286
5	Repair and maintenance	6,297	5,793
6	Marketing and ads	10,000	9,200
7	Production unpredicted and miscellaneous	2,906	2,674
8	Depreciation	13,575	13,575
<b>Total</b>		<b>84606,72</b>	<b>78559,81</b>

### Economic indices

#### Economic indices

Description	Value-measurement scale
<b>NPV (net present value)</b>	<b>237876million rials</b>
<b>IRR(internal rate of return)</b>	<b>44,87%</b>
<b>PBP (period of return of capital)</b>	<b>2years</b>

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Management and Planning Organization of Lorestan Province

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