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TALCUM POWDER A VALUE ADDED PRODUCT OF TALC

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TALCUM POWDER
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Executive Summary

Talc is a naturally occurring mineral, mined from the earth, composed of magnesium, silicon, oxygen, and hydrogen. Chemically, talc is a hydrous magnesium silicate. Talc is the softest mineral, with a Mohs hardness of 1, compared to diamond, which has a hardness of 10. It is water insoluble but slightly soluble in dilute mineral acids. Talc has numerous applications, particularly as an industrial mineral due to its resistance to heat, acid, and electricity. Its properties allow it to be used as a counter top, an electrical switchboard, ceramics, and insecticides. It is also used as a filler in paints and rubber. Pakistan has significant resources of high-quality talc deposits. The majority of its mines are in Khyber Pakhtunkhwa, with the largest deposits in Sherwan (Hazara), Swat, Jamrud, Kurram Agency, SafedKoh (near Parachinar), and LandiKotal. Pakistan has 600,000 talc reserves and produced or extracted 4,684 tons on average between August 1999 and June 2020. The data peaked at 20,631 tons in February 2017 and the lowest was 0.0001 tons in February 2014. Pakistan ranks ninth in the world in terms of talc production, with a share of 2.25 percent. China, on the other hand, is the largest producer of talc. Following China, the United States, India, Finland, and France are the world's largest talc producers.

Talcum powder is made from talc, a naturally occurring silicate mineral mined from rock deposits in the Earth's crust. Manufacturers crush, dry and mill talc into a fine, soft, white powder that is used in a variety of industrial and cosmetic products. This powdered form of talc is mixed with cornstarch to make baby powder. Talcum powder serves as a lubricant and adds softness and shine to products. It prevents caking, absorbs moisture and makes products feel silky. This makes it a common ingredient in cosmetics, food additives and industrial products. The global market for Talc Powder estimated at USD 2.28 billion in the year 2022, is projected to reach a revised size of USD 3.5 billion by 2025, growing at a CAGR of 3.1% during the forecast period 2022-2025. The Global Talcum Powder Market has analyzed significant growth in recent years and will exhibit increased demand in the next forecasted years. The growing demand for Talcum Powder industry is a key factor driving the market growth in the forecast period. The rapid utilization is creating a big opportunity for the buyers, suppliers, and distributors in the Talcum Powder market.

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North America, Europe, China, India, Pakistan, Australia and Brazil are key producer of talc in the world. As Pakistan has huge deposits of Talc, but our share in exports of Talcum powder is nothing. Pakistan's exports represent **0%** of world exports for Talcum powder and its ranking in world exports is 64. On a global scale, talcum powder has a high export potential. To increase Talcum powder exports a joint venture with leading Talc dealing companies may be formed in order to bring cutting-edge technology in mining and subsequent processing in accordance with international market standards.



CHAPTER 1 INTRODUCTION

Talc is a naturally occurring mineral, mined from the earth, composed of magnesium, silicon, oxygen, and hydrogen. Talcum powder is made from talc, a naturally occurring silicate mineral mined from rock deposits in the Earth's crust. Manufacturers crush, dry and mill talc into a fine, soft, white powder that is used in a variety of industrial and cosmetic products. This powdered form of talc is mixed with cornstarch to make baby powder.

1.1 Uses of Talcum Powder:

Talcum powder serves as a lubricant and adds softness and shine to products. It prevents caking, absorbs moisture and makes products feel silky. This makes it a common ingredient in cosmetics, food additives and industrial products. Talc was historically a key ingredient in baby powder.

Under the Federal Food, Drug and Cosmetic Act (FD&C Act), cosmetic products and ingredients, with the exception of color additives, do not have to undergo FDA review or approval before they go on the market. Cosmetics must be properly labeled, and they must be safe for use by consumers under labeled or customary conditions of use. The law does not require cosmetic companies to share safety information with FDA.

Examples of products that have contained talcum Powder:

Body Powder

Johnson's Baby Powder, CVS Brand Baby Powder, Rite Aid Baby Powder, Anti Monkey Butt Powder, Assured Shower & Bath Absorbent Body Powder, Angel of Mine Baby Powder, Family Dollar Mild Baby Powder, Shower to Shower Morning Fresh Absorbent Body Powder

Blush

Maybelline New York Expert Wear Blush Gentle Rose, N.Y.C. New York Color Cheek Glow Powder Blush West Side Wine, NARS Blush Torrid.

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Eye Shadow

Physician's Formula Shimmer Strips Custom Eye Enhancing Shadow & Liner Hazel Eyes, Black Radiance Eye shadow Quartet Retro Chic, Stila Eye Shadow Trio Venus, Dior 5-Colour Iridescent Eye shadow Petal Shine

Foundation

Black Opal True Color Liquid Foundation Heavenly Honey, Laura Mercier Foundation Powder Number 2

Face Powder

LA Colors Pressed Powder Nude, Revlon Color Stay Pressed Powder Fair, Cover Girl TruBlend Mineral Loose Mineral Powder Translucent Fair, Physician's Formula Summer Eclipse Bronzing & Shimmery Face Powder Moonlight/Light Bronzer etc.

1.2 KEY INGREDIENTS:

Number of ingredients are used in talcum powder which are easily available. These are as under

KEY INGREDIENTS OF TALCUM POWDER

Table 1 *Ingredients of Talcum Powder*

INGREDIENT	CATEGORY	USE
Talc	Base/ Mineral	Natural occurring mineral used in specific quantity
Mica	Covering Agent	It helps the powder to stay on skin longer
Kaolin (natural kaolinite) Starch (organic chemical) Silica (matt white powder)	Slip/ Absorbent	Enhance coverage while reducing the sheen provided by talc.
Magnesium Stearate	White color powder and water - insoluble Adhesive	Improves the consistency of face powders
Calcium Carbonate Zinc oxide Zinc stearate Boric acid	Absorbent	Absorbs moisture to minimize oiliness and create a matte finish
Organic & inorganic pigments	Colorant	Added to the formula to create the desired tint.
Triclosan	Perfumes	Enhance the intrinsic appeal

Source: TDAP Research wing



1.3 Objective of Study:

The main aim of this study is to investigate the potential of Talcum powder in Pakistan.

The following are the broad objectives:

- 1- To examine the market potential for Talcum powder in the world.
- 2- To explore the factors which drive revenue growth of talcum powder.
- 3- To examine the leading segment in the talcum powder market in terms of application.

1.4 Significance of Study:

The global market for Talc Powder estimated at USD 2.28 billion in the year 2022, is projected to reach a revised size of USD 3.5 billion by 2025, growing at a CAGR of 3.1% during the forecast period 2022-2025. The Global Talcum Powder Market has analyzed significant growth in recent years and will exhibit increased demand in the next forecasted years. The growing demand for Talcum Powder industry is a key factor driving the market growth in the forecast period. Pakistan's exports represent 0% of world exports for this product, its ranking in world exports is 64th. Pakistan exported 0.3 million USD worth of talcum powder in 2021. The export value can increase with measure to counter the existing loopholes in the final product export.



CHAPTER 2

WORLD MARKET OF TALCUM POWDER (330491)

Due to the COVID-19 pandemic and Russia-Ukraine War Influence, the global market for Talc Powder estimated at USD 2.28 billion in the year 2022, is projected to reach a revised size of USD 3.5 billion by 2025, growing at a CAGR of 3.1% during the forecast period 2022-2025. The Global Talcum Powder Market has analyzed significant growth in recent years and will exhibit increased demand in the next forecasted years. Increasing demand from cosmetic industry is expected to drive the global talcum powder market revenue growth. Other factors attributing too the revenue growth of market are abilities of talcum powder to absorb moisture and provide lubrication and increasing disposable income in emerging countries. The growing demand for Talcum Powder industry is a key factor driving the market growth in the forecast period. The rapid utilization is creating a big opportunity for the buyers, suppliers, and distributors in the Talcum Powder market.

North America, Europe, China, India, Pakistan, Australia and Brazil are key producer of talc in the world, key manufacturers are Imerys, Mondo Minerals (Elementis), Minerals Technologies Inc and IMI Fabi.

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2.1 WORLD TOP EXPORTERS OF TALCUM POWDER (2021)

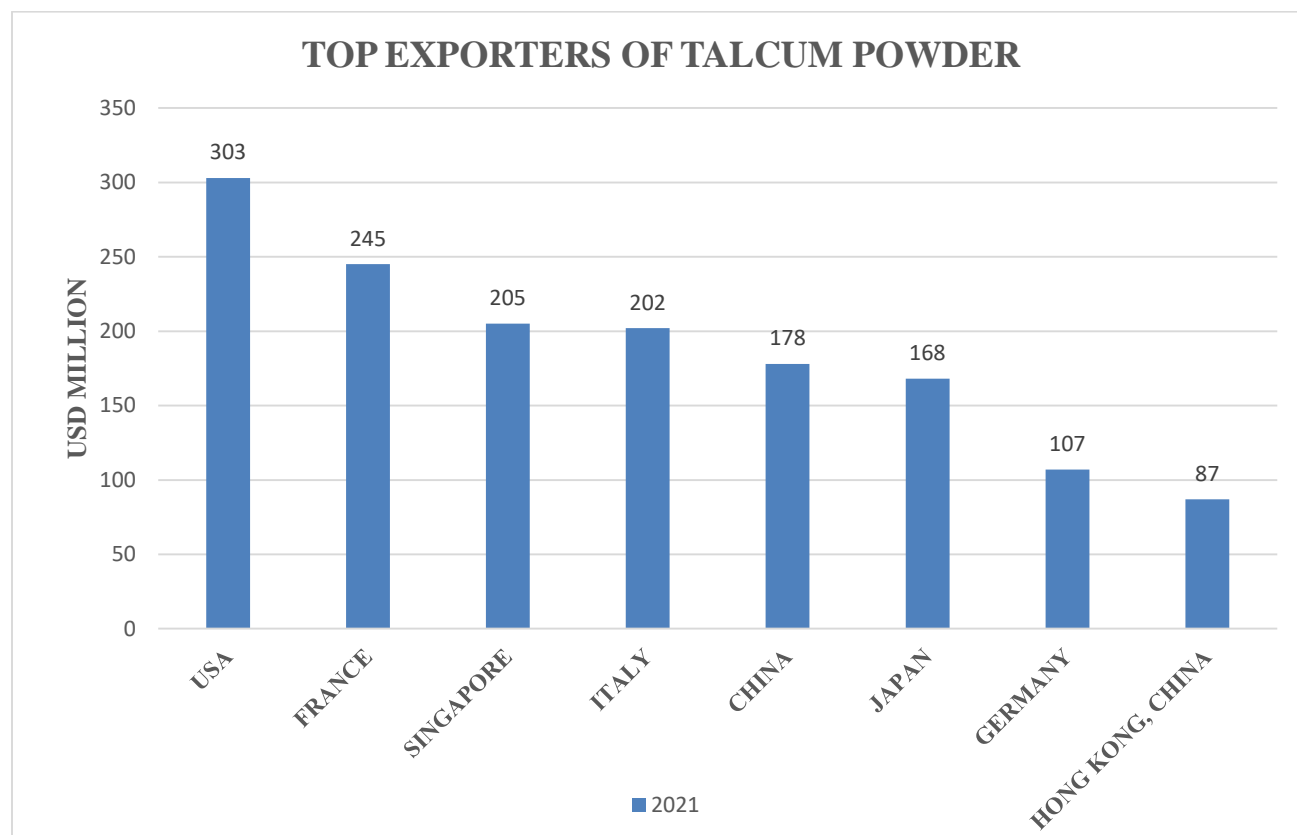
TOP EXPORTING COUNTRIES OF TALCUM POWDER (330491)

Table 2 Top Exporters of Talcum Powder

TOP EXPORTERS	Value exported in 2021 (USD thousand)	Quantity exported in 2021	Quantity Unit	Unit value (USD/unit)	Share in world exports (%)
World	2,286,945	0	No quantity		100
United States of America	303,964	6,996	Tons	43,448	13.3
France	245,969	4,017	Tons	61,232	10.8
Singapore	205,351	0	No quantity		8.9
Italy	202,600	5,493	Tons	37,065	8.9
China	178,946	14,073	Tons	12,716	7.8

Source: ITC

The above table shows the top five exporting countries of Talcum powder (HS 330491). United States of America is the top exporter of talcum powder in the world which accounts for USD 303.96 million of exports. This is due to the increasing use of talcum powder in cosmetics and other industries. The second largest exporter is France, which accounts for USD 245.96 Million of exports. Third largest exporter of talcum powder is Singapore with exports of USD 205.35 million. Fourth largest exporter of talcum powder is Italy, which accounts for USD 202.60 million of exports followed by China with exports of USD 178.94 million of exports.

**World Top Exporters of Talcum Powder (2021):***Figure 1 World Top Exporters of Talcum Powder*

Source: ITC Trade Map

The above figure shows world's top exporters of talcum powder in 2021. Largest exporter is USA followed by France, Singapore, Italy, China, Japan, Germany and Hong Kong, china.

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**2.2 WORLD TOP IMPORTERS OF TALCUM POWDER (2021):
TOP IMPORTING COUNTRIES**

Table 3 Top Importers of Talcum Powder

TOP IMPORTERS	Value imported in 2021 (USD thousand)	Quantity imported in Tons 2021	Share in world imports (%)	Avg tariff applied by the country (%)
World	2,702,591	0	100	
China	468,201	2,211	17.3	17.9
Macao, China	245,379	484	9.1	0
USA	238,634	9,925	8.8	0
Hong Kong, China	179,968	0	6.7	0
United Kingdom	119,706	8,427	4.4	0

Source: ITC

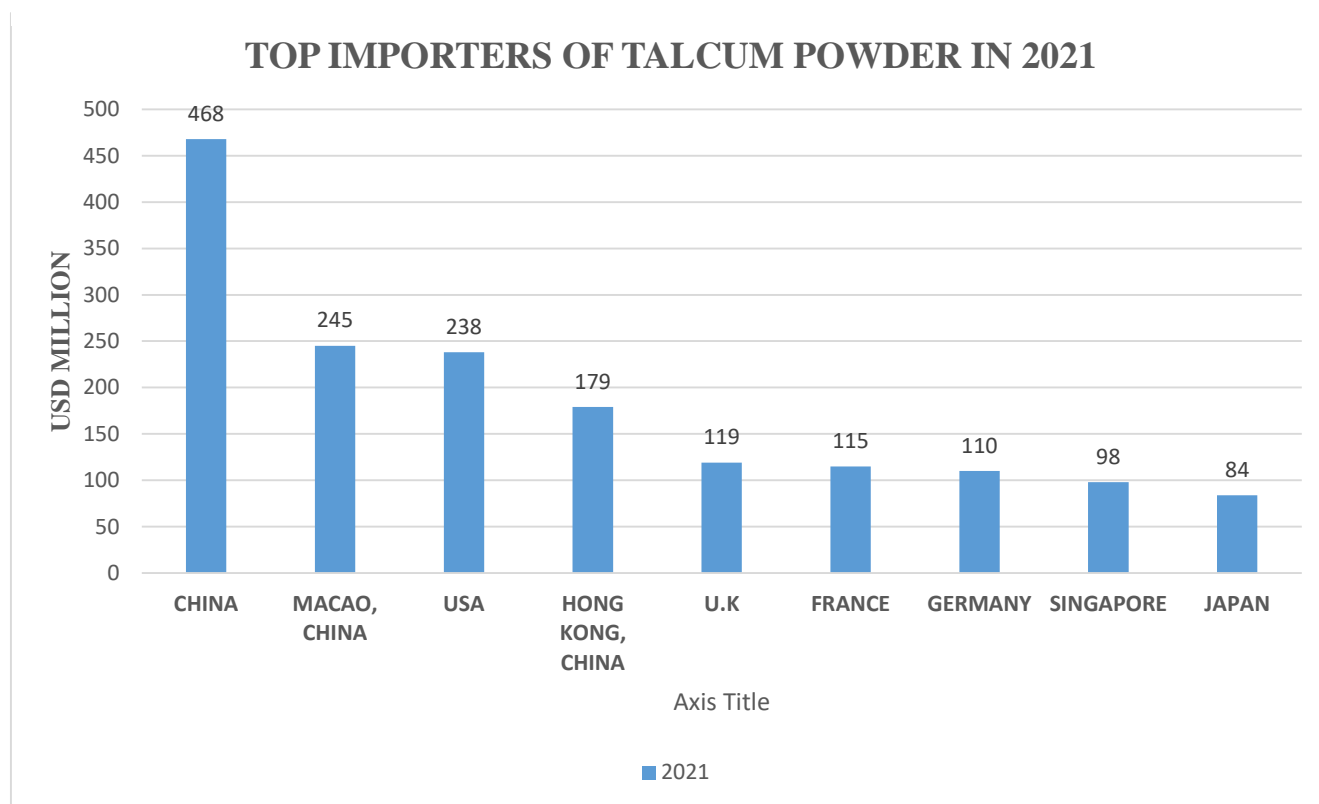
The above table shows the top five importing countries of Talcum powder (HS 330491). China is the top importer of talcum powder in the world which accounts for USD 468.20 million of imports. This is due to the most populated country and its increasing use of talcum powder in cosmetics and other industries. The second largest importer is Macao, china which accounts for USD 245.37 million of imports. Third largest importer of talcum powder is United States of America with imports of USD 238.63 million. Fourth largest importer of talcum powder is Hong Kong, China, which accounts for USD 179.96 million of imports, followed by United Kingdom with imports of USD 119.70 million of imports.

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Figure 2 World Top Importers of Talcum Powder



Source: ITC

The above figure shows world's top importers of talcum powder in 2021. Largest importer is China, followed by Macao, USA, Hong Kong, U.K, France, Germany, Singapore, Japan etc.



CHAPTER 3

PAKISTAN TRADE SCENARIO OF TALCUM POWDER (330491)

Pakistan has significant resources of high-quality talc deposits. The majority of its mines are in Khyber Pakhtoonkhwa, with the largest deposits in Sherwan (Hazara), Swat, Jamrud, Kurram Agency, SafedKoh (near Parachinar), and LandiKotal. Pakistan has 600,000 talc reserves and produced or extracted 4,684 tonnes on average between August 1999 and June 2020. The data peaked at 20,631 tons in February 2017 and the lowest was 0.0001 tons in February 2014. Pakistan ranks ninth in the world in terms of talc production, with a share of 2.25 percent. As Pakistan has deposits of Talc, but has very few proper manufacturing and processing units of preparing Talcum powder. While, Global demand and world market for talcum powder is too high Pakistan's imports represent 0.2% of world imports for this product, its ranking in world imports is 46. Pakistan imported USD 6.7 million in 2021.

3.1 Pakistan's Imports of Talcum Powder:

Table 4 Pakistan's Imports of Talcum Powder

PAKISTAN IMPORTS FROM	Value imported in 2021 (USD thousand)	Share in Pakistan's imports (%)	Quantity imported in 2021	Quantity unit	Unit value (USD/unit)	Avg tariff applied by Pakistan (%)
World	6,751	100	2,341	Tons	2,884	
China	3,846	57	1,226	Tons	3,137	20
Thailand	685	10.1	489	Tons	1,401	20
Germany	569	8.4	69	Tons	8,246	20
Turkey	373	5.5	78	Tons	4,782	20
France	296	4.4	93	Tons	3,183	20

Source: ITC

The above table show that, more than half of talcum powder is imported by Pakistan from its neighbor country China which accounts for USD 3.84 million. Pakistan imports from Thailand

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accounts USD 0.68 million, from Germany Pakistan imports accounts USD 0.56 million, from Turkey USD 0.37 million, followed by France USD 0.29 million

3.2 Pakistan's Exports of Talcum Powder:

Pakistan's exports represent **0%** of world exports for this product, its ranking in world exports is **64**.

Table 5 Pakistan's Exports of Talcum Powder

TOP EXPORT MARKETS	Value exported in 2021 (USD thousand)	Share in Pakistan's exports (%)	Quantity exported in 2021	Quantity unit	Unit value (USD/unit)	Avg tariff faced by Pakistan (%)
World	354	100	128	Tons	2,766	-
Mozambique	190	53.7	64	Tons	2,969	20
U.A.E	73	20.6	29	Tons	2,517	5
South Africa	45	12.7	23	Tons	1,957	20
Iraq	11	3.1	0	Tons	-	-
Sri Lanka	8	2.3	2	Tons	4,000	0

Source: ITC

The above table show that, Pakistan's total exports of talcum powder consist of just USD 0.3 million, which is very low while Pakistan has huge deposits of Talc. Pakistan mostly export to Mozambique which accounts for USD 0.19 million, followed by U.A.E, South Africa, Iraq and Sri Lanka.

3.3 Worldwide Accepted Methods for Talcum Powder Preparations:

There are two worldwide accepted methods used for preparation of Talcum Powder

Wet Method

Dry Method

The mined powder can be purged by the dry creation process or the wet creation process. The dry creation process is utilized for high-grade powder stores, while the wet creation process is utilized for poor-quality powder stores. As of now, the business for the most part utilizes the dry creation interaction to deliver super fine powder, and only occasionally utilizes the wet creation process.



3.3.1 Talc dry creation Method:

Hand-chose and sanitized powder

Rule: As per the perfection distinction of talc and gangue minerals, a manual determination is completed to filter the talc minerals.

Reason: Separate the hugely related minerals ahead of time.

Highlights: This technique is usually utilized as talc is not difficult to distinguish by contacting it. The higher the powder grade, the better the perfection. Nonetheless, it expects that the workers should be capable. It is step by step being replaced by a variety of choices.

Variety choice and purging of talc

Guideline: By utilizing the quality of powder to transmit white fluorescence under ultraviolet light, the cleaner talc can be figured out by a variety of sorters.

Highlights: This strategy is presently progressively esteemed and utilized by enterprises.

Model: The American Cyprus Powder Organization utilized this strategy to improve the lean mineral with a powder content of 30% to a rich metal with a powder content of 69%, lastly grind it to 200 lattices for flotation to get close to 100% cosmetic grade talc.

Electro-choice and purification of talc

Guideline: As per the distinction in conductivity between talc, magnesite, magnetite, and other gangue mineral particles, electro-determination is done in a high-voltage electric field.

Reason: To eliminate powder pollution, like magnesite, magnetite, pyrite, or tremolite.

Highlights: This technique can be utilized for the unpleasant division of talc rock as well concerning the beneficiation and clearing of tailings.



3.4 PROCESS FLOW OF TALCUM POWDER PRODUCTION LINE

As of now, Pakistan's talcum powder processing is mainly processed by dry processing. In view of the normal crushability and grindability of talc,

Talc powder processing can be divided into four types:

- Coarse talc powder processing (0-3MM)
- Fine powder processing (20 mesh-400 mesh),
- Ultra-fine powder deep processing (400 mesh-1250 mesh),
- Micro-powder processing (1250 mesh-3250 mesh) type.

Talc needs to undergo a reasonable grinding process to further realize its higher economic value. It is very important to choose suitable grinding equipment and design a scientific production line process.

The talc milling process is generally divided into two stages: crushing and grinding. The equipment used includes a jaw crusher, talcum powder making machine, bucket elevator, electromagnetic vibrating feeder, fan, analyzer, conveying pipeline, etc. The specific process flow is as follows:

FIRST STAGE: BROKEN

The bulk material of talc is crushed by the crusher to the fineness (10mm-50mm) that can enter the mill.

SECOND STAGE: MILLING

The crushed small pieces of talc are sent to the silo by elevator and then sent to the grinding chamber of the mill evenly and quantitatively by the vibrating feeder for grinding.

Fine powder processing: Raymond mill or high-pressure suspension roller mill can be used.

Superfine powder processing: HGM ultrafine grinding mill or CLUM vertical roller mill can be used. [Video for processing of Talcum powder](#)

THIRD STAGE: CLASSIFICATION

The ground material is classified by the classifier, and the unqualified powder is classified by the classifier and returned to the host for re-grinding.

FOURTH STAGE: POWDER COLLECTION

The powder that meets the fineness is separated and collected by the airflow through the pipe into the dust collector. The collected finished product powder is sent to the finished product silo by the

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conveying device through the discharge port. Then uniformly use a powder tanker or automatic packing machine for packaging. [Price of HGM100L Ore Ultra-Fine Grinding Mill Stone](#)

Powder Production

Custom duty 0%

Sales tax 17%

Income tax 11% and Additional custom duty 2%

Figure 3 Talcum Powder Grinding Machine



Source: HUB SALT

Project Background:

Raw Material: Talc

Input Size: 0-200mm

Output Size: 200~2500 mesh

Capacity: 0.5~7t/h

Note: Capacity may vary with different output size and material features

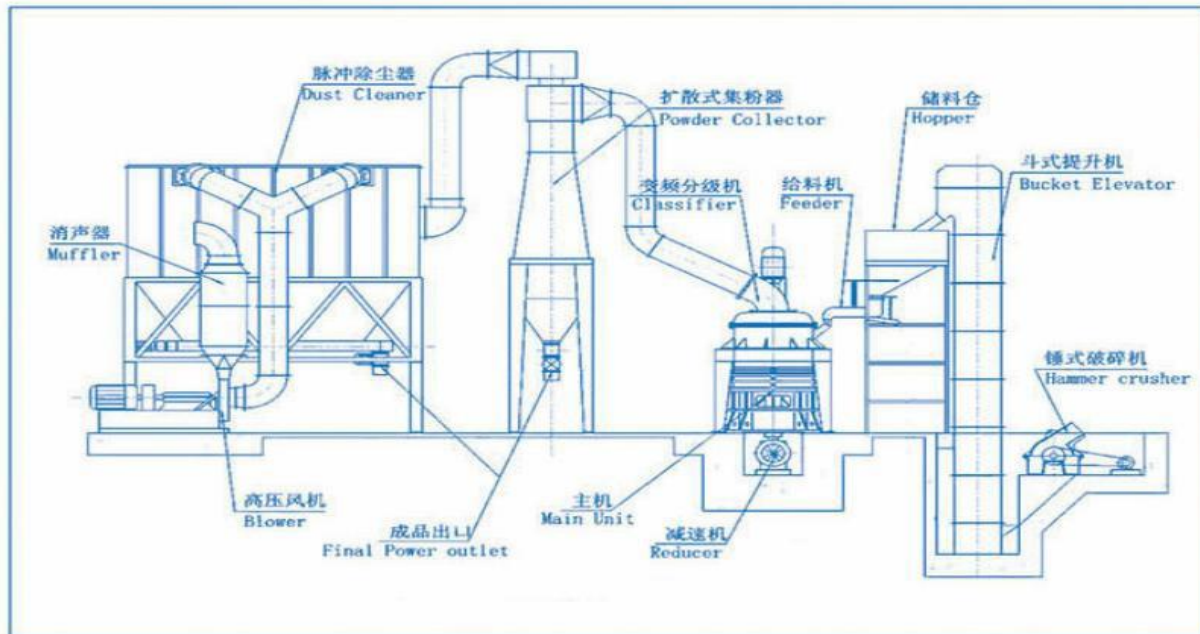
Max fineness can reach 5 microns, 97% passing the screen

Dust Emission: Updated machine using high efficient pulse filter bags house, the filter efficiency reaches 99.99%. Dust Emission from the Blower is just 0.01~0.03%. Compliance with the environment protection policy in the world.

Grinding Principle

Crush the raw material, less than 10mm, lift and transport into the silo, the feeder controls it into the mill, graded grinding, the qualified powder enters the dust removal equipment, the unqualified powder is ground again, reaches the standard, pulse dusting, and then collect finished powder.

Figure 4Grinding Principle



Source: HUB SALT

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Packaging and Loading:

Figure 5 Packaging and Loading



Source: HUB SALT

3.5 Raw Materials for Talcum Powder Production

- Talc IP grade
- Kaolin
- Silica & starch
- Calcium/magnesium carbonate
- Zinc oxide
- Zinc stearate
- Boric acid
- Magnesium Carbonate
- Perfume
- Packaging Container
- Packing materials including labels



3.6 Machinery and Equipment's Needed:

Following machinery and equipment are required:

Table 6 Machinery and Equipments required

Machinery and Equipment's	Price in USD
Jaw crusher	4500 USD
Talc powder Mixer	2400 USD
Bucket elevator	2100 USD
Powder screw conveyer	800 USD
Grinding chamber	200 USD
Electromagnetic vibrating feeder	4800 USD
Fan	1000 USD
Analyzer	7500 USD
Classifier	7000 USD
Mechanical Shifter	3000 USD
Conveyor Belt or pipeline	2500 USD
Semi-Automatic Filling Machine	5000 USD
Labeling machine	3500 USD
SS Storage Vessel	3000 USD
Packing and taping machine	1200 USD

Source: TDAP Research wing



CHAPTER 4

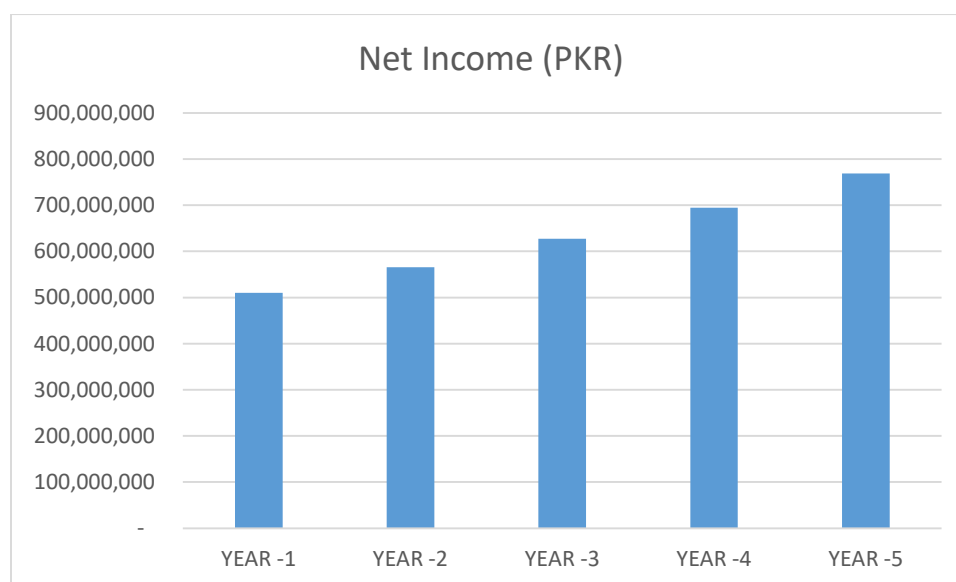
FEASIBILITY OF TALCUM POWDER PLANT

4.1 Estimated Profit:

The Talc ore price is around 33-35 USD per ton with the purity of 75%. By converting this to its value-added product, we can generate huge revenue as the final product, i.e. white purified and grinded talc upto 400mesh can be sold for up to 325 USD per ton.

From the feasibility analysis of 100 TPD Talc beneficiation plant, the estimated net income per year is shown below. The payback period is estimated as one year and two months.

Figure 6 Estimated Profit



Source: EFP: HUB SALT

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4.2 Five-year projections:

Below are the five-year financial projections of Talcum Powder beneficiation plant:

Table 7 Five years Projections

	Monthly Amount- PKR	Year 1 Amount- PKR	Year 2 Amount- PKR	Year 3 Amount- PKR	Year 4 Amount- PKR	Year 5 Amount- PKR
Revenues						
Talc	114,958,594	1,379,503,125	1,517,453,438	1,669,198,781	1,836,118,659	2,019,730,525
Direct Costs						
Electricity	8,400,000	100,800,000	110,880,000	121,968,000	134,164,800	147,581,280
Water	16,511	198,128,	217,940	239,734	263,708	290,078
Raw Material	22,500,000	270,000,000	297,000,000	326,700,000	359,370,000	395,307,000
Freight	7,500,000	90,000,000	99,000,000	108,900,000	119,790,000	131,769,000
Salary	1,755,000	21,060,000	23,166,000	25,482,600	28,030,860	30,833,946
Packaging Cost	2,303,438	27,641,250	30,405,375	33,445,913	36,790,504	40,469,554
Repair & Maint	2,076,366	24,916,388	27,408,027	30,148,830	33,163,713	36,480,084
Miscellaneous	300,000	3,600,000	3,960,000	4,356,000	4,791,600	5,270,760
Indirect Costs						
Depreciation	1,659,699	19,916,388	19,916,388	19,916,388	19,916,388	19,916,388
Shipping Cost	6,234,375	74,812,500	82,293,750	90,523,125	99,575,438	109,532,981
Interest Expense	3,529,822	17,790,301	14,887,873	11,689,397	8,164,677	4,280,435
Total Cost	56,275,209,55	650,734,956	709,135,353,95	773,369,987	844,021,686,95	921,731,507
PBT	58,683,384	728,768,169	808,318,084	895,828,794	992,096,972	1,097,999,018
Income tax	23,473,354	218,630,451	242,495,425	268,748,638	297,629,092	329,399,705
PAT	35,210,031	510,137,719	565,822,658	627,080,156	694,467,881	768,599,313
Cash Flows						
Depreciation	1,659,699	19,916,388	19,916,388	19,916,388	19,916,388	19,916,388
Operating Cash flow	36,869,730	530,054,107	585,739,047	646,996,544	714,384,269	788,515,701

Source: HUB SALT



CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION:

The analysis and characterization of consumer talcum powder marketed in Pakistan indicated that talcum powder is rarely pure talc but rather mixture of other associated minerals. Talcum powder is made from talc, a naturally occurring silicate mineral mined from rock deposits in the Earth's crust. Manufacturers crush, dry and mill talc into a fine, soft, white powder that is used in a variety of industrial and cosmetic products. This powdered form of talc is mixed with cornstarch to make baby powder. Talcum powder serves as a lubricant and adds softness and shine to products. It prevents caking, absorbs moisture and makes products feel silky. This makes it a common ingredient in cosmetics, food additives and industrial products. The global market for Talc Powder estimated at USD 2.28 billion in the year 2022, is projected to reach a revised size of USD 3.5 billion by 2025, growing at a CAGR of 3.1% during the forecast period 2022-2025. The Global Talcum Powder Market has analyzed significant growth in recent years and will exhibit increased demand in the next forecasted years. The growing demand for Talcum Powder industry is a key factor driving the market growth in the forecast period. The rapid utilization is creating a big opportunity for the buyers, suppliers, and distributors in the Talcum Powder market.

North America, Europe, China, India, Pakistan, Australia and Brazil are key producer of talc in the world. As Pakistan has huge deposits of Talc, but our share in exports of Talcum powder is nothing. Pakistan's exports represent 0% of world exports for Talcum powder and its ranking in world exports is 64. The Talc ore price is around 33-35 USD per ton with the purity of 75%. By converting this to its value-added product, we can generate huge revenue as the final product, i.e. white purified and grinded talc upto 400mesh can be sold for up to 325 USD per ton.

On a global scale, talcum powder has a high export potential. To increase Talcum powder exports a joint venture with leading Talc dealing companies may be formed in order to bring cutting-edge technology in mining and subsequent processing in accordance with international market standards.



5.2 RECOMMENDATIONS:

There are some recommendations for facilitating the survival and growth of Talc industry.

- There is a dire need to overhaul the current technologies, techniques, and practices that are currently in place in the cluster. At present, the group is only partly mechanized leaving a lot to be desired in the way of modern technology. Very few initiatives have been taken by relevant authorities that have had a positive impact in the technological domain.
- Moreover, there is a need for introduction of technology suitable for underground mining. Currently, none of the cluster's mining units are in possession of such technology and only rely on surface mining for extraction of stone which not only results in a lower yield, but often leads to a closure of such mines before full extraction of stone has taken place.
- Government should establish Stone-testing laboratory, Technical / Training Institutes and Expo Centers/ Machinery Display centers in Mining districts.
- There is also a need for attracting international mining technology producers to set up their plants within the country.
- There is a need to support and facilitate suppliers of imported heavy duty machinery along with the availability of necessary spare parts and technical support for future repair and maintenance.
- Local machine manufacturers must also be engaged, with government support, in the development and manufacturing of modern machinery for both the mining and processing sectors.
- It is also important for the SBP to address some of the financial issues relating to the acquisition of modern machinery including granting concessions in import duties, allowing the use of imported machinery as collateral, lowering the collateral requirements for acquiring loans, and encouraging commercial banks to finance machinery for their clients.
- With respect to power and electricity, immediate attention needs to be paid to ensuring a basic supply of electricity to mining areas. At present, all of the mine operators confirmed that they were relying entirely on self-generation. The federal and provincial governments in collaboration with other local and international development agencies such as USAID needs to identify potential power projects in mining areas and determine terms that make economic sense to potential private investors.

TALCUM POWDER

A VALUE ADDED PRODUCT OF TALC



- In order to do this, PESCO may need to develop a specialized commercial and industrial cell that would fast-track processing of requests for electricity connections. It is important to reduce electricity tariffs that are currently unfavorable for talc participants.
- As such, it is suggested to include the talc industry in relief packages much like the textile industry.
- As most of talc deposits are in KPK and Baluchistan, therefore warehousing and storage facilities need to build in districts of KPK and Baluchistan, so producers can manage a consistent supply of their products to the market.



5.3 REFERENCES:

- Ahmad, I., & Jehan, N. (2005). *Occupational Exposure To Crystalline Silica (Quartz) And Prevalence Of Lung Diseases In Dhand Killi, Mhmand Agency, Northern Pakistan. Journal Of Himalayan Earth Sciences*, 38, 157-161.
- Cramer, D. W., Vitonis, A. F., Terry, K. L., Welch, W. R., & Titus, L. J. (2016). *The Association Between Talc Use and Ovarian Cancer: A Retrospective Case–Control Study in Two US States. Epidemiology (Cambridge, Mass.)*, 27(3), 334
- Habib, U. S. (2018). *The causes and prevision of mine subsidence in lesser Himalayas, Abbottabad. . Journal of Himalayan Earth Sciences*, 1-7.
- Maritan, L. P. (2018). *Looking like gold: Chlorite and talc transformation in the golden slip ware production (Swat valley, North-Western Pakistan). . 8(5)*, 200.
- Nnorom, I. (2011). *Trace metals in cosmetic facial talcum powders marketed in Nigeria. Toxicological & Environmental Chemistry*, 93(6), 1135-1148.
- Sajjadpour, S. M. (2020). *At the Expense of the Country: Multi-level War Economy in Afghanistan and the Implication for Peace. International Journal of Political Science*, 10(2), 1-24.
- Talc Report by FACT.MR. (2020). Retrieved from factmr.com/report/talc-market.*