

Talc in Talcum!

Key Findings

All the brands of talcum powder were meeting the requirements of Indian Standard for the key parameters like Matter insoluble in boiling water, Fineness, Arsenic.

- All brands of Talcum Powder were found free from any microbial contamination.
- Brand Cinthol was found with least arsenic content among the brands we tested followed by Nivea and Secret. However brand Ponds was found with more arsenic content followed by Park Avenue and Navratna.
- Brands Axe, Navratna, Park Avenue & Secret Temptation were packed in deceptive or oversize packaging as almost 35% of the pack was found empty although the given quantity of powder was as per the label declaration.
- In sensory as well as application tests, brand Park Avenue was found most acceptable followed by Axe and Z, however brand Navratna was least acceptable

Cosmetics also known as personal care products, are widely used as a part of lifestyle to improve appearance, hygiene and counter adverse effects of climate and environment and generally make oneself more presentable. Their use supposedly provides a feeling of sensory well being, and improving self-confidence.

Body powders available are commonly known as talcum powders. While no stipulations have been made regarding the compositions of talcum powders, it is essential that talcum powder formulations do not contain any ingredient in quantity or concentration to cause any toxic or irritating reaction when used on the body or have any harmful effects.

When you read our test report, you are likely to discover details and aspects of the product, which you have never really thought about, or bothered to look out for. Our test reveals how these are important.

We have decoded the product for you, and put it through rigorous testing so that after reading our report you are equipped to purchase the right product, as an informed

and aware consumer. This is especially relevant when choosing from the range of cosmetic products, as most cosmetic products are unnecessary, per se, and even if left out would not be missed. Actually in some cases it might be a wise decision to not get into the habit of using them as they have short and long term deleterious impact, not only on your health but also on the environment, which in turn again impacts your health.

However we do not wish to play the moral police here, and if these products add pleasurable sensations and make you feel good and confident about yourself, especially during the hot, humid Indian summers, then so be it. All we aim at is your safety and health when choosing products. Cost we believe is a subjective consideration, though important.

We have tested only the most sold, small range of the product, whereas you might be using some other brands. That is of not much consequence as our information should equip you to choose the best, whatever you choose, wherever, in the country.

Comparative Test



What is your Body Powder made of?

Talc is a mineral, produced by the mining of talc or chalk rocks and then processed by crushing, drying and milling. Processing eliminates a number of trace minerals from the talc, but does not separate minute fibers which are very similar to asbestos.

Which consumer products contain talc?

Talc is found in a wide variety of consumer products ranging from home and garden pesticides to antacids. However, the products most widely used and that pose the most serious health risks are body powders. Talc is the main ingredient in baby powder, medicated powders, perfumed powders and designer perfumed body powders. Because talc is resistant to moisture, it is also used by the pharmaceutical industry to manufacture medications and is a listed ingredient of some antacids. Talc is the principal ingredient in home and garden pesticides and flea and tick powders. Talc is used in smaller quantities in deodorants, chalk, crayons, textiles, soap, insulating materials, paints, asphalt filler, paper, and in food processing.

Brands Tested

Consumer VOICE tested 10 popular brands of most selling talcum powder. Brands of talcum powder

were chosen based on their popularity and sale for which a random market survey was conducted in the markets and malls of Delhi & NCR. The entire variants we have chosen are the most selling variant of that particular brand.

Brand	Rank
Z	1
Pond's Dream flower	2
Nivea Musk	2
Axe Denim	3
Cinthal Deo Classic	3
Yardley English Lavender	3
Park Avenue Double Deo	4
Premium Lavender	5
Hemani Navratna	6
Secret Temptation	7

Packaging

Talcum powder packaging plays an important role in the storage and use of these powders. The talcum powders should be packed in suitable containers, which protects it from moisture and atmospheric deterioration. It shall be ensured that the material of packaging has no adverse effects on the powders. The packaging / containers should be such that they are easy to use / handle. Our test revealed that only Z and Yardley had good packaging, facilitating use and with packaging size close to the claimed content quantity.

All brands except **Yardley and Z** were packed in plastic containers. **Navratna, Secret Temptation, Yardley and Z** were packed in tamper proof, 'convenient to use', packs. Some of the brands were packed in deceptive or oversize packaging and almost 35% of the packs were found half empty although the given quantity of powder matched the label declaration.

You as a consumer are entitled to ask: what was the logic that guided manufacturers to choose larger than required packs or plastic above tin, for their brands? Obviously larger packs or the tin containers must cost more, but it stands to reason, that the manufacturers still stood to gain if consumers chose the tin or larger packs over the right size that some manufacturers stuck to. It was based on their belief that consumers would be inclined to reach out for the larger packs, without going into details of how much in which pack.

Brands **Axe, Navratna, Park Avenue & Secret Temptation** used larger pack. As per the Indian Standard, talcum powder can be packed in tin container or plastic container but the only requirement is that the packaging should protect the material from moisture and deterioration. There is no connection between the net weight and packaging. Hence packaging is just manufacturers preference.

So the questions that need to cross consumer minds, before buying are: Plastic or tin? Which adds to the cost for the consumer OR which is better for the powder inside?

Do the chosen packaging material and the size of the pack add to the cost for the consumers? Do the tin and/or larger looking packs cost more?

Easy to recycle or / and dispose

We did not conduct any lab test for recyclability or disposability. Therefore it is difficult to say that which one is more environment friendly plastic or tin. But some brands of talcum powder marked with recyclability sign are Nivea, Ponds & Yardley and were packed in both plastic and tin pack. So consumers can in their case presume that the quality of plastic and tin, used to pack the powder are recyclable.

You might like to assist us to provide better information to you if you would take the time to answer a few questions listed at the end of the report. (to be added after feed back from evaluators - in this case all / any of you). You can also fill them online at: www@consumer-voice.org, by clicking on the Discussion option on the Home page of our website or by responding to the available option to you in our forthcoming Newsletter, posted online. OR you can mail us your response at: Consumer VOICE, O-45, Lajpat Nagar -II. New- Delhi -110024

CONSUMERS TO CONSIDER THE FOLLOWING:

Ask yourself how many tins/containers do you or your family use in a season/year. Multiply that roughly to thousands, if not millions and then choose whatever you choose in packaging.

Do you check out the labels for such details when purchasing these items and not get carried away by the look, feel and size of the pack, and put that above your other preferences? Ask yourself!

Markings are important:

A consumer might have anxiety why markings are necessary for them. You can take the markings as a precautionary measure in case if you have to deal with after sales complaints, if any. Every packing must have following details -:

- i) Batch No.
- ii) Manufacturers/Marketers address with Trade Mark, if any
- iii) Month and year of manufacture
- iv) Net mass when packed
- v) Critical ingredients used in the manufacture

- vi) Maximum Retail Price (MRP)
- vii) Instructions of use, if any
- viii) Disposability instructions of the containers if any
- ix) Best Before

None of the brand claimed to be gender or age specific.

Our observation and find out score

All of the tested brands had no specific instructions for use or recyclability except Ponds, which had all the required information marked on its label. Nivea and Yardley had most instructions except for use.

But you can relax as we found this ingredient missing in all brands we tested. We asked ourselves why manufacturers would choose to add this ingredient, even after knowing its harmful effects. Manufacturers are sometimes guided by other interest when making their ingredient choices and these include access, additional bulk at lower costs to themselves, and to consumers in a competitive market.

Asbestine is a mineral compound of nearly pure fibrous magesium silicate, with physical characteristics between those of asbestos and talc. It is an adulterant which adds to talcum powder and is supposed to be absent.



Most of the brands were not marked with instructions for use and recyclability on their label. Only Ponds was found with all required information on its label. All the brands were found with the quantity as declared on their label.

Adulterants absent

We chose this parameter especially because of the suspected presence of Asbestine, a mineral compound, known for its negative impact on human health.

Asbestine found in talc is associate with health risks like lung disease -talcosis. Asbestine was found absent in all the brands we tested.

All tested brands of talcum powder were observed for any foreign particle like dirt, dust etc. and all the brands were found free from any visual foreign particle

Presence of artificial colour

Solubility of colour represents the presence of any artificial colour in talcum powder. Colour is also

Comparative Test

important as sometimes these can be unsafe if not tested for safe use. All the brands passed this test.

Matter insoluble in boiling water

As per the Indian Standard, matter insoluble in boiling water should be minimum 90 % by mass.

All brands of talcum powder met the requirement in this test. Brand Premium had slightly more percentage of matter insoluble in boiling water followed by Park Avenue and Zed.

It is very important parameter to determine the quality of talcum powder. Talcum powder supposes to be insoluble in boiling water and the requirement in Indian Standard for this parameter is minimum 90%. All brands met the minimum requirement of Indian Standard. Talcum powder should be insoluble in boiling water, if it is not so than the powder could enter the human body by dissolving with sweat and can cause serious health problems.

Fineness

There are requirements for the fineness of talcum powder. As per the Indian Standard, residue of powder should not be more than 2% mass when passed through the sieve of 75 micron. And it should not be more than 0.5% by mass when passed through the sieve of 150 micron.

All brands of talcum powder met the requirement for fineness and passed the test. Brand Z was found with least residue followed by Premium and Nivea. However brand Navratna and Axe had more than acceptable levels of residue.

The requirement of the Fineness , we felt would be of importance to users/ consumers as talcum powder is used to add to physical comfort levels and also used directly on the skin and sometimes in delicate or sensitive

areas of the body. It is important that the 'feel' of the product be good. After all cosmetics ultimately are all about the 'feel' factor.

Arsenic

Arsenic is an element which is found in talc powder which is the basic and major ingredient of talcum powder. Indian Standard has specified the maximum permissible limit for arsenic since if it is found more than the permissible limit than it may cause harmful health effects. As per the Indian Standard, Arsenic should not be more than 2 ppm in talcum powder.

All tested brands of talcum powder were found with the arsenic within the specified limit. As Arsenic is a



poisonous element it is supposed to be absent in talcum powder, hence we have given more weightage to the brand with least arsenic content less weight age to the brand having more arsenic in its composition. Brand Cinthol (0.976 ppm) got score of 7.56 was found with least arsenic content among the brands we tested followed by **Nivea** (1.153 ppm) with score 7.11 and **Secret Temptation** (1.194 ppm). However brand **Pond's** (1.538 ppm) was found with more arsenic content followed by **Park Avenue** (1.404 ppm) with score of 6.49 and **Navratna** (1.397 ppm) with score of 6.50.

Microbiological Test (Total Plate Count)

GOOD NEWS !

All brands of Talcum Powder were found free from any microbial contamination. But talcum powder may have the microbial and fungal growth which can cause health problem like irritation or allergy if found in excess. After opening there are chances of microbial growth due to increase in moisture content,

What kind of exposure is dangerous?

1. Talc is toxic. Talc particles cause tumors in human ovaries and lungs. Numerous studies have shown a strong link between frequent use of talc in the female genital area and ovarian cancer. Talc particles are able to move through the reproductive system and become imbedded in the lining of the ovary. Researchers have found talc particles in ovarian tumors and have found that women with ovarian cancer have used talcum powder in their genital area more frequently than healthy women.
2. Talc poses a health risk to the lungs. Talc miners have shown higher rates of lung cancer and other respiratory illnesses from exposure to industrial grade talc, which contains dangerous silica and asbestos. The common household hazard posed by talc is inhalation of baby powder by infants. Since the early 1980s, records show that several thousand infants each year have died or become seriously ill following inhalation of baby powder, which their mothers liberally dust all over their bodies, especially on the chest area, near the face illustration: a mother dusting paws on a baby



therefore Keep your talc container tightly closed and store in a cool, moisture free area, meaning not in the bathroom!

Sensory Tests: Most important

This is a very important parameter, so subjective Panel tests were conducted, based on their critical examination by a panel of users and we present the resulting consumer opinion. We found consumers very careful about selection of product from retail stores and selective about what makes any brand relatively more

or least acceptable. Price or product cost proved to be the first priority of most consumers. We conducted sensory tests for Color, Appearance, Fragrance, Texture, Dusting-off while applying, Feeling after 1 hour of application, Feeling after 5 hours of application, Ease of use of packaging and over all acceptability. These tests were conducted in the lab involving panel members under the supervision of trained experts. We distributed the samples among our panelists. None of our panelist knew the name of any product. The preference of any particular brand can only be judged by

the overall acceptability of that brand by the panelist The entire brand tested had different fragrance. **In this test brand Park Avenue with 31.73 got highest score where Axe with 31.72 and Z 31.70.** Brand Navratna with score 26.8 was least acceptable in application test due to its intense smell and feel, after application.

Friendly to pocket

Yardley was the most expensive and Premium was least expensive brand. Quality of the talc powder and the fragrance are factors which affect the cost.

Base Material

Yes, the basic material is same in all the brands but the quality of talc powder is different in different brands and fragrance is also the factor to differentiate among the brands.

But for checking the consistency of talc to absorb the sweat we did not conduct any test for absorption. Their is no requirement in Indian Standard for absorption of sweat and also not any method for the same. We have observed the consistency of absorption of sweat in sensory/application test and all the brands were found satisfactory in this parameter.

If you wish to play safe : make your own talc. We show you how!

- At first you need to decide the quantity of product you need. Then mix equal proportions of tapioca starch, cornstarch and arrowroot powder in a bowl. Mix them thoroughly.
- For fragrance, add essential oils like lavender, rosemary, etc in absorbent cotton pad.
- Place the perfumed cotton ball inside the container and shake well. Let it be inside the mixture for 24 hours.
- Remove the cotton ball from the powder and once again mix the powder.
- The powder is now perfumed.
- Store it in talcum powder bottles.

If used in moderation even talcum powder available in markets are safe for skin. Cosmetics with talc have safety assurance. In case you find the ingredients harsh on your skin, you can always switch to natural products and prepare the powder of your choice at home.

* This recipe is not tried by us



COMPARATIVE PERFORMANCE SCORE OF TALCUM POWDER

Parameter	Brand	Wt.%	Z	Nivea Musk	Pond's Dream Flower	Axe Denim	Cinthol Deo Classic	Yardley English Lavender	Park Avenue Double Deo	Premium Lavender	Himani Navratna	Secret Temptation
MRP/Net Wt., Rs.			70/200	99/400	105/400	99/300	99/550	100/200	90/300	110/800	98/400	75/300
Unit Price per 100gm			35	24.75	26.25	33	18	50	30	13.75	24.5	25
Physico-chemical Tests												
Matter Insoluble in boiling water		10	8.12	8.08	8.07	8.02	8.06	8.03	8.14	8.16	7.97	7.97
Fineness		12	11.4	11.25	10.97	11.11	11.07	10.93	11.14	11.32	11.01	10.85
Asbestine		2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Solubility of Colour		2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Foreign Particle/Matter		2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Net Weight		2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Heavy Metal (Arsenic)		10	6.59	7.11	6.15	6.73	7.56	6.6	6.49	6.96	6.5	7.01
Microbiological Test (Total Plate Count)		7	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Sensory & Application Tests		40	31.7	30.16	31.32	31.72	29.98	28.64	31.73	29.63	26.8	26.48
General Parameters												
Packaging		7	6.5	5.7	4.5	4.0	4.5	6.5	3.0	3.5	5.0	4.0
Marking		6	4.5	5.0	6.0	4.5	4.5	5.0	4.5	4.5	4.5	4.5
Overall Score (Rounded of value)		100	84.0	82.0	82.0	81.0	81.0	81.0	80.0	79.0	77.0	76.0

Rating: >90 – Very good *****, 71-90- Good ****, 51-70- Average ***, 31-50- Poor **, up to 30 – Very Poor *

Sensory & Application tests: Colour & Appearance, Fragrance, Texture, Dusting –off while applying, Feeling after one hour, Feeling after five hour, Ease of use of packaging and Overall acceptability.

None of the tested brand declared as for men or women but brands Ponds, Nivea, Yardley, Cinthol, Premium, Secret Temptation were preferred by female panelists.