



# Chyavanprash repairs and rejuvenates

### Top performers

1. Baidyanath Kesari Kalp
2. Apollo Pharmacy and
3. Dabur.

Chyavanprash, as a product has high acceptability amongst Indian consumers. Whatever the negative points which commercialization of this traditional product has of necessity added to it, whatever the transformation that is required to be carried out for its entry into the category of processed foods, it is still the health/nutrition supplement that most Indian household reach out for. Men women children, the senior citizens, all consume it regularly, especially during the winter months. If the popularity of a product can be measured by its visibility on market shelves, proliferation of brands, a multiple frequency of ads, and a cultural acceptability, then Chyavanprash certainly makes the mark.

### Key Findings

- Baidyanath Kesari Kalp was tastiest among all the Chyavanprash brands we tested.
- Apollo Pharmacy was found rich in Antioxidants and Vitamin C content.
- Hamdard was found rich in Phenolic compound, Piperine and Calorific value.
- All brands of Chyavanprash were found free from Pesticides, Heavy metals and microbes.
- Dabur was found most acceptable in sensory properties like colour, appearance, flavor, taste and after taste feel.
- Zandu, Himani Sona Chandi and Himalaya were least tasty among all as they tasted of some unknown chemical.
- The major constituent of Chyavanprash was sugar as it was found to be in the range of 62.0% to 71.0%.

**A**gain, most brands in most parameters stay within safe limits as recommended by experts, including Ayush. One thing *Consumer VOICE* found a bit worrisome was the percentage of sugar syrup levels, crossing the 60% and touching the 70% mark. We found three reasons to be able to live with that: one consumer acceptability. It appears that some of the herbal contents of the product make it so bitter, as to be not only unpalatable but mostly unacceptable, therefore it appeared

to be a value addition to make the product acceptable. Second, sugar acted as a preservative, thus making it easy for consumers to continue to use it for as long as they wished, and without having to worry about following any storage or shelf-life limits. Thirdly, and most importantly, there were no mandated limits to how much sugar needs to be added to make it test worthy, therefore the product did not violate any standards by adding the level of sugar, it did. Another argument that went in its favour was that mostly one teaspoon of the product is consumed in a day, hence the sugar ingested per day, per measure is not worrisome.

Our market survey found a great deal of variation in the choice of ingredients in many brands. This also explained the variations in texture quality, ranging from a smooth paste to a somewhat grainy consistency. It sometimes affected the colour range, which varied from a relatively lighter brown to a very intense deep brown. It of course made for taste variations as well, which however were mostly doused by the high sugar levels.

Most users vouched for not only its acceptability, but also its effectiveness in preventing cold and cough and its ability to help the body combat weather variations, especially during the colder months. To top it all, our test found no traces of pesticides, toxic metals, steroids, mandated by Ayush as unacceptable in this product category.

So here is to Chyavanprash - the preferred Indian elixir for many maladies!

Read our report of the 8 most preferred brands!

## What is Chyavanprash?

Chyavanprash is a brown-colour sticky paste with the consistency of jam and a sweet/sour/spicy

taste. The major constituents of Chyavanprash composition include sugar syrup/honey, water amla pulp, fat (desi ghee), honey, black pepper, sesame oil, bamboo manna and various/numerous herbs extracts, spices whose composition and method of manufacturing is the ayurvedic formulatory of India. Chyavanprash is considered to be an effective remedy for premature aging (wrinkles), greying of hair, weight loss, and debility, vitamin and mineral deficiency since it is rich in vitamins and minerals. The unique antioxidant properties of Chyavanprash strengthen the body's internal defence mechanism, the immune system protecting the body from infection, cough, cold, stress.

## Top Performers in Key Parameters

Parameters	Top performer brands
Antioxidant	Apollo Pharmacy (28.22 mg/g)
Phenolic Compound	Apollo Pharmacy (5.35%)
Vitamin C	Apollo Pharmacy (52.80 mg/100g)
Piperine	Hamdard (0.042%)
Calorific value	Hamdard (356.71 kcal/100g)

## How we tested?

We conducted many critical tests for presence of heavy and toxic metals like Lead, Cadmium, Arsenic and Mercury. VOICE tested 8 most popular as well as regular selling brands of Chyavanprash. Chyavanprash should be packed in hermetically sealed, clean and sound containers so as to protect it from deterioration.

## Adequate Labelling in 3 out of 8 brands

The package of Chyavanprash should bear legibly and indelibly,

information like Name of the material; Name and address of the manufacturer; Batch or Code number Date of Manufacture; Instruction/recommendation on use for quantity and List of ingredients/composition.

**Dabur, Himani Sona Chandi and Apollo Pharmacy** had adequate information on their label, hence got full score. On the other hand Baidyanath Kesari Kalp, Humdard and Zandu did not mention instructions for storage. Divya Chyavanprash from Patanjali Yogpeeth did not have instruction for use on its label. List of ingredients and instruction for use were missing on Himalaya label.

## Phenol in Chyavanprash!

Phenols are chemical compounds found in plants. They act like anti-Oxidants and thus have several medicinal properties Phenol is expected to be high in Chyavanprash as it is prepared from various medicinal herbs. These compounds were found between the ranges of 3.57% to 5.35%. Apollo Pharmacy (5.35%) was found with highest percentage of phenolic compounds followed by Zandu (4.99%) and Himalaya (4.85%).

## Pungent Piperine

Piperine, along with chavicine (an isomer of piperine), is the alkaloid responsible for the pungency of black pepper and long pepper. Piperine is used in some forms of traditional medicines and also as an insecticide. It is expected to be highest in Chyavanprash due to a key spicy ingredient of Chyavanprash that has medicinal properties. It was found between the ranges of 0.012% to 0.042%. Humdard (0.042%) was found with higher Piperine content followed by Himalaya (0.035%) and Dabur (0.031%).

## Modern day Antioxidants in ancient Ayurvedic Formula

# Comparative Test

## Dosages mentioned on the labellings

Brand	Rank	Price	Dosage
Baidyanath Kesari kalp	1	520	1 to 2 tablespoonful with lukewarm milk twice a day
Apollo Pharmacy	2	220	10gm or one to two teaspoonfuls twice daily with milk.
Dabur	3	210	12 to 24 gm or one to two tablespoons according to age, best when taken with milk
Humdard	4	210	For adults – 10 gm , For children- 5 gm in morning & evening
Divya	5	200	Not marked
Himani Sona Chandi	6	220	½ to 1 teaspoonfuls with milk or Zandu honey twice daily.
Himalaya	7	230	1-2 tablespoons according to age
Zandu	8	185	1 to 2 tablespoons every morning preferably with milk or Zandu honey.

An antioxidant is a molecule capable of slowing down the oxidation of other molecules that causes damage to our body. "When our body cells use oxygen, they naturally produce free radicals (by-products) which can cause damage. Antioxidants act as "free radical

scavengers" and hence prevent and repair damage done by these free radicals. Health problems such as heart disease, macular degeneration, diabetes, cancer are all contributed by oxidative damage.' – <http://www.healthcastle.com>

Antioxidants may also enhance immune defence and therefore lower the risk of cancer and infection. Chyavanprash is considered to be a rich source of antioxidants as being derived from various herbs & medicinal products.

Best value for money 'Apollo Pharmacy' & 'Divya' priced at ₹ 220 & ₹ 200 per kg, respectively.

'Apollo Pharmacy' had the highest content of Antioxidant of 28.22mg per gram followed by Zandu 28.11 mg and Humdard 28.02 mg.

## Vitamin C sourced from Amla (Indian Gooseberry)

Vitamin C or Ascorbic acid is a natural antioxidant that helps to protect against cancers, heart disease and stress. Vitamin C helps in maintaining a healthy immune system. Vitamin C is required for the growth and repair of tissues in all parts of the body. It is expected to be higher in Chyavanprash as the basic ingredient is amla which has 10 times more vitamin C than oranges. In 100 gm of Chyavanprash, Vitamin C was found the highest with 52.80mg in Apollo Pharmacy followed by Humdard 27.55 mg and Dabur 25.88 mg.

## Dabur Chyavanprash the most pleasant flavour and taste

Sensory test is a very important parameter where subjective panel tests are conducted based on their critical examination and opinion since consumer is always looking for value for money. We conducted the sensory tests against colour & appearance, odour/flavour, taste and after taste feel. These tests were conducted in the lab involving panel members under the supervision of trained experts. In Ayurveda there are 6 tastes: sweet, sour, bitter, pungent, salty and astringent. Each of the 6 tastes plays an important role in healing. Chyavanprash has 5 of the 6 tastes (no salty taste).

Every brand differed in appearance as far as the colour and consistency are concerned. And every product had a distinct taste where the flavour of one or the other spices dominated. In addition some brands were tangy,



other sweet which mean that the sweeter ones will be patronized by the children and youngsters. Dabur was found most acceptable in sensory tests and scored highest among all brands followed by Baidyanath Kesari kalp and Divya. Dabur had most pleasant flavour. However Zandu, Himani Sona Chandi and Himalaya were found with flavour which was least acceptable. Baidyanath was found most acceptable in taste and after taste feel followed by Dabur and Divya, However brand Zandu was found with tangy taste which was not acceptable. Brand Himani Sona Chandi, Zandu and Himalaya were found least acceptable in after taste feel.

## Steroids Conspicuous By Their Absence

**Steroids:** A steroid if taken in high quantity may cause lethal health effect. We tested the products to find out if the manufacturers had used steroids synthetically as an adulterant. Steroids were found absent in Chyavanprash, hence, all brands got full weightage in this test.

## The Sugary story of Chyavanprash

### Carbohydrates:

Chyavanprash is also consumed by the elderly and children and the carbohydrates in Chyavanprash were found in the range of 72.48 to 79.89.

### Sugar

Sugar (Sucrose) consisting of sucrose obtained mainly from sugar cane and sugar beets is a major ingredient of Chyavanprash. It also act as a preservative in Chyavanprash.

The unrefined sugar and honey play an important role in Chyavanprash. They work together as an 'anupan', which means "a carrier of herbs." They help the herbs absorb deep into the tissues. The sugar and honey

## Main Ingredients of Chyavanprash

1. Amla keeps us away from all the diseases by boosting our immune system. It is known as *Emblica officinalis* in biological terms and *amlaki* in Sanskrit language. It is the richest natural source of vitamin C. It is very helpful in skin diseases, improving liver function, provides nourishment and works as brain tonic.
2. Asparagus: Asparagus (which was actually an add on for an ancient herb) is packed with nutrients like Folic acid, potassium, fiber, vitamin B6, vitamins A and C, thiamine and rutin, a compound that strengthens capillary walls. Asparagus has no fat, does not contain cholesterol and is low in Sodium.
3. Sesame oil: Know as the queen of oils, Sesame Seed Oil has been used as healing oil for thousands of years. It is naturally antibacterial for common skin pathogens as well as common skin fungi, such as athlete's foot fungus. Research shows that sesame seed oil is a potent antioxidant.
4. Ghee: Ghee has been used for over 2,000 years in Ayurveda which is the ancient natural healing system of India. It can withstand the high heat in baking. Ghee is a vital food for healthy skin, mental clarity and digestion. It is used in Indian medicinal practice to help with ulcers, constipation and the promotion of healthy eyes and skin.
5. Bamboo manna (*Vansalocahan*): A major source in India is *Bambusa arundinacea*, though other species of *Bambusa* are also used. An Ayurvedic remedy, *Sitopaladi Churna*, was used traditionally for tuberculosis and other wasting diseases and has been adopted as a popular remedy for common cold, sore throat, sinus congestion and cough.
6. Long pepper (*Piper longum*): In Ayurveda it is used for the treatment of respiratory and digestive irregularities. Long pepper is used in correcting digestive disturbances and minor respiratory ailments.
7. Sugar: For sugar traditionally sugarcane juice syrup is added to the formulation. Sugar is a simple carbohydrate that we use for energy. It can preserve fruits in the form of jams, jellies, preserves, marmalade's, etc. because the high sugar content will not let bacteria, yeasts or molds grow due to diffusion.
8. Honey: Honey contains four substances that prevent colon cancer. One tablespoon daily will make a difference in the human body. [www.natureguide.com](http://www.natureguide.com)



provide the sweet taste, which is rejuvenating. Sugar was found in Chyavanprash in the range of 62.01% to 71.0%. Zandu (71.0%) had highest sugar content followed by Himalaya (69.80%) and Apollo Pharmacy (69.60%), However Humdard (62.01%) had lowest sugar content preceeded by Himani Sona Chandi (62.14%) and Dabur (62.42%).

## When and When not to take Chyavanprash

It is said that even nectar can be poisonous if taken in high quantity.

Therefore there should be some restrain in the usage of Chyavanprash by the elderly as the sugar content is very high. Besides it is better for any consumer to take Chyavanprash under Medical supervision. Some experts advise that Chyavanprash should not be consumed during pregnancy.

## Some of the other Test Results at a Glance

**Presence of protein negligible:** Protein is an essential nutrient in diet. It was found in the range of 0.73 to 1.79. Baidyanath (1.79) was found

## Comparative Test

with higher protein content followed by Divya Chyavanprash (1.08) and Himani sona chandi (0.96).

**Fats to enhance flavour and consistency:** The fat component adds richness of flavour and contributes to a smooth texture. Presence of fat in Chyavanprash is the indicator of ghee (desi/pure) which is used for frying of amla pulp and to bring consistency in to a homogenous product. *1.25% to 4.25% fat content in the brands we tested. Zandu (4.25%) had highest fat content*

*among all the brands we tested followed by Baidyanath (4.10%) and Apollo Pharmacy (3.98%). However Himani Sona Chandi (1.25%) had lowest fat content followed by Dabur (2.33%) and Divya (3.40%).*

**The calorie intake from Chyavanprash:** Calorific value is the amount of calories which our body obtains from the foods. As Chyavanprash is also used for giving energy, it is expected to be high in Calorific value. In every 1 Kg container of Chyavanprash we tested, Humdard

and/or blood glucose attenuation. Humdard (4.84) had higher dietary fibre followed by Dabur (4.80) and Baidyanath Kesari Kalp.

**Water Content is less than 20%:** We have considered water as lower the better in Chyavanprash. Humdard (15.29%) had lowest water content followed by Himani Sona Chandi (16.71%) and Dabur (17.28%).

**Foreign matters in the tonic:** After the ignition of sample the residual is called ash. As per the Indian Standard (Ayush), it should not be more than 2% in Chyavanprash. Apollo Pharmacy (0.32) was found with lowest ash content followed by Humdard (0.37) and Himalaya (0.81).

Acid insoluble ash indicates the presence of sand, dirt and dust that does not dissolve in a liquid. As per the Indian Standard, it should not be more than 0.2%. Divya Chyavanprash (0.014) was found with lowest acid insoluble ash content followed by Baidyanath (0.016) and Dabur (0.017).

**Microbiological Tests and Heavy metals within Benchmark:** Microbiological contamination is a very serious issue for food products. Microorganisms are responsible for many food borne diseases. All the brands of Chyavanprash had met the requirements for microbiological contamination, hence got full score.

All the brands of Chyavanprash were meeting the requirement for heavy metal contents as Arsenic, Lead, Cadmium and Mercury, hence got full score.

**Toxicins and Pesticides not present:** All the brands of Chyavanprash were found free from any aflatoxin. Aflatoxin is a kind of toxin or poison produced by the mold *Aspergillus flavus*.

### How do Ayurveda medicines work?

According to Ayurveda most diseases stem from problems in the digestive system. Ayurveda breaks digestion into three stages: the stomach, the small intestine, and the large intestines. Food that is assimilated in the stomach is used very quickly for the building of fluids, blood and lymph. What is assimilated in the small intestine affects mainly muscles and fat; and what is assimilated in the colon is used to regenerate the skin, bones, hair, nerve sheaths, reproductive fluids, and brain. Fragility of the bones and senility are thus colon problems and they are "vata" conditions, derangements of the air and ether. All proper maintenance requires good digestion and assimilation; otherwise, worn out tissues will not be regenerated, i.e. replaced by healthy new tissues. Chyavanprash is the most effective remedy for tissue rejuvenation and as an immunity booster. It is often called "the elixir of life" due to its numerous nutritional properties and benefits to the body.

### Need for Standards of Chyavanprash

It is observed that the consistency and the taste of Chyavanprash varies from one manufacturer to another. Even variations are observed in different manufacturing batches of the same company so it is the need of the hour to have standards for its raw materials quality and finished product specifications.

Chyavanprash has very vast market because it is being promoted as health tonic, not as ayurvedic medicine by its manufacturers. Either Ministry of Health and Family Welfare should take the responsibility or the Bureau of Indian Standards (BIS) which is the National Standards Body working under the aegis of Ministry of Consumer Affairs, Food and Public Distribution should formulate its standards.

was found with highest calorific value of 356.71kcal followed by Apollo Pharmacy 345.38 kcal and Zandu 342.25 kcal in every 100g.

**Chyavanprash: a rich source of Fibre:** Crude fibres are generally present in the Chyavanprash since the herbs are powdered and mixed with sugar syrup/honey while preparing

the Chyavanprash. Himalaya 3.15% was found with highest crude fibre content followed by Humdard 3.11% and Himani sona chandi 2.98%.

Dietary fibre which includes associated plant substances that promote beneficial physiological effects including laxation, and/or blood cholesterol attenuation,

## Conclusion

All brands of Chyavanprash we tested, had a certain quantity of Phenolic compounds, Piperine, Sugar, Fat, Carbohydrate, Protein, Calorific value, Crude & dietary fibres, Vitamin C and antioxidants. Thus the

product was found to be true to the expectation of consumers who buy this product. On the other hand Chyavanprash was also tested for presence of any pesticides as well as most harmful toxic substances namely aflatoxins. Primarily because

this Ayurvedic product is prepared from various critical and rare herbs that may also contain these toxic substances. Fortunately none of the brands contained these toxic materials hence safe for consumption.

## Comparative Test Performance Scores of Chyavanprash

Brand	Wt.%	Baidyanath Kesari Kalp	Apollo Pharmacy	Dabur	Humdard	Divya (Patanjali Yogpeeth)	Himalaya	Himani Sona Chandi	Zandu
<b>Pack Size, gm</b>		1000	1000	1000	1000	1000	1000	1000	1000
<b>MRP, ₹</b>		520	220	210	210	200	220	230	185
<b>Physico-chemical Tests</b>									
Antioxidant	8	6.94	7.77	6.88	7.71	6.97	7.51	6.09	7.74
Phenolic Compound	5	4.02	4.67	3.99	4.5	4.05	4.42	3.78	4.49
Vitamin C	8	6.22	8	7	7.2	6.27	5.98	6.88	4.54
Piperine	4	3.48	3.4	3.56	4	3.44	3.72	2.8	3.36
Steroids	4	4	4	4	4	4	4	4	4
Fat	4	3.74	3.7	3.15	3.67	3.51	3.63	2.8	3.8
Protein	3	3	2.1	2.27	2.18	2.4	2.27	2.3	2.13
Carbohydrate	4	3.94	3.41	3.25	3.04	3.6	3.55	3.01	3.59
Calorific Value	3	2.55	2.79	2.61	3	2.6	2.66	2.58	2.73
Crude Fiber	2	1.88	1.4	1.89	1.98	1.69	2	1.93	1.59
Dietary Fiber	2	1.83	1.75	1.98	2	1.8	1.73	1.71	1.77
Pesticides	4	4	4	4	4	4	4	4	4
Heavy Metals	6	6	6	6	6	6	6	6	6
Aflatoxin	6	6	6	6	6	6	6	6	6
Sugar	3	2.83	2.46	2.82	2.85	2.72	2.45	2.84	2.4
pH	3	2.47	2.18	2.29	2.1	2.85	2.49	2.4	2.37
Water Content	3	2.41	2.66	2.77	2.97	2.56	2.5	2.82	2.68
Total Ash	2	1.77	2	1.44	1.96	1.69	1.76	1.58	1.4
Acid Insoluble Ash	2	1.98	1.92	1.97	1.76	2	1.96	1.4	1.94
<b>Microbiological Tests (Total Plate Count, Yeast &amp; Mould Count and Pathogens)</b>									
	6	6	6	6	6	6	6	6	6
<b>Sensory Tests (Colour, Appearance, Odour/ Flavour, Taste &amp; After taste feel)</b>									
	13	10.87	9.35	11.05	8.16	9.96	9.02	8.99	6.98
<b>General Parameters</b>									
<b>Packing</b>	2	2	2	2	2	2	2	2	2
<b>Marking</b>	3	2.7	3	3	2.7	2.7	2.4	3	2.7
<b>Overall Score</b>	100	90.63	90.56	89.92	89.78	88.81	88.05	84.91	84.21

Rating: >90 – Excellent \*\*\*\*\*, 71-90- Very Good \*\*\*\*, 51-70- Good \*\*\*, 31-50- Average \*\*, upto 30 – Poor \*