

Loose chilli powder: Less in price but unsafe



Loose chilli powder: Cheap but unsafe

2 samples found to be rancid and infested with insects, 5 were discoloured

Too much of it in your curry can make you desperately reach out for a glass of water to cool your burning mouth! But, which Indian kitchen can do without the fiery presence of red chilli powder?

CERC tested chilli powder brands and published the reports in Insight (March-April, 1999) and Right Choice (March 2014). It was found that all brands complied with parameters set by the Bureau of Indian Standards (BIS). However, pilot tests and media reports indicated that loose chilli powder is susceptible to adulteration and contamination.

Purchasing large quantities of loose chilli powder in the appropriate season and storing it for months is a common practice in many states of the country. Hence, we decided to test loose samples for purity and quality.

What is adulteration?

Adulteration of food is defined as the addition or subtraction of any substance to or from food, so that the natural composition and quality of the food is affected. Adulteration can be intentional (for economic gain) or unintentional (because of contamination usually due to improper storage). Adulterated food is dangerous as the added ingredients may be toxic. Increased consumer awareness is the remedy for eliminating adulteration.

Key findings

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We tested 15 loose samples procured from different areas in Ahmedabad. The key findings are as follows:

1. 13 of the 15 samples were free from musty odour and rancid (stale) smell. The two exceptions were found to be highly rancid. This indicates that either the samples belong to an old/expired lot and/or have been mixed with rancid oil. The samples could have also deteriorated due to prolonged exposure to air and/or sunlight.
2. Upon visual examination, 2 samples were seen to be infested with insects. Insect infestation occurs when a sample is exposed to moisture and/or is not stored properly. This problem occurs in godowns or provision stores. However, the presence of insects in freshly drawn samples (as taken for testing by CERC) is a serious concern.
3. Five samples were found to be discoloured having a brownish colour instead of a natural red or brick red colour. The discoloration is probably an effect of oxidation due to exposure to air over a long period.
4. 14 samples contained traces of oil used for preservation purpose. According to regulations, chilli powder may contain any edible vegetable oil to a maximum limit of 2% by weight.

5. All 15 samples tested were found to be free from adulteration with brick powder, sand, dirt, stones, sawdust, powdered bran, coal tar dyes/artificial colours and Rhodamine B (a non-permitted colour)

Price comparison

We purchased 15 loose samples of 500g for testing purposes. The average price came to Rs. 17 per 100g. We checked the price for 100g of five popular brands of packaged chilli powder. The brands and prices are as follows: Everest (Rs. 32), MDH (Rs. 31), MTR (Rs. 32), Ramdev (Rs. 23) and Catch (Rs. 25). The average price comes to approximately Rs. 28 per 100g.

There is a fairly large difference in the price of loose and packed chilli powder (Rs. 11 per 100g.). But since chilli powder is not consumed in large quantities, cost considerations are not that significant.

How to test chilli powder at home for adulteration

Take a little chilli powder and sprinkle it in a bowl of water. Keep it aside for around ten minutes. Pure chilli powder will sink to the bottom of the bowl. If there are wood shavings they will float on the surface of the water. If there is any added colour it will change the colour of the water.

How healthy is chilli powder?

Chilli peppers are rich in various vitamins and minerals, notably Vitamins A, B6, C, E and K and thiamin, riboflavin, folate, calcium, magnesium and potassium. However, since they are only eaten in small amounts, their contribution to the daily micronutrient intake is very small.

Capsanthin, the main carotenoid in red chillies, responsible for the red colour, has powerful antioxidant properties. However, it is capsaicin that is the main bioactive plant compound in red chillies which is responsible for the unique, hot pungent taste and many of the other health benefits. Capsaicin has been known to reduce appetite and increasing fat burning, thereby promoting weight loss.

On the flip side, consumption of chilli powder may cause digestive distress – stomach pain, burning sensation in the gut, cramps and painful diarrhoea in some people.

Area of action

As per Food Safety and Standards Authority of India Reg 2.3.14: 'Restrictions relating to conditions for sale' Item (15) No person shall sell powdered spices and condiments except 'under packed conditions. The Regulatory Authorities should enforce this rule strictly.

Summing up

It is always advisable to purchase and use packaged food products. Spices and condiments, including chilli powder, come under the Agmark Scheme of Inspection & Marking. So buy Agmark products to be assured of purity and quality.

If you are buying a large quantity and want to save money it is better to buy red chillies and get them ground in front of you than buy loose chilli powder. Ensure that the stalks are separated from the chillies. In fact, self-ground chilli powder (whether at home or at a shop) is better than branded varieties.

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