

Pure? Find out at home

You can try these kitchen tricks to expose adulteration in your everyday ingredients

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In a country where official systems set for food safety and prevention are constantly outdone by a booming adulteration business, the onus of safeguarding one's family against contaminated food, unfortunately falls on citizens themselves. From loose packed ground spices, to wet produce such as milk, khoya, paneer, to dry spices and grains, almost everything you can buy might be adulterated, if purchased from an unauthorized vendor in a box unmarked and untested by either Agmark or ISI. While some of these could be less harmful, such as water or bran, chemicals and coloring agents such as metanil yellow, lead chromate, sudan red III, are known to be carcinogenic.

The chairman of the Consumer Guidance Society of India, Dr Sitaram Dixit, lists a few commonly used food items, and suggests simple home tests to check for their most common adulterants. In case the test asks for the presence of an acid, you could use common toilet-cleaning acid, or easily found citric acid or even lemon juice.

1

TURMERIC , DALS AND PULSES SUCH AS MOONG OR CHANNA ADULTERANT

Metanil yellow and kesari dal (added to enhance the yellow color of a food substance).

TEST

Dissolve half a spoon full of besan or turmeric powder in 20 ml of lukewarm water. Add a few drops of hydrochloric acid or any commonly available acid at home. If the water turns pink, violet or purple, it shows the presence of metanil yellow.

HARMFUL EFFECTS

It's considered to be highly carcinogenic and if consumed over a continuous period of time, it can also cause stomach disorders.

2

GREEN CHILLIES, GREEN PEAS AND OTHER VEGETABLES

ADULTERANT

Malachite green (to accentuate the bright, glowing green color of the vegetable).

TEST

Take a small portion of the sample and place it over a moistened white blotting paper. Colored impressions on the blotting paper indicate the presence of Malachite green.

HARMFUL EFFECTS

It's a colored dye that has proven to be carcinogenic for humans if consumed over a long period of time.

MUSTARD SEEDS AND MUSTARD OIL

ADULTERANT

Argemone seeds (used to add bulk and weight)

TEST

When pressed or crushed, argemone seeds are white inside and have a rough outer surface whereas mustard seeds are smooth on the outside and are yellow on the inside.

HARMFUL EFFECTS

The consumption of these could cause epidemic dropsy and severe glaucoma. Young

children and senior citizens with poor immunity are more susceptible to this.

4

PANEER , KHOYA , CONDENSED MILK AND MILK ADULTERANT

Starch (used to give it a thick, rich texture)

TEST

Take a small sample of the product in a test tube, add 20 ml of water and bring to a boil. Cool to room temperature and add a drop or two of iodine solution. If the solution turns blue, it clearly marks the presence of starch.

HARMFUL EFFECTS

Unhygienic, unprocessed water and starch can cause stomach disorders. Starch greatly reduces the nutritional value of the ingredient.

5

ICE CREAM ADULTERANT

Washing powder (used to add a bright white sheen and lightness of flavor).

TEST

The best thing would be to squeeze a few drops of lemon juice on the ice cream. If it starts to froth and bubble, it marks the presence of washing powder.

HARMFUL EFFECTS

It can cause severe stomach and liver disorders.

6

BLACK PEPPER ADULTERANT

Papaya seeds (used to add bulk).

TEST

Float the sample in alcohol.

Mature black pepper corns will automatically sink whereas papaya seeds will float to the surface.

HARMFUL EFFECTS

Very few people know that papaya seeds can actually cause serious liver problems and stomach disorders.

7

COFFEE POWDER ADULTERANT

Tamarind seeds, chicory powder (used to add bulk and color).

TEST

Gently sprinkle coffee powder on the surface of water in a glass. The coffee will float whereas chicory will start to sink within a few seconds. Also, the falling chicory powder will leave a trail of color behind due to the large amounts of caramel it contains.

HARMFUL EFFECTS

These can cause diarrhoea, stomach disorders, giddiness and severe joint pains.

CATCH THE ADULTERER

According to the directives by the FDA, if a packed product with an ISI or an AGMARK tests positive for adulteration, you can take the sample immediately to your local city office, and register an official complaint. This is the best way to crack the whip on adulterers trying to pull the wool over your eyes. The agencies then conduct their own tests, and if confirmed, raid their premises and take legal action against erring companies.





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