

Methods for Detection of common adulterants in food:

S. No	Food Item	Adulterant	Method of Detection	Inference
1.	Turmeric	Coloured saw dust	Take a tea spoon full of turmeric powder in a test tube. Add a few drops of concentrated Hydrochloric acid. Instant appearance of pink colour which disappears on dilution with water shows the presence of turmeric. If the colour persists, metanil yellow (an artificial colour) a not permitted coal tar colour is present	Sample is impure if change is detected. It is pure if no change.
		Lead chromate	Appears to be bright in colour which leaves yellow colour immediately in water.	Sample is impure if change is detected. It is pure if no change.
		Chalk powder or yellow soap stone powder	Take a small quantity of turmeric powder in a test tube containing small quantity of water. Add a few drops of concentrated Hydrochloric acid, effervescence (give off bubbles) will indicate the presence of chalk or yellow soap stone powder	Sample is impure if change is detected. It is pure if no change.
2.	Wheat Flour	Chalk powder	Shake sample with dil. HCl Effervescence indicates chalk.	Sample is impure if change is detected. It is pure if no change.
		Excess bran	Sprinkle on water surface. Bran will float on the surface.	Sample is impure if change is detected. It is pure if no change.
3.	Ghee	Vanaspathy or Margarine	Take about one tea spoon full of melted sample of Ghee with equal quantity of concentrated Hydrochloric acid in a test tube and add to it a pinch of sugar. Shake for one minute and let it for five minutes. Appearance of crimson colour in lower (acid) of Vanaspati or Margarine. The test is specific for Sesame oil which is compulsorily added to Vanaspati and Margarine. Some coal tar colours also give a positive test. If the test is positive i.e. red colour develops only by adding strong Hydrochloric acid (without adding crystals of sugar) then the sample is adulterated with coal tar dye. If the crimson or red colour develops after adding and shaking with sugar, then alone Vanaspati or Margarine is present	Sample is impure if change is detected. It is pure if no change.