

TESTING VEGETABLE OIL FOR ADULTERANTS

FOOD ITEM	ADULTERANT	SIMPLE METHOD FOR DETECTING THE ADULTERANT
Pure Ghee or Butter	Vanaspati	1. Take one teaspoonful of melted ghee or butter with equal quantity of Conc. Hydrochloric acid in a test tube. Add to it a pinch of cane sugar. Shake well for one minute and let it stand for five minutes. Crimson red colour in lower layer shows the presence of Vanaspati.
	Mashed Potato or Sweet Potato	2. Boil 5 ml sample in a test tube. Cool and add a drop of iodine solution. Blue colour indicates the presence of starch.
	Rancid or old Ghee	3. Take 5 ml of molten ghee sample in a stoppered measuring tube. Add 5 ml of HCl. Shake vigorously for 30 seconds. Add 5 ml of 0.1% ether solution of Phloroglucinol. Re-stopper the tube and shake for another 30 seconds. Allow it to stand for 10 minutes. A pink or red colour in the lower acid layer indicates rancidity and presence of old ghee.
	Synthetic colouring matter	4. Dissolve 2 grams of Ghee in ether. Divide the potion into two test tubes. Add 1 ml of HCl in one test tube add 1 ml of 10% NaOH solution in the other potion. Shake well and allow standing. Presence of pink colour in the acidic solution and /or yellow colour in the alkaline solution indicates added colouring materials.
	Coal tar dyes	5. Add 5 ml of dilute Hydrochloric Acid or concentrated Sulphuric Acid to 5 ml of molten ghee sample in a test tube. Shake well. Pink colour in the case of Sulphuric Acid addition and crimson red colour in case of dilute Hydrochloric Acid indicates the presence of coal tar dyes. If addition of HCl does not give crimson red colour, add some water. Development of colour indicates presence of coal tar colour dyes.
Vegetable Oil	Castor Oil	Take 1ml Oil in a dry test tube. Add 10 ml of acidified petroleum ether. Shake vigorously for 2 minutes. Add 1-2 drops of ammonium molybdate reagent (Dissolve 1 gm ammonium molybdate in 100 ml of Conc. Sulphuric Acid). Turbidity indicates adulteration with castor oil.
	Karanja Oil	Take a 1 ml of Oil in a test tube. Add few drops of antimony trichloride solution in chloroform, mix well. Appearance of a canary yellow or orange color indicates presence of Karanja oil
	Mineral Oil	Take 2 ml sample in a test-tube and add 2 ml of alcoholic potash to it. Warm the sample on a low flame burner for about 10 min and add water to it. Appearance of turbidity shows presence of Mineral Oil.