

## Oils impure; Need refining to make them safer, says Prasad at ICF meet

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The oil obtained either from expellers or solvent extraction plant contains some impurities which adversely affect the safety, flavour, odour and appearance of oil and are required to be removed for making them edible. After refining, oils will become more safe, palatable and stable against rancidity upon storage.

This was stated by R B N Prasad, chairperson, scientific panel on oils and fats, FSSAI, and one of the panellists at the Forum on Edible Oils - Myths and Facts, organised recently by the Indian Consumer Federation (ICF), a registered organisation for creating awareness about consumer rights and duties and helping consumers understand the various aspects of products and its safety.

The objective of the platform was to help the consumers understand the various aspects of the edible oil production and consumption from a panel of eminent scientists, nutritionist and the Solvent Extractors' Association of India (SEA).

Prasad said, "We are honoured to share knowledge about oils and its facts to the consumers through this forum. Cooking or edible oils are very important for the maintenance of good health. These are energy-rich components in our daily food and provide about 9kcal/g, whereas carbohydrates and proteins provide only 4kcal/g."

"FSSAI has recognised several oils for cooking purposes, and some of the most common cooking oils being consumed are as follows - coconut oil, cottonseed oil, groundnut oil, linseed/flaxseed oil, mustard oil, rapeseed or mustard oil (low erucic acid), olive oil, palmolein, palm stearin, palm kernel oil, rice bran oil, safflower seed oil, til oil (gingelly or sesame oil), soybean oil, maize (com) oil, sunflower seed oil and high-oleic sunflower seed oil. The majority of these oils require refining," he added.

“Some of the oils, like groundnut oil, sesame, coconut oil, mustard oil and safflower oil, which are extracted using expelling technique, can be consumed without refining. However, in some cases, these seeds are also affected by aflatoxin during harvesting. It is advisable to refine these oils before consumption,” Prasad said.

“Several oils, like sunflower, palm soyabean, cottonseed, rice bran, etc., are required to be sold only as refined oils, as these oils are produced by solvent extraction process, as they may contain solvent residues,” he added.

“FSSAI and other global agencies permit several processing aids for the refining of oils. Hence, refined oils are totally safe to use as cooking oil. Globally, over 85 per cent of the oil consumed is refined oil,” Prasad said.

“The country’s apex food regulator has officially allowed the refining of vegetable oils using permitted food-grade materials. Most of the nutritional components, like tocopherols, tocotrienols, phytosterols, oryzanol lignans, etc. are retained in reasonably higher quantities during refining,” he added.

“However, during the refining, some of the nutritional components like lecithin have to be removed (during the degumming step) as these components create some problems like foam during further refining steps or during cooking the foods,” Prasad said.

The panel also comprised Kalpagam Polasa, former director, National Institute of Nutrition (NIN), Prabodh Halde, president, AFST(I) (the Association of Food Scientists and Technologists [India]), and convener, food regulatory and legal committee, SEA, and B V Mehta, executive director, SEA. They discussed the different aspects about edible oils, comprising their importance in the diet, the selection of oils, the safety of refined oils and the logic of importing oils and its pricing.

Halde said, “Particularly refined oils are completely safe, since the refining process is approved by the government, accepted in over 200 countries and in practice for the last 100 years.”

“Internationally, the Codex Alimentarius Commission and in India, FSSAI has approved the refining process, and thus, refining is a completely safe process to produce safe oil. If refined oil is consumed in moderate quantity and one gets regular exercise too, it is safe and healthy. Most of the refined oils are fortified with Vitamins A and D, which is good for health,” he added.

“The refining technique is a scientific process, and that has made a lot of healthy oils edible for human beings. Rice bran oil and soy oil would not have been edible if the refining

process was not invented. We have to respect science and the government, consume edible oils as per one's choice and be healthy and safe," he stated.

Polasa said, "Most of the global health organisations recommended intake for total dietary fat (visible+invisible) in adults ranges between 20 and 35 per cent total energy intake per day."

"In India, the recommended dietary guideline of ICMR for the total dietary fat intake is 30 per cent of the total energy intake per day. This means that 30 per cent of the total daily energy intake should come from dietary sources of oils and fats," he added.

"For example, if an individual consumes 2,000kcal of energy/day, 30 per cent of it (i.e. 600kcal [equivalent to 65g]) must come from the total fat (visible+invisible) intake. Hence, it is necessary to take about 30g/day of visible oils. Each cooking oil has its own merits and demerits. We always suggest that consumers buy packed edible oils, as loose oils could be adulterated," he added.

Mehta said, "Indian vegetable oil production has been almost stagnant between 7.5 to 8.5 million tonne per year for the last 10 years. However, the demand for edible oils in India has shown a compounded growth of 4.5 per cent over the last 10 years."

"Due to this reason, India's import of vegetable oils is continuously growing, and about 15.1 million tonne of vegetable oils were imported during 2016-17. Despite this, the current levels of per capita consumption of edible oils in the country is about 15-16kg, which is well below the world average of around 24kg," he added.

"The total consumption of edible oils in India stands at 22 million tonne, with sunflower oil being 11.7 per cent for the year 2017-18. Ninety per cent of the sunflower oil consumed in the country is imported from Ukraine and Russia," Mehta said.

"All imported edible oils are checked and verified for quality by Central food authorities. Only then are they allowed for further processing. As discussed by other panellists, it is essential to refine the vegetable oils, and India consumes almost 87 per cent of the refined oil in various forms, so all responsible manufacturers use the FSSAI-approved process and agents for refining," he added.

Mehta said, "The pricing of edible oils is a dynamic factor dependent on the cost of oil, duty structure, and other operational costs. All standard brands in any category adhere to the guidelines by FSSAI and provide brands at competitive pricing derived from their efficiencies of manufacturing and distribution."