



## Transfats : Most dangerous element of processed food



Trans fats are formed when previously healthy liquid oils are hydrogenated, or hardened, a process often used to improve the texture of packaged foods and increase shelf life.

According to Lauren Graf, MS, RD, clinical dietitian at The Children's Hospital at Montefiore in the US,

"Research shows that

trans fats, even in small quantities are worse for us than the old bad guy – saturated fats.

"They raise our Low-density lipoprotein (LDL) bad cholesterol, lower our High-density lipoprotein (HDL) good cholesterol, and increase triglyceride levels in the blood. They also promote inflammation in the body, which can damage blood vessels – a quadruple whammy for the heart," Graf said.

Now that federal regulations require all food companies to report trans fat amounts on food labels, many people are glancing at the nutrition facts to make sure they are steering clear of them.

## Graf offers the following tips to help you decipher food labels accurately:



### Seems so simple

What's the Catch? If you're relying on the "Nutrition Facts" part of the label to avoid trans fats, think again. Just because a product claims to have zero grams of trans fat doesn't mean it's trans-fat free.

The Food and Drug Administration (FDA) allows companies to report "0" grams of trans fat if the product has less than 0.5 grams per serving. You may be eating several of these trans fat-free foods each day, thinking they are healthy. Or you may be eating 2 or 3 times the serving size and getting a lot more of this harmful fat than you realised.

### Look at the ingredient list

If you see the words partially hydrogenated oils, you can be sure there's trans fat. Many foods claim "0" grams on the package, but when you go to the trusty ingredient list, you'll notice this code word for trans fats is in there.

## Misting Technology – a new development in storage



**“The latest Development in Food Preservation Technology.”**

The latest development in food preservation technology has been the invention of the misting technology applied for the preservation of fresh agri-produce, fruits, and vegetables. This technology is the application of high pressure (1000 psi) to water, to convert it into fine droplets of mist. The average droplet size of the mist is 4-5 microns, which is achieved by the highly engineered nozzles. This size of the droplets ensures enhanced surface area coverage, resulting in

immediate evaporation and consequent cooling and humidification of the space.

The application of misting ensures drying or withering is avoided and on the other hand, there is no wetting of surface of the fruits and veggies, as it may lead to rotting. And so misting technology has to ensure a balance between the prevention of drying and avoidance of too much of wetting. Since the droplet size is minuscule, it

ensures that mist does not actually touch or wet the surface of the fruit. An equilibrium in the humidity parameter which is highly crucial for a fresh harvest

A notable point here is that misting requires very low quantity of water because of the application of high pressure. A nozzle delivers 0.07 litre of water per minute; while the misting that is used for supermarkets is pulsed at a few seconds per minute.

## FSSAI brings in new rules to deal with adulteration, licensing



Around one lakh cases related to food adulteration are pending in courts. The conviction rate of these cases is only 1%, said PI Suvrathan, chairman, Food Safety and Standards Authority of India. The prime reason for the low conviction rate was faulty designing of the law under the Prevention of Food Adulteration Act, which was based on sample testing of the final product. If the sample was found adulterated by the food inspector, the food manufacturer was taken to the court. However, he would manage to go free if he proved that circumstances other than manufacturing were responsible for adulteration. For example, the way the product was transported or stored. This allowed him to evade from the 3-6 months jail term as prescribed under the PFA Act.

With the FSSAI coming up, the method of law implementation will change radically. The FSSAI will put the responsibility of food safety on the manufacturer and not the government or the law-enforcing agency. The prime responsibility would lie on the manufacturer and secondary responsibility on the food handler. In case an offence is committed, the manufacturer will be given an opportunity to rectify his product. If the act is repeated, then a warning or suspension may take place.

Said Suvrathan, “For the first time science-based protocols are being laid down. We are developing a simplified system of safety standards which will be a part of the licensing regulation.

With the FSS Act, the role of food inspector will be replaced by the food safety officer. Also, till now food manufacturers had to comply under various licences proposed under different Acts like the FPO, MPO, etc. Now, all licensing will be integrated in one licence known as the FSSA licence.

Also, for the first time the FSSAI has introduced the rule that if the regulating authority fails to respond within 60 days of application of licence/registration, then the food manufacturer can go ahead and start operations without approval/registration. Thus the responsibility has been shifted to the regulator, said Suvrathan.





The food ingredient sector across the world is facing major challenges including food safety/traceability issues, regulatory pressures, changing demographics and many other factors, and these relatively new phenomena are forcing major players to realign their global strategies in this market. This raises some important questions regarding India's growing role in the ingredient sector.

### **Global Speciality Food Ingredient Markets**

In general, the ingredient industry is divided into the

following segments:

- Bulk ingredients (bulk dairy ingredients (SMP,WMP,... ), oils & fats, bulk sugars, basic proteins, etc.)
- Speciality ingredients (emulsifiers, acidulants, phytochemicals, LC/HL sweeteners, flavours, colors, enzymes, etc. and this segment also includes nutritional ingredients)
- Intermediates and mixes (meat seasonings, bakery mixes, fruit preps, vitamin/mineral pre mixes, etc.)

The global speciality ingredient market is estimated at just below \$30 billion, and consists of a

wide variety of ingredient groups such as flavours, hydrocolloids, emulsifiers, enzymes, speciality proteins and fats and many others.

Within this segment, India currently has a significant presence only in 3 or 4 product groups such as hydrocolloids (only guar gum), colours, phytochemicals and vitamins/minerals. On the other hand, with its vastly improved technologies and based on its inherent strength in fermentation, China has emerged as the global leader in speciality ingredients.

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