

Importance of Nutritional and Health Standards for the Quality and Safety of Edible Oils & Fats

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Oils and fats are essential nutrients in both human and animal diets. Nutritionally, oils and fats are concentrated sources of energy (9 kcal/gram) compared to protein or carbohydrates (4 kcal/g). According to FAO/WHO dietary guidelines, about 20 – 35% of total calories must come from oils and fats. Globally about 225 million tons of oils and fats are being consumed and in India the consumption crosses about 26 million tons per year. Hence, the safety and quality of oils and fats are very crucial for the benefit of consumers. It is necessary to take lot of care from the quality of raw material to the packaging of the final product of edible oils and fats. All the stakeholders of a food chain are responsible for food safety. Adequate integration among expelling, solvent extraction and refining units may provide high quality edible oils and fats. In general, there is a possibility of mixing cheaper oils with expensive oils and this is the major intentional adulteration of edible oils and fats. In isolated cases, unethical industries are adulterating edible oils with synthetic oils being prepared by the reaction of glycerol and fatty acids, which must be condemned by all the stake holders. Due to this type of unethical market competition, an honest industry cannot easily match the unrealistic prices that the adulterating product charges. Hence the legislation which is making regulations has to ensure that consumers and fair industry are adequately protected and nutritional and health standards are important for the quality and safety of edible oils and fats because they ensure the product is safe to consume and help to detect adulteration. In addition, oils and fats can deteriorate through oxidation, hydrolysis, and polymerization and monitoring and maintaining their quality is important to ensure safety and oils and fats can also contain potentially toxic contaminants. Due to these reasons, over the years, the standards of Codex Alimentarius Commission and individual countries for oils and fats have been gradually modified to enhance their usefulness in tackling authenticity problems. By considering the importance of edible oils and fats in the common man's food, FSSAI is also taking lot of care in providing safe oils and fats to consumers by introducing several crucial specifications like fatty acid composition, peroxide value, limiting industrial trans fatty acids to not more than 2% by mass of the total oils/fats with effect from 1st January, 2022, restricting the total polar material in the fresh vegetable oils (not more than 15%) and fried oils (not more than 25%) etc. During the last couple of years standards have been introduced for some new oils and fats like avocado oil, palm stearin, palm kernel stearin, palm olein, palm super olein, chia oil, grapeseed oil etc. FSS (Advertising & Claims) regulation gave allowance to list of positive claims for edible vegetable oils. The presentation provides an overview about the importance of nutritional and health standards for the safety and quality of edible oils and fats.