

Determination of Polar compounds (TPC) in Vegetable Oil



The process of frying transforms oil, subjecting it to high temperatures that alter its chemical, nutritional, and sensory attributes. Amidst this, the formation of Total Polar Compounds (TPC) becomes a crucial concern. These compounds, generated during frying, harbor adverse health implications for consumers due to their association with conditions like hypertension, atherosclerosis, Alzheimer’s disease, and liver disorders.

TUV India recognizes the pivotal importance of monitoring oil quality, to safeguard consumer health. Our Total Polar Compounds testing service plays a pivotal role in ensuring cooking oil safety. Utilizing column chromatography based on AOAC methods, we meticulously analyze the TPC content in cooking oils. The regulatory guidelines from the Food Safety and Standards Authority of India (FSSAI) underscore the necessity of monitoring oil quality during frying. FSSAI has imposed limits for Total Polar Compounds in vegetable oils, beyond which their use is deemed unsuitable.

Since 1st July 2018, all Food Business Operators (FBOs) are mandated to adhere to these regulations, ensuring compliance and consumer safety.

The regulations established by FSSAI encompass an EEE Strategy—Education, Enforcement, and Ecosystem approach—aimed at diverting Used

Cooking Oil from the food value chain. This strategic implementation ensures the health and welfare of the nation’s populace, contributes to energy security, combats climate change, and fosters environmentally sustainable development.

TUV India’s commitment to food safety aligns seamlessly with these regulations. Our Total Polar Compounds testing service empowers FBOs to adhere to FSSAI guidelines, ensuring that the oil used in food preparation meets the stringent quality standards.

Choose TUV India’s Total Polar Compounds testing to uphold food safety, comply with regulatory standards, and ensure that every culinary creation meets the highest quality benchmarks, safeguarding consumer well-being with each delicious meal served.

Type of Cooking oil	Limit prescribed by FSSAI
Unused/fresh vegetable oil/fat	NMT 15 %
Used vegetable oil/fat	NMT 25 %



About Us:

TUV India Pvt. Ltd. (TÜV NORD GROUP) is a customer-focused, innovative, and independent, technical, quality & safety services organization, dedicated to providing future-proof solutions through technological excellence for the success of its customers with the highest level of integrity. With a presence at over 40 strategic locations in India; a branch office in Sri Lanka and Bangladesh; state-of-the-art laboratories at Pune, Bengaluru, Noida and Jamnagar; 100 important countries worldwide and through digital means, we are always connected to you, our esteemed customer, anywhere, anytime.

We are proud to provide increasing levels of services to the best known, largest global and national companies as well as medium and small industries in diverse sectors like Oil & Gas, Petro chemical, Nuclear, Renewables, Infrastructure, Food, Power, Manufacturing, Chemicals, Pharma, Paper, Automobiles, Railways, Aerospace, Defence, IT,

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