Science of Safe Food Additives – Balancing Innovation and Compliance in Food Processing

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- Ms Mamta focused on the scientific and regulatory framework that ensures the safe use of food additives while supporting innovation in the food industry. Food additives play a crucial role in enhancing food quality, safety, shelf life, sustainability, and consumer acceptance. Their responsible use helps reduce food waste, improve product stability, and enable the development of innovative food products.
- She highlighted the role of the Joint FAO/WHO Expert Committee on Food Additives (JECFA), which provides independent scientific advice that forms the basis for international food safety standards.
- Focus was also on risk analysis, which consists of four interconnected components: hazard identification, risk assessment, risk management, and risk communication. Scientific risk assessment is conducted using transparent, evidence-based methods to ensure a "reasonable certainty of no harm" to consumers. Key principles include excellence, independence, transparency, and universality.
- She also talked on Acceptable Daily Intake (ADI) and Tolerable Daily Intake (TDI) in determining safe exposure levels to food additives and contaminants.
- Ms Mamta also discussed the role of the Codex Alimentarius Commission, which develops international food standards based on scientific advice from expert bodies such as JECFA. Codex standards provide a harmonized framework for food safety and additive regulation worldwide. From an Indian regulatory perspective, her talk covered the FSSAI Food Products Standards and Food Additives Regulations, which categorize foods into different groups and prescribe permitted additives, processing aids, and maximum use levels.
- The talk was concluded by emphasising that innovation in food processing must be balanced with robust scientific evaluation, regulatory compliance, transparent communication, and consumer trust. Safe food additives, when used responsibly and in accordance with regulations, are essential tools for modern food production and food security.