Food quality is everybody’s concern since there are few who have not suffered the consequences of adulteration in India. A buyer generally checks foodstuff for quality by sensory evaluation: look, touch, smell or taste. However, in case of packaged food, the date of expiry is the only indicator of the standard of the fare. What if there was some sensor to feel the stuff inside, detect it for freshness and inform the buyer, too?

A team of scientists led by Dr PN Raju of the National Dairy Research Institute, Karnal, has developed exactly such a device. They have filed for the patent of an innovative sensor that can be fitted into the packet to gauge the quality of the enclosed khoya or paneer. The change in the sensor’s colour, visible to the buyer, will indicate if the product has gone bad or is good to consume. Several chemical, microbial and biochemical changes lead to the spoilage of food in the packet as certain gases leak in. The electrospun mat developed by the dairy technology scientists detects such minute changes, if any, and indicates it with a colour code.

This smart tool that promises to make the packaged dairy products intelligent would be of immense value to the consumers. It assumes significance as people are losing
confidence in the quality of milk and milk products sold in the open. With an increasing number of youngsters preferring packaged meals to cooking meals, a huge number of consumers stand to gain by such a scientific tool.

New technologies in this sphere are welcome as safety standards are suspect along the entire food chain — from the farm gate to the plate. Horror stories of a large majority of milk product samples failing the safety standards are published every now and then. This, despite measures and regulations being implemented more stringently after the Food Safety and Standards Authority of India’s survey about five years ago startlingly revealed that most Indians are consuming detergents and other contaminants through milk.