Case Study
Determination of protein in milk and SO_2 in wine

Customer: Punjab Biotechnology Incubator, Mohali, India

Punjab Biotechnology Incubator (PBTI) is an agriculture and food testing laboratory set up to provide a service to agricultural producers, processors and marketers by offering quality testing, research & development and contract research. The markets served by PBTI are milk and milk products, cereal and cereal products, fresh/processed fruits & vegetables, soil and solid waste, water and waste water, pesticides and other agro chemicals, spices and condiments etc.

Application: Nitrogen/protein determination in packaged and processed food including milk and milk products and SO_2 determination in canned juices, wine etc.

Rapid globalization in the food market has increased demand for quality testing to ensure safe, nutritional and appealing foods reach the consumer. Milk is rich in carbohydrates, fats, minerals, vitamins and essential amino acids however it is prone to spoilage, if not properly handled. Fruits and vegetables enter the market in many forms ranging from freshly harvested to processed products, such as juices, squashes, nectars, jam, jelly, ketchup, frozen/canned/dehydrated products, etc. We need to check the quality of these products and the nutritional labelling to ensure good quality products are delivered to the consumers.

Equipment: KjelFlex K-360, SpeedDigester K-439

The modular, flexible nature of the BUCHI KjelFlex K-360 allows us not only to perform Kjeldahl nitrogen or protein determination in food and beverages but also allows us to perform non-Kjeldahl applications, such as, SO_2, phenol and alcohol determination using the acid resistant pump. The SpeedDigester K-439 allows us to store up to 50 methods and thereby run our applications without the need to manually alter the parameters.

Benefit / Conclusion: Broad application flexibility

The key benefit of this system is the flexibility to do back-titration and direct distillation of steam volatile compounds. Automated dosage of strong acids and the ability to connect an external titrator to the K-360 allow many applications to be run using one system.

"The solution for Kjeldahl as well as sulfur dioxide determination on one single instrument, is excellent. Moreover the support for application development is very much appreciated."
Dr. S.S. Marwaha, Chief Executive Officer, Punjab Biotechnology Incubator, India.

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