Case Study
Determination of protein in wheat flour samples

Customer: Grain Quality Testing Laboratory, PARC, Pakistan
GQTL is a part of Pakistan Agriculture Research Council under the Federal Ministry of Food Security and Research, Govt. of Pakistan. The laboratory is involved in R&D and testing activities related to grain quality and contaminant residues by means of validated instruments.

Application: Protein in wheat flour
Protein in wheat flour is considered to be one of the significant parameters determining the end use quality of wheat flour. Frequently, the protein content is measured by means of NIR. However, the use of these instruments largely depends on the demand of the customer as NIR is an empirical technique and requires calibration by means of a reference technique like Kjeldahl.

Equipment: AutoKjeldahl Unit K-370
The AutoKjeldahl K-370 performs the distillation and titration steps for protein analysis fully automated. The Digestion Unit K-435 is used to digest the samples prior to distillation, and hazardous fumes of acidic nature are safely absorbed in the highly alkaline solution of the Scrubber B-414, ensuring environmental safety.

Benefit / Conclusion: Time saving and better recovery
The AutoKjeldahl Unit, combined with the Digestion Unit and the Scrubber is a complete solution for the needs of the GQTL. The system has low maintenance costs, and the high degree of automation leads to lower personnel costs as well.

“The AutoKjeldahl Unit is user- and environmentally friendly. As the Kjeldahl method is a reference method for protein analysis, the availability of such an instrument in a food testing laboratory is essential.”
Mr. Saqib Arif, Grain Quality Testing Laboratory