

Case Study

Determination of TKN



Customer: PTT Chemical, Thailand

PTT Chemical is a fully-integrated petrochemical manufacturer of olefins, including ethylene and propylene, as its core products, and related downstream products such as polymers, EO-based performance, and oleochemicals. The company also provides services to support PTT Group's production capacity, such as shared facility products and jetty and buffer tank farm. Additionally, the company's distinctive business expansion plan will enhance its competitiveness as well as elevate the Thai petrochemical industry into the global arena.

Application: Determination of TKN and formaldehyde in waste water from industrial factory

The BUCHI Kjeldahl system is used in chemical testing laboratories for determination of total Kjeldahl nitrogen and formaldehyde in waste water from the production process of the PTT Chemical group. The specification limit is less than 100 mg/L for TKN and less than 1 mg/L for formaldehyde.

Equipment: Distillation Unit K-370, K-431 and Scrubber B-414

The Distillation Unit K-370 is a fully automatic system. It is easy to handle for total Kjeldahl nitrogen determination in waste water. For example, it provides automatic aspiration (emptying of sample tube and receiving vessel) after distillation. The Digestion Unit K-431 takes just a short time to digest the sample when compared with another model. In addition, the instrument offers durability and safety in work processes.

Benefit / Conclusion: Convenient and safe

It is easy to use, convenient and not time consuming in the laboratory. The K-370 is a compact stand-alone unit with modern, functional design and has warnings and error messages on the LCD display. In addition, the scrubber unit neutralizes acid fumes and reaction gases, which is beneficial to the environment and to users.

"The BUCHI Kjeldahl instruments are very convenient tools not only for the determination of nitrogen in waste (TKN) but also for the analysis of volatile substances such as formaldehyde."

Miss Panida Pongtuy, Chemist Testing Operations Service II
