

## Japan Customs Analysis Methods

No. 105

### Quantitative Analysis of Crude Protein

(Issued in June 1999)

(Updated in November 2013)

#### 1. Scope

This analysis method is applied for determination of crude proteins in products containing proteins, such as food products.

(4) Standard Tables of Food Composition in Japan,  
Fourth Revised (1996)

#### 2. Procedure

Determination of crude proteins is performed using an automatic Kjeldahl nitrogen analyzer. The analyzer should be operated in accordance with the manufacturer's instruction.

The digestion temperature and time must be set to conditions under which nitrogen recovery ranges from 98% to 100% when tryptophan (JIS special grade) is used as a reference sample.

Here, conversion factors from Kjeldahl nitrogen to crude protein are as follows:

Milk and dairy products	6.38
Wheat and unpolished flour	5.83
Rye, barley, and oat	5.83
Rice	5.95
Soy bean and its products, excluding soy protein isolates	5.71
Others	6.25

#### 3. References

- (1) AOAC 991.20
- (2) Codex Standard 175-1989
- (3) FAO FOOD AND NUTRITION PAPER 77 (2003)  
"Food energy – methods of analysis and conversion  
factors"