

S37-5 Analytical Techniques for Reliability in Food Labeling

○Akemi YASUI¹

¹Nat. Food Res. Inst., Nat. Agr. & Food Res. Org.

There was an only way to do an on-the-spot inspection on documents for confirmation of credibility of labeling before. In response to revision of the JAS law on food labeling and reinforcement of protection of the breeder's right by revision of the Plant Variety Protection and Seed Act, distinction techniques are strongly needed for scientific verification of labeling. Studies on methods of distinction by variety, geographic origin, traceability, genetically modification, irradiation etc. are progressing.

For distinction by variety, RAPD, CAPS, SSR and SNP methods by DNA markers are studied. For distinction by geographic origin of farm and marine products, inorganic element composition by ICP-AES, ICP-MS, atomic absorption spectrometry, fluorescent X-ray spectrometry, activation analysis etc., stable isotope ratio of heavy elements(Sr, Pb etc.) or light elements(D, C, N, O) are studied. On traceability of organic crops, stable isotope ratio of nitrogen is studied. And on traceability of irradiation, photostimulated luminescence , detection of new product, use of X-ray as re-radiation source in thermoluminescence method etc. are studied. These techniques used for regulatory analysis are requested to be validated by collaborative study. On genetically modified organisms, the quantitative methods of GM soybean and GM maize were validated by collaborative study and adopted as Japanese standard methods. And determination methods on geographic origin of farm and marine products are published as manuals and begin to be used for survey by administrative agency.