

Asbestos analysis methods of building materials in Japan

In Japan around 10,000,000 ton of Asbestos was imported and 90% of them was manufactured into building materials. As increasing the number of victims of asbestos-related diseases, asbestos issues receive a great deal of public attention. “Ordinance on Prevention of Hazards due to Asbestos” was established in 2005. This ordinance is trying to control treatment of asbestos at construction demolition sites.

A new legally-defined asbestos analysis method for building materials was published at the same time of the ordinance. Essential features of the analysis method are 1) qualitative analysis by x-ray diffractometry and dispersion staining microscope method using a microscope of 400 magnifications, 2) quantitative analysis by x-ray diffractometry applying absorption correction method and solution processing by acid. The analysis method was developed by JAWE: Japan Association for Working Environment Measurement on government-commissioned research. JAWE has provided training courses for analysis organizations and trained 216 organizations until 2007. The regulation value of inclusion of asbestos was changed from 1.0% to 0.1% in 2006. And the legally-defined asbestos analysis method was modified and integrated into JIS A 1481 “Determination of asbestos in building material products”

Some challenges remain. 1) Review of Analysis procedure. Determination of inclusion of asbestos on 0.1% regulation value is difficult in the case of under 1.0% inclusion. It is necessity to review the accuracy of the analysis procedure. 2) Systematic and organized training for upgrading analysis ability. 3) Information exchange between analysis organizations aiming at upgrading analysis technique.