

TXRF AND MICRO-XRF ANALYSIS OF PLASTIC TOYS AND SOILS

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Harmful elements, such as Cr, Pb and Cd are in some cases included in the coating layer on the plastic products, such as plastic toys, or in the soils. It is very important to know the concentrations of these elements for our health. XRF analysis is one of the feasible methods for these samples. We have applied a table-top TXRF instrument (Rigaku Co. Nanohunter). After the toy or soils were put into the acid solution, the droplets of the solutions taken from the elution were placed on the glass substrate for TXRF analysis. In the case of analysis of toys, the time dependence of TXRF intensity was investigated. The time-dependent curves were different each other depending on the elements. The same toy was measured by a laboratory-made micro-XRF instrument. In addition, optimum sample preparation for XRF analysis of soils was investigated.

References

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