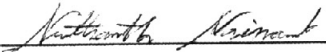


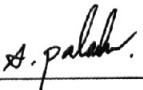
Nutthawuth Nainanont 2008: Elemental Analysis of Sediment at Phak-Pa-Nang Bay, Nakhon Si Thammarat Province by Energy Dispersive X-Ray Fluorescence. Master of Science (Applied Radiation and Isotopes), Major Field: Applied Radiation and Isotopes, Department of Applied Radiation and Isotopes. Thesis Advisor: Mr. Somchit Palakas, Ph.D. 141 pages.

Analysis of sediment samples with Energy Dispersive X-Ray Fluorescence technique was conducted using EDXRF instrument of Oxford (model ED 2000) completed with ISIS 300 program. The most appropriate mode of analysis was vacuum combined with various optimized conditions that could effectively analyze 14 elements including aluminum, silicon, phosphorus, chlorine, potassium, calcium, titanium, vanadium, chromium, manganese, iron, nickel, zinc and barium.

In quantitative analysis, optimization and standard calibration were performed using 9 sets of reference soil standards comprising GBW07401, GBW07402, GBW07403, GBW07404, GBW07405, GBW07406, GBW07407, GBW07408 and NIST2710. In comparison to all sets of standard, the analysis results with the error within the range of ± 10 percent were accepted as corrected values.

Thereafter, all optimized conditions were applied to analyze sediment samples collected from 2 sites of Phak-Pa-Nang Bay located in Nakhon Si Thammarat province; the first site was western Laem-Ta-Lum-Puk and the second site was the western coast of outer Phak-Pa-Nang Bay. Five samples of 40 cm in depth were collected from each area and layer of 5 cm of each sample were sectioned. Similar tendency in quantity of each element at the same layer of each station and each sampling site were observed, and, almost elements found in the western coast of outer Phak-Pa-Nang Bay were higher than those found in western Laem-Ta-Lum-Puk area except calcium and chromium.


Student's signature


Thesis Advisor's signature

24 / 5 / 08