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THE RELEVANCY OF THE RESEARCH WORK IN THAILAND

In recent years, there have been world-wide efforts to design and fabricate miniaturized instrumentations for chemical analysis and used as the basis to the development of environmentally friendly analytical methods. An increasingly great demand for small and powerful analytical systems concerns, particularly application in field measurements such as environmental and pharmaceutical analysis. In such analyses analytical tasks usually take up a lot of time owing to a large number of samples to be analyzed. Therefore, analytical techniques with high sample throughput and minimum consumption of reagent/sample are required. Miniaturization of analytical instrumentation and methods would serve these purposes. This research highlights recent advances, trends and application of miniaturized analytical systems for environmental and pharmaceutical analyses in Chiang Mai (Thailand).

The objectives of this research group are development of greener analytical techniques and home-made instrumentation with specially designed software for analyzing environmental samples. This research group has been terms " α-flow " group since 1990 as soon as most of our on-going researches are based on flow analysis and application to a wide range of samples. This research shows that notable advances have been made in miniaturization of analytical instrumentation and development of sequential injection analysis methods for environmental and pharmaceutical analyses. These methods and systems have been perfect, environmentally friendly analytical methods for chemical analysis would be achieved. In term of economic point of view, the used of the modified instrument for treatment

of heavy metals is not only reduce the cost for the imported instrument, but also increase the country incomes from the exported instrument. This would be able to help the Thai government to improve the economy of Thailand in the near further.