

**DEVELOPMENT OF QUALITY ASSURANCE
AND QUALITY CONTROL PROGRAM FOR
DETERMINE TOTAL CHEMICAL
COMPOSITION OF LEAD IN SOIL**

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by

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Abstract

The application of certified reference materials (CRMs) in analytical chemistry for Quality control purposes is well recognized and recommended by a wide range of International, national and professional organizations. The quality control and quality assurance techniques that used in Sri Lankan laboratories are very weak and not have accurate QA and QC program for determine the total chemical composition of lead on soil. The project of develop the QA and QC program for the measurement of lead in soil. The purpose of the project is to evaluate the field sample for the measurement of lead in soil and compare with the SRM sample 2586. The ten field samples and five SRM samples were digested using microwave digestion method and ten field samples and three SRM samples were digested using 4M Nitric digestion method. The techniques of quality control and quality assurance were used for digestion and for to take measurements. For take the measurements the Flame atomic absorbance spectrometer and graphite furnace were used. And statistically analyze the values using t-test. The final conclusion is the total chemical composition of lead given by microwave digestion is not equal to the total chemical composition of lead given by 4M nitric digestion. And from the value of lead in field samples digested can get the conclusion that total chemical composition of lead is not given by 4M nitric digestion.