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| Thesis Title | Development of a Biomonitoring Method Using grasses as Bioindicator for Heavy Metal in the Air |
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ABSTRACT

Two local Thai grasses i.e. Ya Nuannoi (*Zeysia matrella* Merr.) and Ya Malasia (*Axonopus compressus* (Swartz) Beauv.) were examined for their suitability as indicator plants for active biomonitoring methods. Identical sets of samples were exposed on Rama IV Rd., at highly air polluted area from vihal and at the King Mongkut's Institute of Technology Ladkrabang (Ladkrabang district), a lesser air polluted area from vihal for a period of 2 months. Every 2 weeks, the newly grown plant material was collected and analyzed for the concentration of the heavy metals Cd, Cr, Cu, Pb and Zn. It was found that the sample grass at Rama IV Rd. was higher sensitive and could accumulate more heavy metal than the samples in Ladkrabang especially Pb, with the series of $Cd < Pb < Cr < Cu < Zn$ respectively. The average concentration of Cu, Pb and Zn was found in Ya Nuannoi has higher value than in Ya malaysia, while the average concentration of Cd and Cr are opposite. On the comparision between Ya Nuannoi and Ryegrass (*Lolium multiflorum* Lema), the European standard indicator grass, ryegrass shows the concentration of heavy metal was higher than Ya Nuannoi with the series of $Cr < Pb < Cu < Zn$ respectively, but under the Thai climate it can not grow.