This research work aims to analyse of metals contaminants in *Mimosops elengi* Linn. dried stem bark powder using Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES). The samples were collected from 17 areas in Thailand. Three metals, including cadmium (Cd), Lead (Pb) and Arsenic (As), were studied. The result findings that the amounts of Pb ranged from 0.04 to 0.5 ppm which do not exceed regulatory Pb limits of 10 ppm recommended for medicinal plants. None of As and Cd were detected. Limit of quantification of all three metals were 0.04, 0.05 and 0.007 ppm, respectively. The relatively low concentrations of metals detected in this study suggested a relatively low risk for Thai medicinal plants.

Keywords: Metal *Mimosops elengi* Linn., ICP-OES

* Corresponding author
E-mail: permsuk.s@dmsc.mail.go.th