

Elementary analysis of Asian tiger mosquito (*Aedes (Stegomyia) albopictus*) and *Culex tritaeniorhynchus* by PIXE

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Abstract

Element contents of Asian tiger mosquito (*Aedes (Stegomyia) albopictus*) and *Culex tritaeniorhynchus* were determined by PIXE at NMCC. The results obtained in this study are summarized as follows.

- 1) Thirteen elements, namely, Na, Mg, P, S, Cl, K, Ca, Mn, Fe, Cu, Zn, Br and Sr were detected in “whole body”, “head and chest”, abdomen, “3-main parts” (head, chest and abdomen), leg and wing of mosquito samples.
- 2) In the case of Asian tiger mosquito inhabiting nishi-chiba area, the concentrations of Mg, P, Ca and Sr were higher in leg than “whole body” and another parts. The same tendency was observed also in Asian tiger mosquito inhabiting the outdoors of National Institute of Infectious Diseases. In the other hand, in *Culex tritaeniorhynchus* bred indoors, the same tendency was accepted only by three elements other than Sr.
- 3) As a result of evaluating the similarity to the element composition of each body part using cluster analysis, it was suggested that the “head and chest” and “3-main parts”(head, chest and abdomen) resemble “whole body”.