

## **Serum selenium status among populations in Hulu Langat District, Selangor, Malaysia : [Status selenium serum populasi di daerah Hulu Langat, Selangor, Malaysia]**

### **Abstract**

Selenium plays an important role in maintaining human health status. Insufficient intake of selenium could lead to disease development. One cross-sectional study was conducted to assess serum selenium levels among populations of Hulu Langat District, Selangor, Malaysia. Furthermore, its pattern according to the socio demographic factors of the subjects was identified. The populations of Hulu Langat District involving six sub-districts namely Ulu Langat, Ampang, Kajang, Cheras, Beranang and Semenyih were randomly selected. A total of 415 subjects aged between 5-64 years old were involved in the study. Blood sample was taken to assess serum selenium levels. Results showed that overall selenium levels were  $1.67 \pm 0.44 \mu\text{mol/l}$ . The result of Two Way ANOVA showed no significant difference of selenium levels according to gender with the value  $p=0.981$  ( $p>0.05$ ). Whilst there was significant difference of selenium levels according to age groups with the value  $p<0.001$ . Interaction effect for gender and age group showed no significant effect with the value  $p=0.362$  ( $>0.05$ ). Selenium levels are significantly different according to location ( $p<0.05$ ) for both gender. Selenium levels were higher for subject who live further from city centre of Kuala Lumpur. In conclusion, the population of Hulu Langat District selenium levels were normal if compared to reference value from Trace Element Lab, Robens Institute, University of Surrey i.e.  $0.89-1.65 \mu\text{mol/l}$  for adult.