

---

## [O-3]

### Dietary Selenium Intake and Blood Selenium Level of Korean Women

HR Yang<sup>\*</sup>, ES Kim<sup>1</sup>, and Y Tamari<sup>2</sup>

*Kangbuk Agricultural Products Inspection Team, Seoul Metropolitan Government Research Institute of Public Health and Environment, <sup>1</sup>Department Food Science and Nutrition, Dankook University, Seoul 140-714, Korea, <sup>2</sup>Department Chemistry, Konan University, Kobe 658-8501, Japan*

To assess the selenium status of Korean women, 24h-duplicate diet samples and fasting venous blood samples were collected from sixty six free-living adults aged between twenty and fifty-five years residing in Incheon(n=32) and Yangyang(n=34). Diet samples were collected from the participants and samples included three meals, snacks, drinks(alcohol or soft, even fresh water if taken)and whatever the participants consumed for 24hours. The collected 24h-duplicate diet samples were weighed and blended for each subjects. Aliquots of the daily food composites were freeze-dried and calculated water content. Selenium content of freeze-dried diet samples, whole blood and plasma samples was analyzed by atomic absorption spectrophotometer with hydride formation system after nitric-perchloric acid digestion. Daily selenium intake was  $42.8 \pm 13.5 \mu\text{g}/\text{day}$ ;  $41.9 \pm 12.2$  for Incheon,  $43.8 \pm 15.0$  for Yangyang, thus this was below the lower level of ESADDI, 50~200 $\mu\text{g}$ . The selenium content of whole blood was  $140 \pm 32.3 \text{ng}/\text{g}$ ;  $135 \pm 25.3$  for Incheon,  $144 \pm 37.7$  for Yangyang. The selenium content of plasma was  $83.4 \pm 19.5 \text{ng}/\text{g}$ ;  $86.2 \pm 22.0$  for Incheon,  $80.8 \pm 16.7$  for Yangyang. Dietary selenium intake per kg of body weight per day was  $0.75 \pm 0.27 \mu\text{g}/\text{kg}/\text{day}$ ;  $0.73 \pm 0.30$  for Incheon,  $0.80 \pm 0.30$  for Yangyang. This was lower than that of North American adult,  $1.0 \mu\text{g}/\text{kg}/\text{day}$  and higher than that of Chinese adult  $0.67 \mu\text{g}/\text{kg}/\text{day}$ . In comparison other countries, our results show that selenium status of Korean women is included low-selenium group of the low, medium and high level in the world.