

Serum Selenium copper and zinc concentrations in inhabitants of S. Miguel Island (Azores Archipelago)

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Selenium, copper and zinc are trace elements which, besides having other biological functions, are cofactors of enzymes involved in antioxidant systems. The aim of this study is to report the first data on serum selenium, copper and zinc concentrations in Portuguese subjects (W – Women, n = 149; M, Men, n = 92) living in urban, rural and fishing regions of S. Miguel Island. Serum trace elements were evaluated by atomic absorption spectrometric procedures. Values of these elements (Mean ± SD) are in the following table:

Regions	Selenium (µg/L)	Selenium (µg/L)	Copper (µg/L)	Copper (µg/L)	Zinc (µg/L)	Zinc (µg/L)
	W	M	W	M	W	M
Urban	81±14	98±16*	138±40	115±19*	102±16	108±15**
Rural	78±18	84±22	157±48	127±26*	97±15	108±18**
Fishing	89±12	97±18**	157±54	135±42**	99±16	111±17**

The trace element levels are in the same range as values obtained in other European countries. Besides the sexual differences observed in these elements (*p<0.01; p<0.05**) in the same populations, the more striking result is the lower (p<0.01) serum selenium concentrations observed in men of the rural region as compared to those of the fishing and urban populations.