

# Metal (Cu, Zn, Fe, Pb) concentrations in human placentas

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## SUMMARY

*The concentrations of some metals (Cu, Zn, Fe, Pb) in human placentas at term in two populations living in polluted (Krakow, n=10) and non-polluted (Bieszczady, n=13) areas were investigated by means of graphite furnace - or flame atomic absorption spectrometry (GF-AAS or F-AAS). The concentrations of Cu, Fe and Pb were higher in Krakow vs. Bieszczady, while Zn concentration was lower, but these differences were not significant. The following results were obtained for the whole studied group: Cu  $1.17 \pm 0.25$  g/g w.w., Zn  $8.44 \pm 2.10$  g/g w.w., Fe  $115.0 \pm 31.9$  g/g w.w., Pb  $51.6 \pm 18.0$  ng/g w.w.*

*The inverse accumulation of Zn and Pb is in accord with previous observations. In the whole group of placenta specimens the statistically significant correlation was also found between concentrations of Cu and Pb. The correlations between metal concentrations and placental or maternal features were the strongest for lead.*

**Key words:** human placenta, trace elements, atomic absorption spectrometry

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