

Electronic Supplementary Information

Nano-analytical Characterization of Endogenous Minerals in Healthy Placental Tissue: Mineral Distribution, Composition and Ultrastructure

*Alexandre H.C. Anthis, Elena Tsolaki, Louis Didierlaurent, Samuel Staubli, Robert Zboray,
Antonia Neels, Dörthe Dietrich, Pius Manser, Lotus May Desbiolles, Sebastian Leschka, Si-
mon Wildermuth, Sandro Lehner, Pascale Chavatte-Palmer, Wolfram Jochum, Peter Wick,
Alex Dommann, Tina Buerki-Thurnherr, Tina Fischer, René Hornung, Sergio Bertazzo, Inge
K. Herrmann**

inge.herrmann@empa.ch

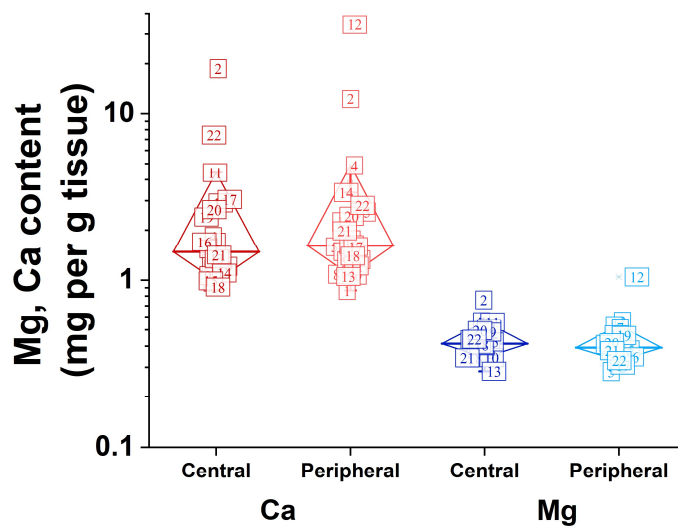


Figure S1: Mg and Ca content of placental tissue – central vs. peripheral portion (median of 5 samples per placenta, 22 placentas in total).

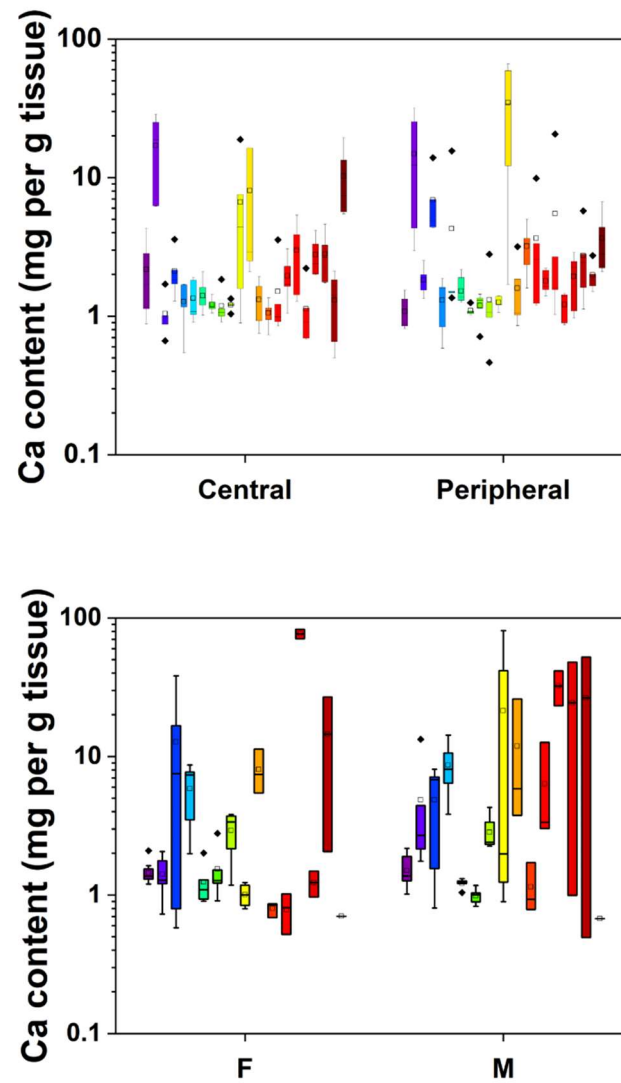


Figure S2: Ca content of placental tissue - 5 samples per placenta per condition (distribution). Top: Central vs. peripheral portion (22 different placentas). Bottom: Fetal vs. maternal portion (15 different placentas).

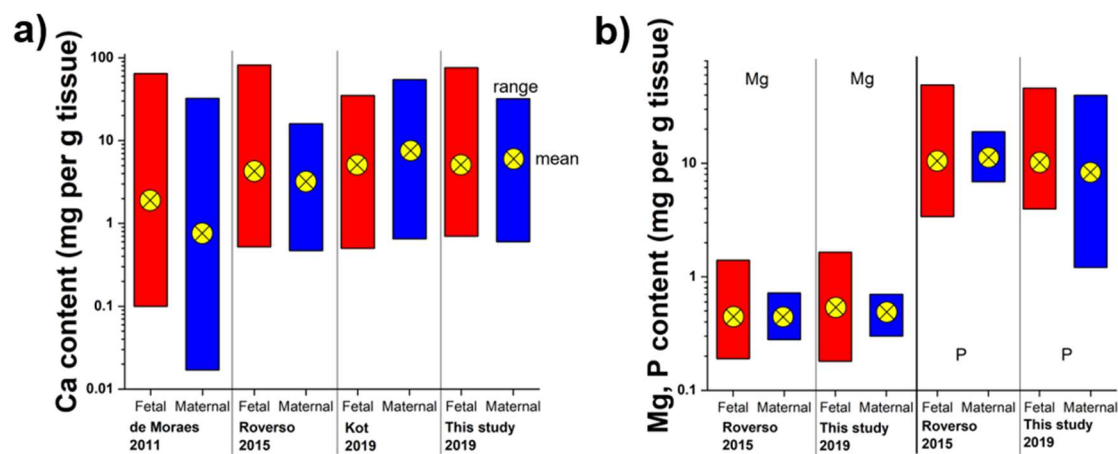


Figure S3: Ca, Mg and P content of placental tissue (mg per g (dry weight) compared to available other studies (De Moraes et al.,¹ Roverso et al.² and Kot et al.³)

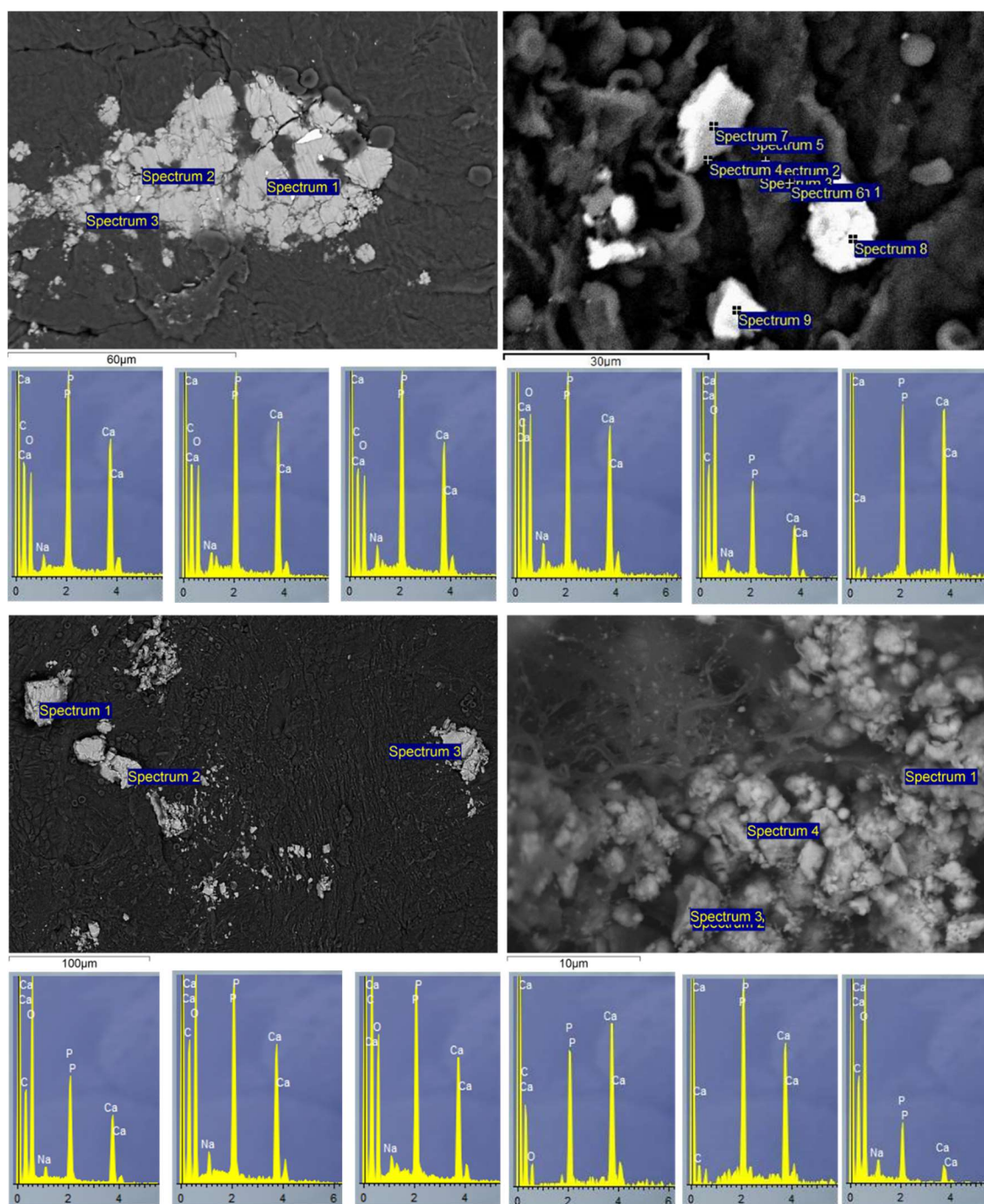


Figure S4: Additional EDXS spectra indicating Ca, Na, P in the majority of calcified samples.

References (ESI)

1. M. L. de Moraes, R. de Faria Barbosa, R. E. Santo, F. da Silva Santos, L. B. de Almeida, E. F. O. de Jesus, F. L. de Carvalho Sardinha and M. d. G. T. do Carmo, *Biological Trace Element Research*, 2011, **143**, 1271-1281.
2. M. Roverso, C. Berté, V. Di Marco, A. Lapolla, D. Badocco, P. Pastore, S. Visentin and E. Cosmi, *Metallomics*, 2015, **7**, 1146-1154.
3. K. Kot, D. Kosik-Bogacka, N. Lanocha-Arendarczyk, W. Malinowski, S. Szymanski, M. Mularczyk, N. Tomska and I. Rotter, *International Journal of Environmental Research and Public Health*, 2019, **16**, 1615.