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Identification of the co-localisation of Hg with Se and Fe by NanoSIMS in sperm whale liver.

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The biological pathway by which MeHg undergoes detoxifications in some mammals and birds has yet to be fully elucidated. The current understanding is that HgSe nanoparticles (NPs) are formed *in vivo* as the end point of a detoxification process. Presented, is a contribution to the body of work already present in the field based on recent insights into the existence of HgSe NPs after Hg was detected by NanoSIMS, for the first time, in the liver of a sperm whale that was beached in Ardersier, Scotland. Analysis by NanoSIMS found heterogenous distribution and co-localisation of Hg with other elements including Se and Fe, giving a possible insight into the complex biological mechanism that ends in tiemannite NPs being stored in the livers of whales.