**SUPPLEMENTARY MATERIAL**

**Table S1: Review of previous studies using DBS or microsampling devices for blood mercury assessment.**

| | Sample support (volume of sample, µL) | Instrument determination | Sample size | LOD (µg/L) | LOQ (µg/L) | Median Hg value |
|---|---|---|---|---|---|---|
| **This work** | DBS (controlled 50) | DMA | 41 | 0.10 | 0.40 | 3.79 |
| **Schweizer et al., 2021** | DBS (estimated 60) | DMA | 44 | 0.14 | 0.28 | 0.67 |
| **Koutsimpani-Wagner et al., 2021** | VAMS (estimated 23) | DMA | 68 | 0.18 sVAMS<br>0.10 dVAMS | 0.61 sVAMS<br>0.33 dVAMS | 0.78 |
| **Chaudari et al., 2008** | DBS (estimated 11.5) | ICP-MS | 18 | 0.65 | Not mentioned | 0.37** |
| **Funk et al., 2013** | DBS (estimated 30) | ICP-MS | 49 | Not mentioned | Not mentioned | 0.3** |
| **Funk et al., 2015** | DBS (estimated 60) | ICP-MS | 82 | Not mentioned | Not mentioned | 0.36 |
| **Nelson et al., 2016** | DBS (estimated 62) | ICP-MS | 48 | 0.7 | Not mentioned | 0.5** |
| **Nyanza et al., 2019a** | DBS (Estimated 45-55) | ICP-MS | 44 | 0.012 | 0.026* | 1.16 |
| **Nyanza et al., 2019b** | DBS (estimated 100) | ICP-MS | 1056 | 0.02 | Not mentioned | ASGM workers: 1.2<br>Non ASGM workers: 0.66 |
| **Basu et al., 2017** | DBS (estimated 62) | GC-CVAFS | 675 | MeHg:0.3 | Not mentioned | MeHg:1.46 |
| **Santa-Ríos et al., 2020** | DBS (controlled 40) | GC-CVAFS | 49 | MeHg:0.02<br>Inorganic Hg:0.57 | Not mentioned<br>Not mentioned | MeHg:0.74<br>Inorganic Hg:1.67 |

DMA: Direct Mercury Analyser; ICP-MS: Inductively Coupled Plasma Mass Spectrometry; GC-CVAFS: Gas Chromatography Cold Vapour Atomic Fluorescence Spectroscopy; VAMS: Volumetric Absorptive Microsampling; sVAMS: Mercury determination in one VAMS; dVAMS: Mercury determination in two VAMS. ASGM: artisanal and small - scale gold mining areas.

*Calculated data in base on background of blank as LOD=Blank means+10*$SD_{blank}$.

[&]Estimated based on data in the manuscript.