**Tsang et al.**

**Oxidized silver cups can skew oxygen isotope results of small samples**

**Supplementary Material**

Table S1. Detailed results of isotope measurements

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample** | **Amount of BaSO4 (µg)** | **Retention time (s)** | **Width of oxygen peak (s)** | **Area 28 (Vs)** | **Ampl 28 (mV)** | **Ampl 29 (mV)** | **Ampl 30 (mV)** | **BGD 28 (mV)** | **Raw -δ18O****(‰)** | **Calibrated -δ18O\* (‰)** |
| Old silver cup in room conditions | 0 | 428.5 | 30.3 | 3.795 | 219 | 249 | 114 | 152.2 | -3.71 | -4.49 |
| Silver cup in oven for a month | 0 | 431 | 33.4 | 3.118 | 141 | 161 | 75 | 189.1 | 9.83 | 9.42 |
| Silver cup in oven for a month | 0 | 430.3 | 28.8 | 2.196 | 112 | 129 | 60 | 190.4 | 11.88 | 11.53 |
| IAEA-SO-5 | 195 | 430.3 | 65 | 135.176 | 6712 | 7660 | 3571 | 148.6 | 12.48 | 12.14 |
| IAEA-SO-5 | 156 | 429.9 | 64.8 | 108.373 | 5117 | 5832 | 2715 | 164.7 | 12.59 | \*12.26 |
| IAEA-SO-5 | 107 | 431 | 60.8 | 69.678 | 3209 | 3659 | 1703 | 163.1 | 12.22 | \*11.88 |
| IAEA-SO-5 | 43 | 430.1 | 49.7 | 30.100 | 1482 | 1689 | 786 | 164.0 | 11.59 | \*11.23 |
| New silver cup\*\* | 0 | / | / | / | / | / | / | 177.2 | / | / |

\*The calibrated-δ18O here hasn’t considered the effect that smaller the IAEA-SO-5 sample size compared to 200 µg, lower the δ18O. Another amplitude-mass calibration is needed for the accurate δ18O.

\*\*The new silver cup has no oxygen peaks in the spectrum.