

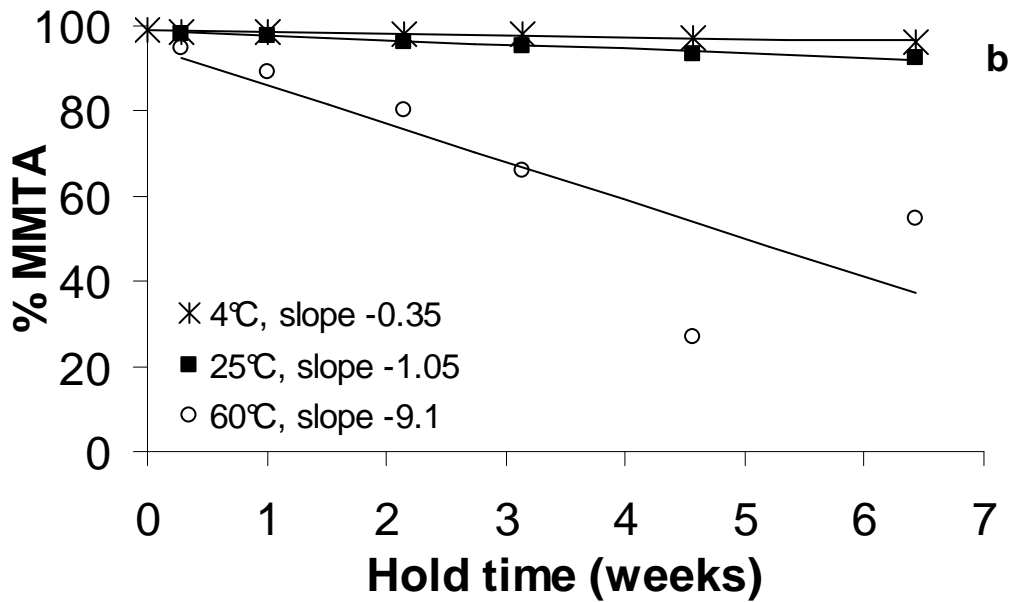
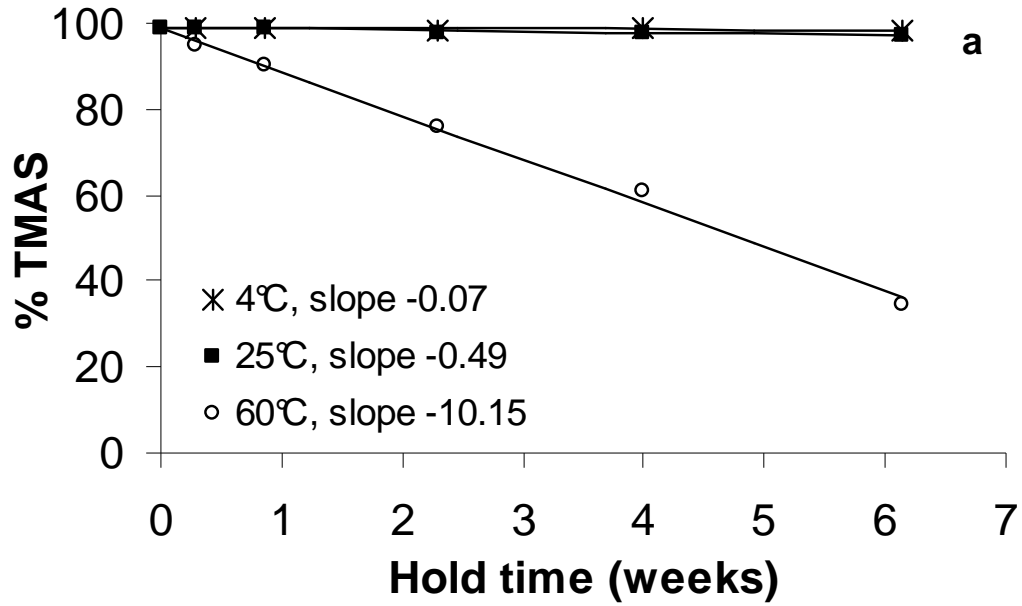
**Supporting information for:**

**Investigation of the Effects of pH on the  
Formation of Methylated Thio-arsenicals and the  
Effects of pH and Temperature on Methylated  
Thio-arsenical Stability**

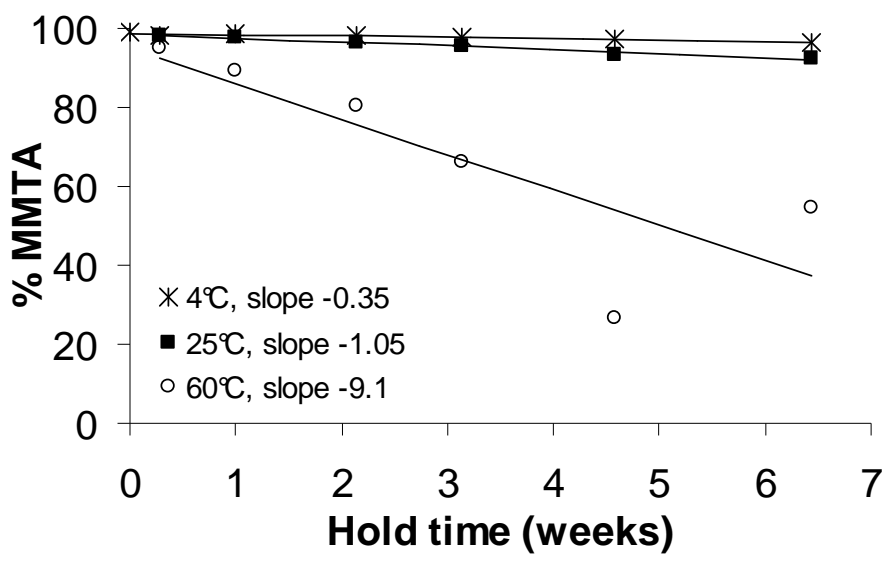
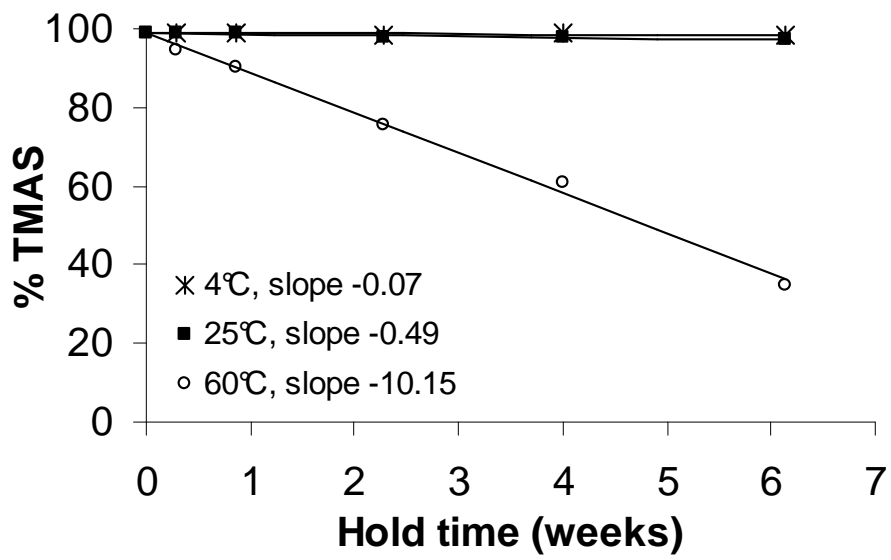
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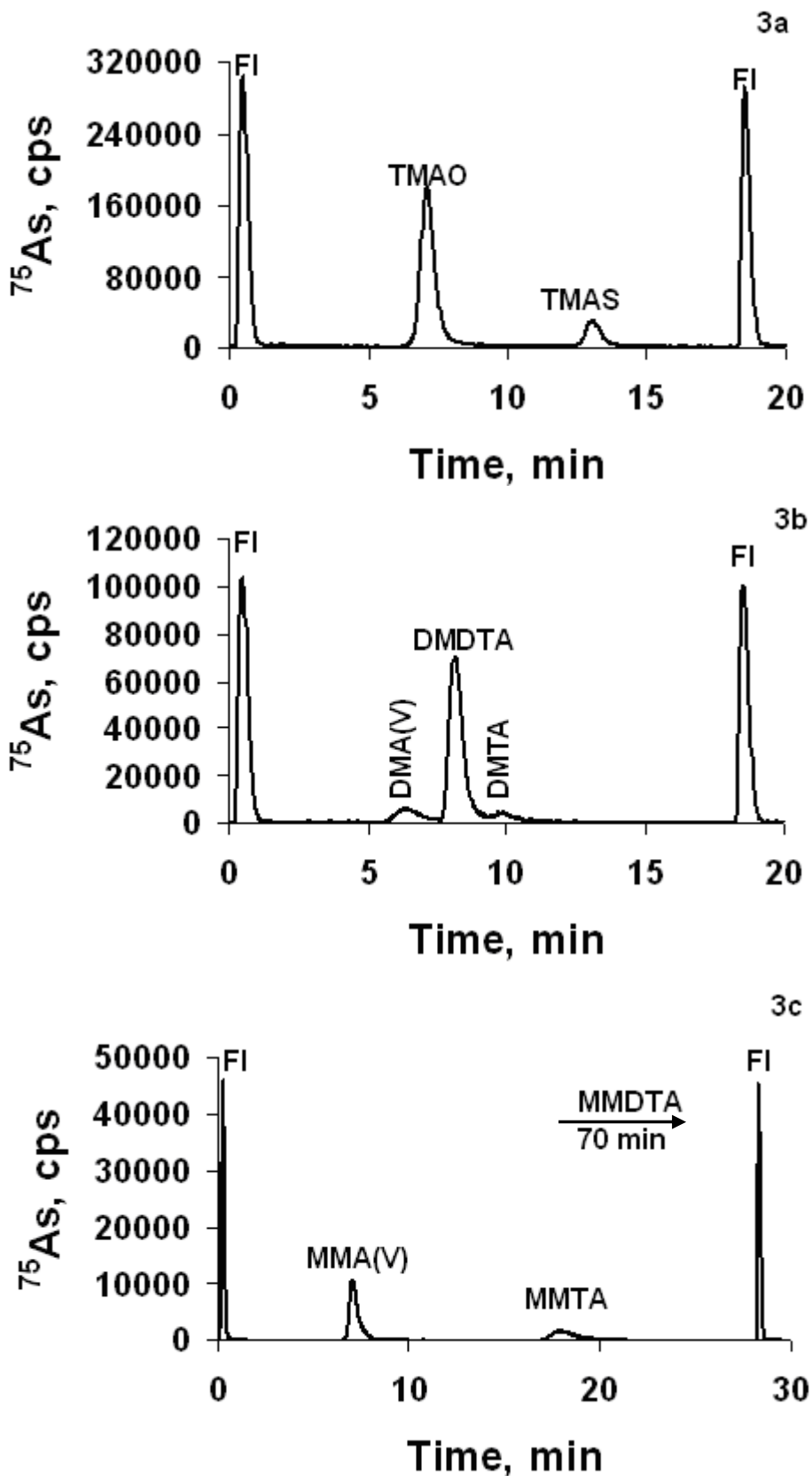
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**Figure SI-1:** Stability of (a) TMAS and (b) MMTA over time in pH 10, 7 and 4 buffers at room temperature. The plots show the percentage of the total arsenic (chromatographic sum) detected as the sulfide form (Y-axis) as a function of time (X-axis). These results show that the arsenic sulfide to oxide conversion rates were relatively unaffected by pH.



**Figure SI-2:** Stability of (a) TMAS and (b) MMTA over time at 60°C, 25°C and 4°C in pH 7 buffer. The plot shows the percentage of total (chromatographic sum) arsenic present as the sulfide form (Y-axis) as a function of time (X-axis). The data suggest that high temperatures should be avoided in order to minimize loss of thio-arsenicals. Refrigeration at 4°C provided the best preservation of TMAS and MMTA.



**Figure SI-3:** Chromatogram showing conversion of a) TMAO to TMAS using Chromatography A; b) DMA to DMTA and DMDTA using Chromatography A; and c) MMA to MMTA using Chromatography C. FI is the drift standard.