

overall conclusion of this work was that Md cannot be reduced to a monovalent ion with Sm^{2+} , and therefore, the earlier claim for Md^+ , was unsubstantiated.

Table 2. Distribution of tracer elements after reduction with Sm^{2+} and coprecipitation with Rb_2PtCl_2 in ~85% ethanol. (Ref. 11).

Distribution ratio for						
Fm	Md	Eu	Sr	Y	Es	Cs
0.004	0.005	0.006	0.012	0.017	0.033	110

This same conclusion was reached also by Samhoun et al.⁸ and David and coworkers⁹ on the basis of their electrochemical investigations of Md, which we described earlier. If the potential for the reaction $\text{Md}^+ + e^- \rightarrow \text{Md}$ was more positive than -1.5 V, it would have been observed in the electrochemical reductions. Furthermore, the logarithmic slope of the Md reduction waves could not be fitted to a slope of 60 mV expected for a one-electron change. And lastly, the shifts in potential caused by complexing Md with either citrate or chloride ions were consistent with it being a divalent ion and not with it being either a cesium-like or silver-like ion.

The attempts to produce a monovalent state have the positive effect of setting limits on its stability. From the limits obtained, we can then make an estimate of the stability of the $5\underline{f}^{14}$ configuration relative to the $5\underline{f}^{13}7\underline{s}$. Presumably, the $\underline{f}^{13}\underline{s}$ configuration lies lower in energy than the \underline{f}^{14} because there is no obvious stabilization of a monovalent state due to a possible