

MIXING ENTHALPIES OF TbBr₃ - MBr LIQUID MIXTURES (M=Li, Na, K, Rb, Cs)

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Rare earths play a significant role in everyday life and in sophisticated industrial applications. Many processes are still under development; particularly those dealing with reprocessing of spent nuclear fuel or nuclear waste processing [1-2]. However data on lanthanide compounds are scarce and not easily accessible in literature. As a consequence, intensive efforts are being made at an international level both on the research and development aspects and also on data bank development.

The present work is part of the research performed on LnX₃-MX systems (where Ln is lanthanide, M is alkali metal and X is halide) [3-12]. It reports the experimental enthalpies of mixing of the TbBr₃-MBr liquid systems (M=Li, Na, K, Rb, Cs), which were measured by direct calorimetry. A comparison with the analogous TbCl₃-MCl liquid mixtures [13] is also presented. The current data are discussed in terms of "relative ionic potentials" [14].

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