Performance characterization of an acid purification system

DON POTTER AND GREG EIDEN

Savillex Corporation 10321 West 70th Street, Eden Prairie MN 55344-3446, USA (*correspondence: dpotter@savillex.com) (geiden@savillex.com)

The in-house production of high purity acids by the purification of lower grade acids is becoming more popular, especially in geochemistry labs that are required to measure metals at the ultra trace level, This paper evaluates the performance of an acid purification system with respect to the quality of acid produced and initial cleaning required. Analytical data showing the quality of acid produced will be presented for HNO3, HCl and HF, and compared to commercially available, bottled high purity acids. In the case of HF, the acid purification system was used directly after initial cleaning, to evaluate the cleaning required for a newly commissioned acid purification system to begin producing high purity (10ppt) grade acid.