

Resurgence of an old test for identification of lanthanum

Alcídio Abrão^a, Soraya M.Rizzo^a and Carlos A.S.Queiroz

^a Instituto de Pesquisas Energéticas e Nucleares.
C.P. 11049, São Paulo, CEP-5422-970, Brazil

An old qualitative test for identification of both lanthanum cation and acetate anion is put at service by the authors. The test is based upon the reaction of the analyte containing lanthanum ion and acetate with elemental iodine after the precipitation of lanthanum hydroxide with ammonium hydroxide. A blue color that reminds the reaction of starch with iodine is produced. The old test claims that only lanthanum gives a positive test.

In this paper the test was applied to the other single rare earth elements and to various mixed rare earth oxides. The test resulted valuable for the identification of the presence of lanthanum in various processes of rare earths fractionation, as for instance the elution from a cationic ion exchanger. So it facilitates the follow up and the breakthrough point during the elution.

In this paper it was determined the identification limit and the dilution limit for the lanthanum test. This can be done either using a test tube or a filter paper ribbon.