

METHOD DEVELOPMENT FOR FeO ANALYSIS FOR IRON ORE AND REDUCED PRODUCTS

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Abstract

Several different techniques have been worked upon for the establishment of FeO analyses. In the technique, dissolution is carried out in a nitrogen atmosphere to prevent oxidation by atmospheric oxygen. The Indian Standard Method IS: 1493-1959 describes that the iron ore sample is attacked in a covered platinum crucible, with sulphuric acid and hydrofluoric acid in an atmosphere of carbon dioxide, the solution thus obtained is analysed by titration method. The above analytical method needs a sophisticated apparatus which is designed suitably so that FeO does not react with the oxygen content of the material under study.

It needs a careful study of the XRD phases associated with the sample. A NIST traceable standard is utilised for the purpose. The experiment is carried out by applying different national and international standard methods. The results are compared by applying a statistical technique and established by prevailing ILC practices.

Keywords: Inter Laboratory Comparison (ILC), X Ray Diffraction (XRD), Inter Laboratory Comparison, National Institute of Standards and Technology (NIST)