

Record 4 of 26

Title: 14 MeV neutron activation analysis of gold jewellery

Author(s): Aksoy, A; Ahmed, M

Source: JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY 256 (2):369-371
Art No. ISSN 0236-5731 2003

Times Cited: 0

Abstract: Samples of nominal 18 carat and 21 carat gold jewellery from the local market were non-destructively bulk analyzed using neutron activation analysis. Neutrons of 14 MeV energy were used with a fast pneumatic sample transfer system. The actual gold contents, as well as the composition of the base metals in these samples were determined. The fast neutron activation was found to be an efficient, quick and accurate method of characterizing the precious metal objects routinely in bulk, with a large sample throughput. The results demonstrate the commercial availability of the technique for non-destructive bulk analysis of precious metal objects.