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Title: KFUPM FAST-NEUTRON ACTIVATION-ANALYSIS FACILITY

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Abstract: A newly established Fast Neutron Activation Analysis facility at the Energy Research Laboratory is described. The facility mainly consists of a fast neutron irradiation station and a gamma ray counting station. Both stations are connected by a fast pneumatic sample transfer system which transports the sample from the irradiation station to the counting station in a short time of 3 s. The fast neutron activation analysis facility has been tested by measuring the Al-27(n, alpha)Na-24 and In-115(n, n')In-115m cross sections at 14.8 and 2.5 MeV neutron energies, respectively. Within the experimental uncertainties, the measured cross sections for these elements agree with the published values.