

Performance of the RNB Linac at KEK-Tanashi,
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M. TOMIZAWA, KEK - A linac for radioactive nuclear
beam (RNB) has been constructed at KEK-Tanashi. The
linac is a post accelerator in the ISOL-based RNB test
facility. The radioactive nuclear beam extracted from the
ISOL system is transported to the linac through a 60-m long
beam line. The front end of the linac is a 25.5-MHz split
coaxial RFQ (SCRFQ) which accelerates ions with a
charge-to-mass ratio (q/A) greater than $1/30$ from 2 to
172 keV/u. It is followed by a 51-MHz interdigital-H (IH)
linac which accelerates ions with a q/A greater than $1/10$.
The output energy is variable in the range of 0.17 through
1.05 MeV/u. For examining the linac performance, we
have measured transmission efficiencies, energy spectra,
beam emittances, etc. Results of the beam tests show the
performance of the SCRFQ/IH linac is close to the designed
one.