

**1514**

MEASUREMENT OF LEAKING Xe-133GAS UNDER  
CLINICAL EXAMINATION WITH Xe-133GAS  
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We have evaluated quantity of leaking Xe-133gas under clinical examination with Xe-133gas control system(AZ-701-NTS). An examination have been done by way of the inhalation scan of pulmonary ventilation study(Administering 10mCi Xe-133gas to each patient). Radioactivity of exhausted gas passing through the charcoal cartridge of this system were measured by ionization chamber connected to vibration lead electrometer. The result shows insignificant difference from back ground radioactivity, and obviously far below the permitted concentration,  $3.7 \times 10^{-7} \mu\text{Ci/ml}$  air. However the exhaust gas monitor covering whole RI facility shows rather ascending concentration. Compared with the former result, It concluded that the latter leak could occur around a mouthpiece unfitting some patients or Xe-133 source of crashing type.

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