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Application of ZD REDOX Detection Technology for Measuring Hydrogen Isotopes in Tritium Extraction System

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It is limited for thermal conductivity detectors(TCDs) to measure hydrogen isotopes with gas chromatography in a large amount of helium gas environment. Then a new detection technology of ZD REDOX combined with chromatographic column was investigated in order to measure the low concentration of hydrogen isotopes in the atmosphere of tritium extraction system. The estimated detection limit for H₂/D₂ gas was 1 ppm in the mixed gases with 99.9% He, and the measuring precision of relative deviation was less than 5%.

Eligible for student paper award?

No

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