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Tritium/Helium-3 Dating of River Infiltration:An Example from the Oderbruch Area, Berlin, Germany

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ABSTRACT
The concentrations of tritium, helium isotopes and neon have been measured in groundwater samples from a shallow and deep groundwater system recharged by bank infiltration from the Oder River in northeastern Berlin, Germany. The apparent $^{3}H/^{3}He$ ages show a distinct variation. They increased from only a few months to >40 years along the flow path. The farthest wells from the river have high concentration of ^{4}He terrigenic which is around $5 \times 10^{?5}$ (ccSTP/kg). The highest values for stable ^{3}H ($^{3}H + {}^{3}He_{trit}$) were encountered at a 2.6 kmdistance from the river.

KEYWORDS
Groundwater Dating; Bank Infiltration; Excess Air

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