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## The air-water partitioning of radon in groundwater contaminated by BTEX

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It is well known that organic solvent, such as benzene and toluene, has the highest level of solubility for radon, being approximately 50 times higher than the solubility of radon in water at the same environmental conditions such as temperature and pressure. The inhomogeneous distribution of radon between water and organic compounds allows for utilizing naturally occurring radon as aqueous tracer for the assessment of residual organic contamination of aquifers. In the present work, the air-water partitioning coefficient of radon in water contaminated by organic compounds were measured by a modified equilibrium partitioning in closed system (MEPICS) technique using a liquid scintillation counter (LSC). The organic compounds were benzene, toluene, ethyl benzene and xylene (BTEX). A radioactive standard solution (SRM4967, NIST) of radium (Ra-226) was used as a radon source of groundwater. The MEPICS method was applied to measure the partitioning coefficient of radon in pure water and an artificial water containing 30 $\mu$ g/L BTEX at 25 °C.

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