

DETERMINATION OF LOW LEVEL TRITIUM CONCENTRATIONS FOR TRITIUM TRACING APPLICATIONS

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Past tests of nuclear weapons in the atmosphere, nuclear energy facilities and tritium of natural origin are main sources of tritium in the environment. Thanks to its presence in environment and its favourable properties, tritium is used as a radiotracer. Since stopping of atmospheric nuclear tests, tritium in precipitation has been decreasing towards natural levels below 1 Bq/L and precise analyses of low level tritium activities are necessary. This paper focuses on tritium development at sites not influenced by any technogenic releases of tritium in Elbe River Basin (Bohemia) in the Czech Republic using liquid scintillation measurement in the period 2001–2017, with electrolytic enrichment in the period 2010–2017.