

Applications

Verification procedure. River Rhine water was used as a model for substantially diluted waste water downstream of a chemical production plant. In aqueous solution nerve agents such as sarin and soman will decompose to the acidic degradation products IMPA and PMPA, respectively [16]. The stability to hydrolysis in pure water is highest at pH 4-7 [21].

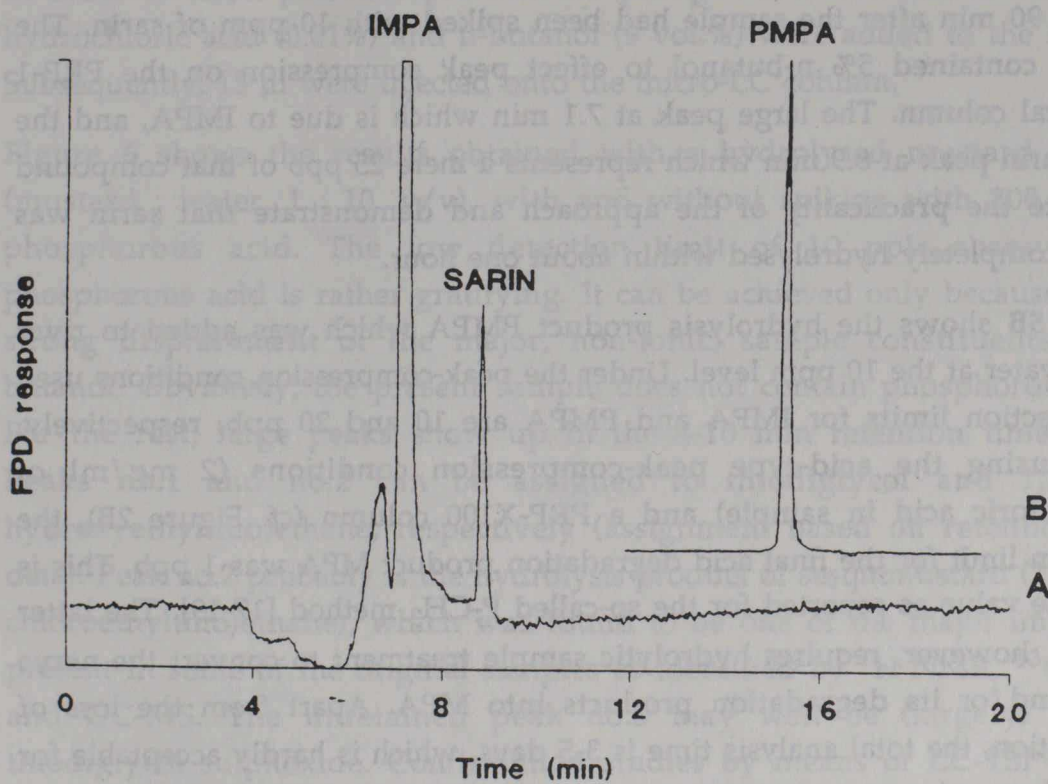


Fig. 5. Micro-LC-FPD chromatogram of river Rhine water spiked with 10 ppm of (A) sarin, analysed 90 min after sampling and spiking and (B) pinacolyl methylphosphonic acid (PMPA). IMPA, isopropyl methylphosphonic acid. Column, 300 mm x 0.32 mm i.d. PRP-1; injection volume, 10 μ l (with 5% n-butanol); eluent, 0.1 M aqueous ammonium oxalate (pH 3.7) containing 25% methanol. Flow rate: pump A (eluent), 5 μ l/min; pump B (water), 3 μ l/min.