

Degradation of Soman GD Agent on Sands Determined by ^{31}P Solid NMR and GC-MS

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Soman GD is one of the most toxic nerve agents of the known chemical warfare agents. Herein we studied the degradation of soman GD agent on silica sand by ^{31}P solid state magic angle spinning NMR and GC-MS. Results show that a drop of soman GD agent on silica sand spread laterally and was absorbed gradually into the pore of sand. Then, soman GD degraded to *O*-pinacolyl-methylphosphonic acid (PMPA) following a *pseudo*-first-order rate reaction over weeks.