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Review

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The pentachlorophenol-dehalogenating *Desulfitobacterium hafniense* strain PCP-1

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In this report, a complete description of *Desulfitobacterium hafniense* strain PCP-1 is presented. The *D. hafniense* strain PCP-1 was isolated from a methanogenic consortium for its capacity to dehalogenate pentachlorophenol (PCP) into 3-chlorophenol. This strain is also capable of dehalogenating several other chloroaromatic compounds and tetrachloroethene into trichloroethene. Four gene loci encoding putative chlorophenol-reductive dehalogenases (CprA2 to CprA5) were detected, and the products of two of these loci have been demonstrated to dechlorinate different chlorinated phenols. Strain PCP-1 was used in laboratory-scale bioprocesses to degrade PCP present in contaminated environments. *Desulfitobacterium hafniense* PCP-1 is an excellent candidate for the development of efficient bioprocesses to degrade organohalide compounds.