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Deuterated Phenanthrene

National Cancer Institute

Source

National Cancer Institute. *Deuterated Phenanthrene*. NCI Thesaurus. Code C102788.

A noncarcinogenic and structural analogue of polycyclic aromatic hydrocarbon (PAH), phenanthrene labeled with deuterium ([D10]Phe) with potential use in assessing an individual's capacity for PAH metabolism by the diol epoxide pathway. Upon oral or inhalation administration, [D10]Phe is metabolized into the tetraol end product ([D10]PheT) via the diol epoxide pathway, and can be quantified in urine. [D10]PheT can be used as a biomarker to assess PAHs metabolic activation and may therefore determine an individual's susceptibility to carcinogenicity upon PAH exposure.