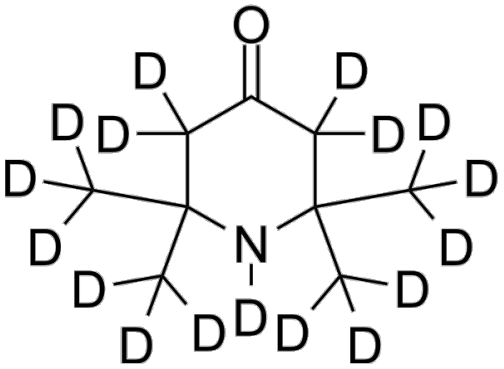
Product Data Sheet

Product Name: Triacetonamine-d17
Cat. No.: GC71901

Chemical Properties

Cas. No.	52168-48-6		
Formula	$C_9D_{17}NO$	M.Wt	172.34
Solubility	DMSO : 100 mg/mL (580.25 mM; Need ultrasonic and warming; Hygroscopic DMSO has a significant impact on the solubility of product, please use newly opened DMSO)Ethanol : 50 mg/mL (290.12 mM; Need ultrasonic and warming)	Storage	
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Product Data Sheet

Triacetonamine-d17 (2,2,6,6-Tetramethyl-4-piperidone-d17) is the deuterium labeled Triacetonamine. Triacetonamine has oral activity and can induce acute liver failure (ALF) in rats.

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

References:
[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.
[2]. Cao JP, et al. Triacetonamine formation in a bio-oil from fast pyrolysis of sewage sludge using acetone as the absorption solvent. Bioresour Technol. 2010 Jun;101(11):4242-5.
[3]. Ting Jiang, et al. Application of Bone Marrow Mesenchymal Stem Cells Effectively Eliminates Endotoxemia to Protect Rat from Acute Liver Failure Induced by Thioacetamide. Tissue Eng Regen Med. 2022 Apr;19(2):403-415.

Caution: Product has not been fully validated for medical applications. For research use only.
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