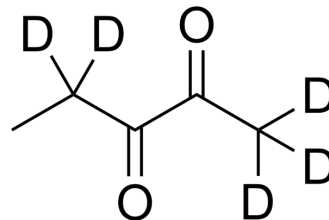


2,3-Pentanedione-d₅

Cat. No.:	HY-W012998S
CAS No.:	352431-46-0
Molecular Formula:	C ₅ H ₃ D ₅ O ₂
Molecular Weight:	105.15
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	2,3-Pentanedione-d ₅ is the deuterium labeled 2,3-Pentanedione[1]. 2,3-Pentanedione is a common constituent of synthetic flavorings and is used to impart a butter, strawberry, caramel, fruit, rum, or cheese flavor in beverages, ice cream, candy, baked goods, gelatins, and puddings. 2,3-Pentanedione also occurs naturally as a fermentation product in beer, wine, and yogurt and is released during roasting of coffee beans[2].
In Vitro	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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Morgan DL, et al. Bronchial and bronchiolar fibrosis in rats exposed to 2,3-pentanedione vapors: implications for bronchiolitis obliterans in humans. *Toxicol Pathol*. 2012;40(3):448-465.

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

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