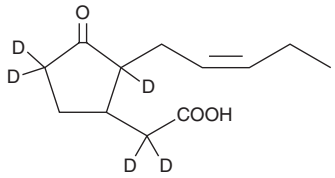
PRODUCT INFORMATION

(±)-Jasmonic Acid-d_5

Item No. 29076

CAS Registry No.:	2750534-78-0
Formal Name:	3-oxo-2-(2Z)2-penten-1-yl-cyclopentane-2,4,4-d_3-acetic-2,2-d_2 acid
MF:	$C_{12}H_{13}D_5O_3$
FW:	215.3
Chemical Purity:	≥98% ((±)-Jasmonic Acid) (mixture of diastereomers)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_5); ≤1% d_0
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(±)-Jasmonic acid-d_5 is intended for use as an internal standard for the quantification of (±)-jasmonic acid (Item No. 88300) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

(±)-Jasmonic acid-d_5 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. (±)-Jasmonic acid-d_5 is slightly soluble in methanol and chloroform.

Description

Jasmonic acid (JA) is a plant growth regulator and derivative of α-linolenic acid (Item Nos. 90210 | 21910) that can exist in four stereoisomeric forms.[1,2] (–)-3(R),7(R)-JA and (+)-3(S),7(S)-JA have the two side chains in the *trans* configuration, whereas (–)-3(S),7(R)-JA and (+)-3(R),7(S)-JA have the two side chains in the *cis* configuration, which can epimerize at C7 to the *trans* configuration *via* keto-enol tautomerization.[2]

References

1. Creelman, R.A. and Mullet, J.E. Biosynthesis and action of jasmonates in plants. *Annu. Rev. Plant Physiol. Plant Mol. Biol.* **48,** 355-381 (1997).
2. Holbrook, L., Tung, P., Ward, K., *et al.* Importance of the chiral centers of jasmonic acid in the responses of plants. Activities and antagonism between natural and synthetic analogs. *Plant Physiol.* **114**, 419-428 (1997).

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