



## Product Information Sheet

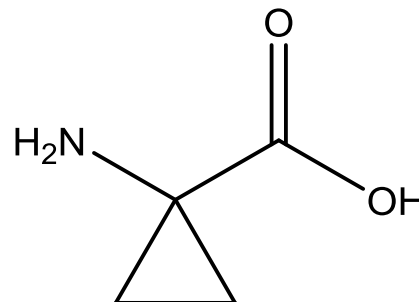
**A1180**

# 1-Aminocyclopropanecarboxylic acid (ACC)

Synonyms: 1-Aminocyclopropane-1-carboxylic Acid; ACPC; ACC  
CAS: 22059-21-8  
Formula: C<sub>4</sub>H<sub>7</sub>NO<sub>2</sub>  
Mol. Weight: 101.10

### Properties

Form: Powder  
Appearance: White-off-white  
Application: Plant Defense and Immunity  
Solubility: Soluble in Water (40 mg/ml) or DMSO  
Storage Temp: Room Temperature  
Stock Solution Storage Temp: -20 °C  
Typical Working Concentration: 20-500 mg/L; Varies by application. Concentration should be determined by end user.  
Other Notes:



### Application Notes

ACC is the key intermediate between methionine and ethylene production in plants.<sup>2</sup> It is generally associated with the wounding process production of ethylene. Endogenous concentrations in leaves generally range from ~0.1-10 nmol/g. It has been used to ripen climacteric fruit, such as apple.<sup>3</sup>

### References

1. Inge Bulen, Bram Van de Poel, Maarten LATM Hertog, Maurice P De Proft, Annemie H Geeraerd, and Bart M Nicoli. 2011. Protocol: An updated integrated methodology for analysis of metabolites and enzyme activities of ethylene biosynthesis. *Plant Methods*. Vol 7(17)
2. Adams DO and Yang SF. 1979. Ethylene biosynthesis: Identification of 1-aminocyclopropane-1-carboxylic acid as an intermediate in the conversion of methionine to ethylene. *PNAS* Vol 76(1) pg 170-174.
3. Mansour R, Latché A, Vaillant V, Pech JC, and Reid MS. 1986. Metabolism of 1-Aminocyclopropane-1-carboxylic Acid in ripening apple fruits. *Physiologia Plantarum*. Vol. 66 pg 495-502