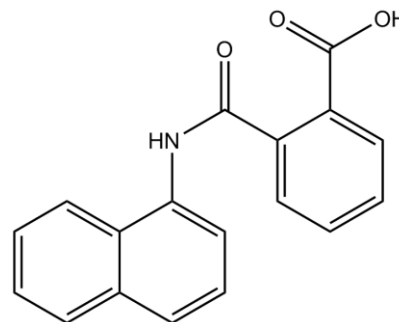


N6250
N-1-naphthylphthalamic acid
(NPA)

Synonyms: NPA, Naptalam
CAS: 132-66-1
Formula: $C_{18}H_{13}NO_3$
Mol. Weight: 291.30 g/mol

Properties:

Form: Solid
Appearance: White powder
Application: Polar auxin-transport inhibitor
Solubility: 200 mg/L in water
Storage Temp: Room temperature
Typical Working Concentration: Varies by application. Concentration should be determined by end user.

**Application Notes:**

Synthetic polar auxin transport inhibitors block auxin efflux out of the cell through interfering with *PIN1* efflux carrier proteins (Geldner *et al.* 2001) which take auxin from endosomal compartments to the plasma membrane, thus causing net accumulation of auxin within the cell (Casimiro *et al.* 2001).

References:

Casimiro I, Marchant A, Bhalerao RP, Beeckman T, Dhooge S, Swarup R, Graham N, Inzé D, Sandberg G, Casero PJ, and M Bennett (2001) Auxin Transport Promotes Arabidopsis Lateral Root Initiation. *The Plant Cell* Vol 13:843-852.

Geldner N, Friml J, Stierhof YD, Jürgens G, Palme K (2001) Auxin transport inhibitors block PIN1 cycling and vesicle trafficking. *Nature* 413:425–428

Jensen PJ, Hangarter RP, and M Estelle (1998) Auxin Transport Is Required for Hypocotyl Elongation in Light-Grown but Not Dark-Grown Arabidopsis *Plant Physiology* Vol 116 pg 455-462

Merck, 13 6444

PhytoTech Labs Inc.

14610 W 106th St. Lenexa, KS 66215
Phone: 1-888-749-8682 or 1-913-341-5343
phytotechlab.com