

Product Information Sheet

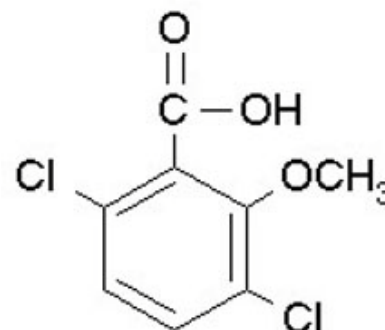
D159

Dicamba

Synonym: 3,6-Dichloro-o-anisic Acid
 CAS: 1918-00-9
 Formula: C₈H₆Cl₂O₃
 Molecular Wt: 221.04

Properties

Form: Powder
 Appearance: White to Beige Crystalline
 Application: Plant Growth Regulator
 Solubility: Slightly Soluble in Water. More Soluble in KOH.
 Typical Working Concentration: Varies by application, should be determined by the end user.
 Storage Temp: 2 to 6 °C
 Stock Solution Storage Temp: 2 to 6 °C
 Other Notes: Plant Tissue Culture Tested; For Research Use Only



Application Notes

Dicamba has similar activities to other auxins, e.g., adventitious root formation, induction of somatic embryos, cell division, callus formation and growth, inhibition of axillary buds, inhibition of root elongation. Other activities of dicamba have been observed. It has been reported that disruption of normal growth with morphological and cytological aberrations were observed when wheat and barley were treated with dicamba during their high meristematic activity.²

Typical working concentration of dicamba varies by application and plant species. Effective concentrations of dicamba have been reported on various monocotyledons in inducing embryogenic callus formation.³ Treatment of monocot species such as *Dactylis glomerata* at 40 µM, *Musa* at 90.5 µM and rice at 4.5 – 18.1 µM with dicamba have been reported³; however; a low concentration of dicamba at 0.09 µM has been reported for use in wheat regeneration.⁴

Dicamba is heat labile⁵ and should be added aseptically to autoclaved medium that has been cooled enough to handle.

PhytoTechnology Laboratories® also carries Dicamba Solution (1 mg/mL), Product No. D165.

Please Note: While PhytoTechnology Laboratories™ tests each lot of this product with two or more plant cell/ tissue culture lines, it is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References

1. Merck 13, 3065
2. Friesen, H.A., H. Baenzinger, and C.H. Keys. 1964. Morphological and cytological effects of dicamba on wheat and barley. *Can. J. Plant Sci.* 44:288-294.
3. George, E.F. 1993. Plant propagation by tissue culture. Part 1: The Technology, 2nd Ed. Exegetics Ltd. Edington, Wilts. BA13 4QG, England.
4. Bahieldin, A., W.E. Dyer, and R. Qu. 2000. Concentration effects of dicamba on shoot regeneration in wheat. *Plant Breeding.* 119:437-439.
5. Keitt, George W. and Robert A. Baker. 1966. Auxin activity of substituted benzoic acids and their effect on polar auxin transport. *Plant Physiology.* 41:1561-1569.

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