



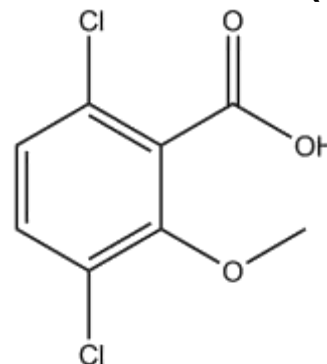
## Product Information Sheet

### D165 Dicamba Solution (1 mg/mL)

Synonym: 3,6-Dichloro-o-anisic Acid  
CAS: 1918-00-9  
Formula: C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub>  
MW: 221.04 g/mol

#### Properties:

Form: Liquid  
Appearance: Colorless, Clear Liquid  
Application: Plant Growth Regulator  
Solubility: Miscible with Water  
Typical Working Concentration: Varies by application. Concentration should be determined by end user.  
Storage Temp: 2-8°C  
Other Notes: Plant Tissue Culture Tested; For Research Use Only



#### Application Notes:

Dicamba is an auxinic herbicide which can aid in adventitious root formation, inducing somatic embryos, cell division, callus formation and growth, inhibition of axillary buds, inhibition of root elongation.

Typical working concentration of dicamba varies by application and plant species. Dicamba concentrations to inducing embryogenic callus in banana at 90.5 µM and rice at 4.5 – 18.1 µM have been reported (George *et al.* 2008). Corn callus has been induced with 30 µM dicamba on seedlings (Conger *et al.* 1987).

The *DMO* (dicamba monooxygenase) gene was isolated from a soil bacterium (Behrens *et al.* 2007) and introduction to a crop allows for dicamba to be used as a selection agent.

Dicamba is stable to autoclaving (Fogerty *et al.* 1994).

PhytoTechnology Laboratories® also carries Dicamba powder, Product No. D159.

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:

- Behrens MR, Mutlu N, Chakraborty S, Dumitru R, Jiang WZ, LaVallee BJ, Herman PL, Clemente TE, and DP Weeks (2007) Dicamba Resistance: Enlarging and Preserving Biotechnology-Based Weed Management Strategies. *Science* Vol. 316:1185-1188.
- Conger BV, Novak FJ, Afza R, and K Erdelsky (1987) Somatic embryogenesis from cultured leaf segments of *Zea mays*. *Plant Cell Reports*. Vol. 6(5):345-347
- George EF, Hall MA, and GJ De Klerk (2008). Plant Propagation by Tissue Culture. Volume 1. The Background, 3<sup>rd</sup> Ed. Springer. The Netherlands
- Fogarty AM, Traina SJ, and OH Tuovinen (1994) Determination of Dicamba by Reverse-Phase HPLC. *J. Liq. Chrom.* 17(12):2667-2674.
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