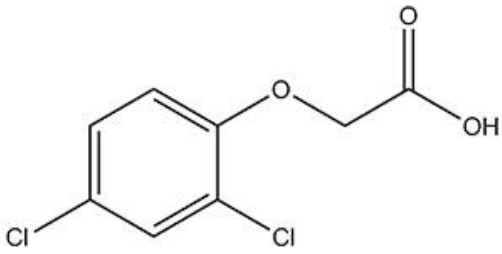
D295
2,4-Dichlorophenoxyacetic Acid Solution (1 mg/mL)

Synonym: 2,4-D
CAS: 94-75-7
Formula: $C_8H_6Cl_2O_3$
MW: 221.04 g/mol



Properties:

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

Application Notes:

2,4-D is an auxinic herbicide and is generally considered to be the most potent auxin. Like other auxins it can aid in adventitious root formation, induction of somatic embryos, cell division, callus formation and growth, inhibition of axillary buds, inhibition of root elongation. It was developed independently by four different research groups during WWII (Troyer 2001). The use of 2,4-D to form callus and its subsequent removal from the medium to form somatic embryos was first demonstrated in carrot (Steward et al. 1958), but it is still used widely today in other crops such as corn (Duncan *et al.* 1985).

2,4-D is stable to autoclaving. *Phyto*Technology Laboratories® also carries 2,4-Dichlorophenoxyacetic Acid Solution (10 mg/mL), Product No. D309.

Please Note: While *Phyto*Technology 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:

Duncan DR, Williams ME, Zehr BE, and JM Widholm (1985) The production of callus capable of plant regeneration from immature embryos of numerous *Zea mays* genotypes. *Planta* Vol. 165:322-332
Merck **13**, 2825
Steward FC, Mapes MO, and K Mears (1958) Growth and Organized Development of Cultured Cells. II Organization in Cultures Grown from Freely Suspended Cells. *Am J. Bot.* Vol. 45(10):705-708
Troyer JR (2001) In the beginning: the multiple discovery of the first hormone herbicides. *Weed Science* Vol. 49:290-297

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