



## Product Information Sheet

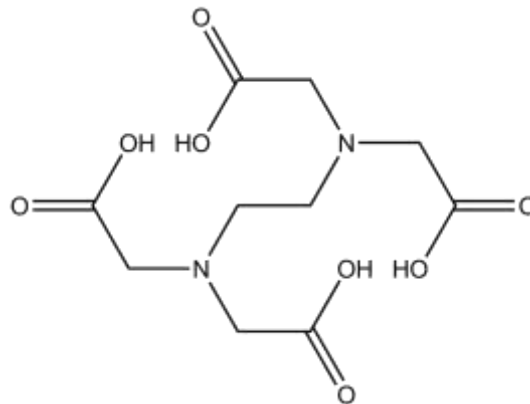
**E316**

### EDTA, Free Acid

Synonym: Ethylenediaminetetraacetic Acid; Edetic Acid  
CAS: 60-00-4  
Formula:  $C_{10}H_{16}N_2O_8$   
MW: 292.24 g/mol

#### Properties:

Form: Powder  
Appearance: White Powder  
Application: Chelating Agent  
Solubility: KOH  
Typical Working Concentration: Varies by application, should be determined by the end user.  
Storage Temp: Room Temperature  
Other Notes: Plant Tissue Culture Tested



#### Application Notes:

EDTA is a chelating agent for metal salts in plant tissue culture media. It is also the most commonly used chelating agent in plant tissue culture media. It primarily chelates Iron (III) in plant tissue culture media from pH 4-6.5 (Halvorson and Lindsay, 1972). It primarily chelates Iron (III) in plant tissue culture media from pH 4-6.5 (Halvorson and Lindsay, 1972) and is used in equimolar amounts to iron in many popular media (Murashige and Skoog, 1962, Lloyd and McCown, 1981).

Note the pK<sub>A</sub> of the protons in the Free Acid are 2.0, 2.7, 6.2, and 10.3. Therefore it requires the pH > 7.0 to dissolve at relatively lower concentrations.

PhytoTechnology Laboratories® also carries a more water soluble disodium salt form, Product No. E410.

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:

Halvorson AD, and WL Lindsay (1972) Equilibrium Relationships of Metal Chelates in Hydroponic Solutions. *Soil Sci. Soc. Amer. Proc.* Vol. 36(5):755-761  
Lloyd, G and BH McCown (1981) Commercially-feasible micropropagation of Mountain Laurel, *Kalmia latifolia*, by shoot tip culture. *Proc. Int. Plant Prop. Soc.* Vol. 30:421-427  
*Merck* **13**, 3546  
Murashige T, and F Skoog (1962) A revised medium for rapid growth and bioassays with tobacco tissue cultures. *Physiol. Plant.* Vol. 15:473-497

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