



## Thidiazuron

Synonym: 1-Phenyl-3-(1,2,3-thiadiazol-5-yl)urea; TDZ  
CAS: 51707-55-2  
Formula: C<sub>9</sub>H<sub>8</sub>N<sub>4</sub>OS  
Molecular Wt: 220.3

### Properties

Form: Powder  
Appearance: White to Off-white Powder  
Application: Cytokinin  
Solubility: DMSO, 1 N NaOH/KOH (See Application Note below)  
Storage Temp: -20 to 0° C  
Storage Temp of Stock Solution: -20 to 0° C  
Other Notes: TDZ is a substituted urea compound that elicits cytokinin activity in several plant systems, sometimes at 1/10<sup>th</sup> to 1/100<sup>th</sup> the concentration of N<sup>6</sup>-substituted adenine-based cytokinins [Yip and Yang (1976)].  
Plant Tissue Culture Tested

### Application Notes

Please Note: While *PhytoTechnology Laboratories*<sup>TM</sup> 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.

A note on the TC Listserv indicates that a 10 mM stock solution can be prepared by dissolving 22 mg of TDZ in a few drops of 1 N NaOH (or KOH) with vortexing. Bringing the volume up to 10 mL will produce a 10 mM solution. This protocol has not been confirmed by PhytoTech Labs.

For additional information concerning TDZ and its cytokinin activity see Yip and Yang (1986) and Thomas and Katterman (1986). Many other references are available by searching the internet.

### References

*Merck* **13**, 9384

Thomas, JC and FR Katterman (1986), Cytokinin activity induced by thidiazuron. *Plant Physiol.* 81:681-683.

YIP, WK and SF Yang (1986), Effect of thidiazuron, a cytokinin-active urea derivative, in cytokinin-dependent ethylene production systems. *Plant Physiol.* 80:515-519.

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