



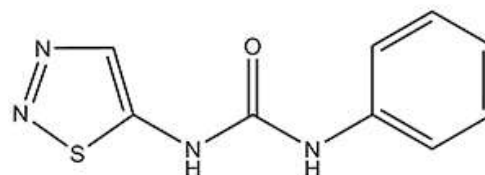
Product Information Sheet

T888 Thidiazuron (>98%)

Synonyms: 1-Phenyl-3-(1,2,3-thiadiazol-5-yl)urea; TDZ
CAS: 51707-55-2
Formula: C₉H₈N₄OS
MW: 220.25 g/mol

Properties:

Form: Powder
Appearance: White to Off-White Powder
Application: Plant Growth Regulator
Solubility: DMSO, 0.1 N KOH
Storage Temp: -20°C
Stock Solution Storage Temp: -20°C
Typical Working Concentration: Varies by application. Concentration should be determined by end user.
Other Notes: Plant Tissue Culture Tested; For Research Use Only



Application Notes:

Thidiazuron (TDZ) was originally used as a cotton defoliant and is the active ingredient in Dropp®. TDZ was later found to have cytokinin activity in bean (Mok *et al.* 1982). It is a derivative of a N,N'-diphenylurea (DPU), which belongs to a substituted phenylurea class of compounds that exhibits similar cytokinin activity to that of adenine-based cytokinins (Takahashi *et al.* 1978). The main mode of action of phenylurea-cytokinins is to inhibit cytokinin oxidases and allow for endogenous cytokinins to have a longer half-life (Mok and Mok 2001).

PhytoTechnology Laboratories® also carries TDZ Solutions (1 mg/mL), Product No. T8118 (aqueous solution) and Product No. T7999 (DMSO).

TDZ is not stable to autoclaving.

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:

- Merck* **13**, 9384
Mok, DWS and M Mok (2001) Cytokinin metabolism and action. *Annu. Rev. Plant Physiol. Plant Mol. Biol.* 52:89-118.
Mok MC, Mok DWS, Armstrong DJ, Shudo K, Isogai Y, and T Okamoto (1982) Cytokinin Activity of N-Phenyl-N'-1,2,3-thiadiazol-5-ylurea (Thidiazuron). *Phytochemistry* Vol. 21(7):1509-1511.
Takahashi S, Shudo K, Okamoto T, Yamada K, and Y Isogai (1978) Cytokinin Activity of N-Phenyl-N'-(4-pyridyl)urea (Thidiazuron). *Phytochemistry* Vol. 17:1201-1207.