

## Product Information Sheet

### T7982 Thiourea

Synonyms: Thiocarbamide, Sulfoarea  
 CAS: 62-56-6  
 Formula: CH<sub>4</sub>N<sub>2</sub>S  
 Mol. Weight: 76.12

#### Properties

Form: Powder  
 Appearance: White to Off-White  
 Solubility: Soluble in Water  
 Application: Seed Testing/Germination  
 Storage Temp: Room Temperature  
 Typical Working Concentration: Varies with application, should be determined by end user.

#### Application Notes

Thiourea is commonly used to increase the stress tolerance in plants (Srivastava *et al.* 2008), and also increase germination rate or to break dormancy in seeds (Tukey & Carlson 1945). It has been used as a substitute for stratification in a number of tree species, such as *Quercus borealis* Michx., *Q. velutina* Lamarch, *Larix decidua* Mill, *Picea abies* Karst., and *Betula lenta* L.(Baskin & Baskin 1971).

Plant species that have shown a successful increase in germination rates induced by thiourea are: *Chenopodium humile* L. (Jordan & Jolliffe 1970), *Atropa belladonna* (Choudhary & Kaul 1973), *Gloriosa superba* (Singh 2006), & *Aconitum heterophyllum* (Pandey *et al.* 2000), just to name a few. Please see references below for specific methods for these species.

#### References

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- Choudhary DK & Kaul BL (1973) Note on the effect of Thiourea on the germination of *Atropa belladonna*. *Indian J. Agric. Sci.*, 43 (10): 967-968.
- Jordan LS and VA Jolliffe (1970) Germination and Maturation of *Chenopodium humile* L. *Weed Science*, 18(3), pp. 382-385.
- Pandey H, SK Nandi, M Nadeem & LMS Palni (2000) Chemical stimulation of seed germination in *Aconitum heterophyllum* species of medicinal value. *Seed Sci. and Technol.*, 2(1): pp. 39-48.
- Singh AK (2006). Flower crops: Cultivation & management. New Delhi: New India Pub. Agency.
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- Tukey HB & RF Carlson (1945) Breaking the Dormancy of Peach Seed by Treatment with Thiourea. *Plant Physiology*, 20(4), pp. 505-516.

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