Product Information Sheet

T7982
Thiourea

Synonyms:	Thiocarbamide, Sulfourea
CAS:	62-56-6
Formula:	CH_4N_2S
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

Baskin JM and CC Baskin (1971) Germination of *Cyperus inflexus* Muhl. *Botanical Gazette*, 132(1), pp. 3-9.

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.

Srivastava AK, NK Ramaswamy & SF D'Souza (2008) Bioregulatory role of thiourea in multistress tolerance of the Indian mustard (*Brassica juncea* L.). *BARC Newslett*., 297: 2-11.

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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