

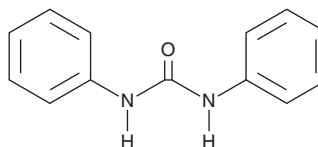
# PRODUCT INFORMATION



## 1,3-Diphenylurea

Item No. 31323

CAS Registry No.: 102-07-8  
Formal Name: N,N'-diphenyl-urea  
Synonyms: DPU, N,N'-Diphenylurea, NSC 227401, NSC 8485  
MF: C<sub>13</sub>H<sub>12</sub>N<sub>2</sub>O  
FW: 212.3  
Purity: ≥98%  
UV/Vis.: λ<sub>max</sub>: 257 nm  
Supplied as: A solid  
Storage: -20°C  
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

1,3-Diphenylurea is supplied as a solid. A stock solution may be made by dissolving the 1,3-diphenylurea in the solvent of choice, which should be purged with an inert gas. 1,3-Diphenylurea is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 1,3-diphenylurea in these solvents is approximately 30 mg/ml.

1,3-Diphenylurea is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1,3-diphenylurea should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 1,3-Diphenylurea has a solubility of approximately 50 µg/ml in a 1:20 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

1,3-Diphenylurea is a cytokinin.<sup>1,2</sup> It increases fresh weight of tobacco plant tissue when used at concentrations ranging from 1 to 16 mg/L in growth media.<sup>1</sup> 1,3-Diphenylurea (32 and 100 µM) increases the growth of cultured *P. lunatus* callus tissue.<sup>2</sup> Exogenous 1,3-diphenylurea (32 and 100 µM) added during first-passage culture induces second-passage cytokinin autonomy in cultured *P. lunatus* tissue.

### References

1. Dyson, W.H., Fox, J.E., and McChesney, J.D. Short term metabolism of urea and purime cytokinins. *Plant Physiol.* **49**(4), 506-513 (1970).
2. Mok, M.C., Kim, S.-G., Armstrong, D.J., et al. Induction of cytokinin autonomy by N,N'-diphenylurea in tissue cultures of *Phaseolus lunatus* L. *Proc. Natl. Acad. Sci. USA* **76**(8), 3880-3884 (1979).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM