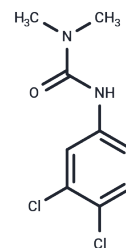


## Diuron

## Chemical Properties

CAS No. :	330-54-1
Formula:	C <sub>9</sub> H <sub>10</sub> Cl <sub>2</sub> N <sub>2</sub> O
Molecular Weight:	233.10
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Diuron is an orally active benzoylurea herbicide against annual, perennial broadleaf weeds, and grass weeds. Diuron inhibits the production of ATP and NADH, thereby impairing plant photosynthesis, and also increases ROS production and promotes DMBA/BBN-induced bladder cancer development.
Targets(IC50)	Others,ROS,MDM-2/p53
In vitro	Diuron (100 nM-200 μM, 24-72 h) was used to treat BeWo cells and MCF-7 cells. It was found that Diuron could significantly increase the production of ROS in BeWo cells and reduce their cell viability. At the same time, Diuron could significantly increase the production of ROS and induce DNA damage in MCF-7 cells. [1]
In vivo	Diuron (25-2500 ppm, oral, 20 weeks) treatment of Wistar rats can induce hyperplasia of the bladder and renal pelvis urothelium in a dose-response relationship. [5]

## Solubility Information

Solubility	DMSO: 200 mg/mL (858 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (21.45 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.290 mL	21.450 mL	42.900 mL
5 mM	0.858 mL	4.290 mL	8.580 mL
10 mM	0.429 mL	2.145 mL	4.290 mL
50 mM	0.0858 mL	0.429 mL	0.858 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

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- Kaonga CC, et al. Diuron, Irgarol 1051 and Fenitrothion contamination for a river passing through an agricultural and urban area in Higashi Hiroshima City, Japan. *Sci Total Environ*. 2015 Jun 15;518-519:450-8.
- Da Rocha MS, et al. Diuron-induced rat urinary bladder carcinogenesis: mode of action and human relevance evaluations using the International Programme on Chemical Safety framework. *Crit Rev Toxicol*. 2014 May;44(5):393-406.

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