

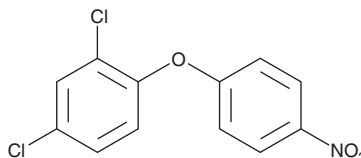
# PRODUCT INFORMATION



## Nitrofen

Item No. 20341

CAS Registry No.: 1836-75-5  
Formal Name: 2,4-dichloro-1-(4-nitrophenoxy)-benzene  
MF:  $C_{12}H_7Cl_2NO_3$   
FW: 284.1  
Purity:  $\geq 98\%$   
UV/Vis.:  $\lambda_{max}$ : 292 nm  
Supplied as: A crystalline solid  
Storage:  $-20^{\circ}C$   
Stability:  $\geq 4$  years



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

### Laboratory Procedures

Nitrofen is supplied as a crystalline solid. A stock solution may be made by dissolving the nitrofen in the solvent of choice, which should be purged with an inert gas. Nitrofen is soluble in methanol.

### Description

Nitrofen is an herbicide with potent teratogenic activity in rats and mice.<sup>1</sup> It induces bilateral pulmonary hypoplasia and an immature lung architecture in fetal rats and mice, which is used to model human congenital diaphragmatic hernia.<sup>2-4</sup>

### References

1. Manson, J.M. Mechanism of nitrofen teratogenesis. *Environ. Health Perspect.* **70**, 137-147 (1986).
2. Allan, D.W. and Greer, J.J. Pathogenesis of nitrofen-induced congenital diaphragmatic hernia in fetal rats. *J. Appl. Physiol.* **83**(2), 338-347 (1997).
3. Guilbert, T.W., Gebb, S.A., and Shannon, J.M. Lung hypoplasia in the nitrofen model of congenital diaphragmatic hernia occurs early in development. *Am. J. Physiol Lung Cell. Mol. Physiol.* **279**(6), L1159-L1171 (2000).
4. Pereira-Terra, P., Moura, R.S., Nogueira-Silva, C., *et al.* Neuroendocrine factors regulate retinoic acid receptors in normal and hypoplastic lung development. *J. Physiol.* **593**(15), 3301-3311 (2015).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/21/2022

#### 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