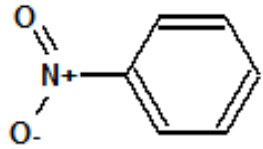


Nitrobenzene

CAS-No.:	98-95-3 The scope of this Standard includes, but is not limited to the CAS number(s) indicated above; any other CAS number(s) used to identify this fragrance ingredient should be considered in scope as well.	Molecular formula:	C ₆ H ₅ NO ₂
Structure:			
Synonyms:	Benzene, nitro Nitrobenzol Mirbane oil		

History:	Publication date:	2006 (Amendment 40)	Previous Publications:	1974 2002
-----------------	-------------------	---------------------	------------------------	--------------

Implementation dates:	For new submissions*:	Not applicable.
	For existing fragrance compounds*:	Not applicable.
*These dates apply to the supply of fragrance mixtures (formulas) only, not to the finished consumer products in the marketplace.		

RECOMMENDATION:

PROHIBITION

FRAGRANCE INGREDIENT PROHIBITION:

Nitrobenzene should not be used as a fragrance ingredient.

CONTRIBUTIONS FROM OTHER SOURCES:

NONE TO CONSIDER (SEE ALSO THE SECTION ON CONTRIBUTIONS FROM OTHER SOURCES IN CHAPTER 1 OF THE GUIDANCE FOR THE USE OF IFRA STANDARDS)

Nitrobenzene

INTRINSIC PROPERTY MANAGEMENT:	DRIVING RISK	ACUTE TOXICITY, SKIN TOXICITY
---------------------------------------	---------------------	--------------------------------------

EXPERT PANEL FOR FRAGRANCE SAFETY RATIONALE / CONCLUSION:

The Expert Panel for Fragrance Safety reviewed all the available data for Nitrobenzene and recommends not to use Nitrobenzene as or in fragrance ingredients in any finished product application.

REFERENCES:

The IFRA Standard on Nitrobenzene is based on at least one of the following publications:

- The RIFM Safety Assessment on Nitrobenzene is available at the RIFM Safety Assessment Sheet Database: <http://fragrancematerialsafetyresource.elsevier.com/>.
- Api A.M., Belsito D., Bruze M., Cadby P., Calow P., Dagli M. L., Dekant W., Dent M., Ellis G., Fryer A. D., Fukayama M., Griem P., Hickey C., Kromidas L., Lalko J., Liebler D.C., Miyachi Y., Politano V.T., Renskers K., Ritacco G., Salvito D., Schultz T.W., Sipes I. G., Smith B., Vitale D., Wilcox D.K. (2015). Criteria for the Research Institute for Fragrance Materials, Inc. (RIFM) safety evaluation process for fragrance ingredients. *Food Chem Toxicol.* 2015 Aug;82 Suppl:S1-S19 (doi: 10.1016/j.fct.2014.11.014). (http://fragrancematerialsafetyresource.elsevier.com/sites/default/files/Criteria_Document_Final.pdf).
- IDEA project (International Dialogue for the Evaluation of Allergens) Final Report on the QRA2: Skin Sensitisation Quantitative Risk Assessment for Fragrance Ingredients, September 30, 2016 (<http://www.ideaproject.info/uploads/Modules/Documents/qra2-dossier-final--september-2016.pdf>).
- Salvito D.T., Senna R. J., Federle T.W. (2002). A framework for prioritizing fragrance materials for aquatic risk assessment. *Environ Toxicol Chem.* 2002;21:1301-1308. (<https://www.ncbi.nlm.nih.gov/pubmed/12069318>).
- Christensen, H.E., Toxic Substances List, National Institute for Occupational Safety and Health (1972), p. 369.

Additional information on the application of IFRA Standards is available in the Guidance for the use of IFRA Standards, publicly available at www.ifrafragrance.org.