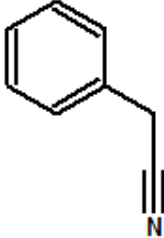


**Benzyl cyanide**

<b>CAS-No.:</b>	140-29-4 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.	<b>Molecular formula:</b>	C <sub>8</sub> H <sub>7</sub> N
		<b>Structure:</b>	
<b>Synonyms:</b>	Benzeneacetonitrile Benzyl nitrile Phenylacetonitrile Phenyl acetyl nitrile		

<b>History:</b>	Publication date:	2004 (Amendment 38)	Previous Publications:	Not applicable.
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<b>Implementation dates:</b>	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.	

<b>RECOMMENDATION:</b>	<b>PROHIBITION / RESTRICTION</b>
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<b>FRAGRANCE INGREDIENT PROHIBITION:</b>	<p>Benzyl cyanide as such should not be used as fragrance ingredient.</p> <p>The natural extracts containing Benzyl cyanide should not be used as substitutes for this substance.</p>
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RESTRICTION LIMITS IN THE FINISHED PRODUCT (%):			
Category 1	See notebbox	Category 7A	See notebbox

**Benzyl cyanide**

Category 2	See notebox	Category 7B	See notebox
Category 3	See notebox	Category 8	See notebox
Category 4	See notebox	Category 9	See notebox
Category 5A	See notebox	Category 10A	See notebox
Category 5B	See notebox	Category 10B	See notebox
Category 5C	See notebox	Category 11A	See notebox
Category 5D	See notebox	Category 11B	See notebox
Category 6	See notebox	Category 12	See notebox

**Fragrance ingredient restriction - Note box**

On the basis of established maximum concentration levels of this substance in commercially available natural sources (like essential oils and extracts), exposure to this substance from the use of these oils and extracts is not significant and the use of these oils is authorized as long as the level of Benzyl cyanide in the finished product does not exceed 0.01% (100 ppm).

<b>FLAVOR REQUIREMENTS:</b>	Due to the possible ingestion of small amounts of fragrance ingredients from their use in products in Categories 1 and 6, materials must not only comply with IFRA Standards but must also be recognized as safe as a flavoring ingredient as defined by the IOFI Code of Practice ( <a href="http://www.iofi.org">www.iofi.org</a> ). For more details see chapter 1 of the Guidance for the use of IFRA Standards.
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**CONTRIBUTIONS FROM OTHER SOURCES: SEE ANNEX I**

ANNEX I					
Natural Complex Substances (NCS) containing Benzyl cyanide					
Concentration in NCS (%)	CAS number of ingredient	Name of NCS	Botanical name	CAS number of NCS	Essential oil category
0.1	140-29-4	Gardenia tahitensis oil	Gardenia tahitensis DC.	683748-01-8	F2.13
0.1	140-29-4	Genet absolute	Spartium junceum L.	90131-21-8	E2.1
0.07	140-29-4	Jasmine grandiflorum absolute	Jasminum grandiflorum L.	8022-96-6	F2.1

**Benzyl cyanide**

1.2	140-29-4	Jasmine sambac absolute	Jasminum sambac (L.) Aiton	103798-23-6	F2.1
5	140-29-4	Karo karunde absolute	Leptactina senegambica Hook f.	94334-14-2	F2.1
0.09	140-29-4	Magnolia flower oil	Magnolia grandiflora L.	68917-19-1	F2.12
0.2	140-29-4	Orange flower oil, bitter (neroli and neroli bigarade)	Citrus aurantium L. spp. Amara Link	8016-38-4	F2.12
0.5	140-29-4	Orange flower water absolute	Citrus aurantium L. spp. Amara Link	8030-28-2	F2.54
0.8	140-29-4	Tuberose absolute	Poliantes tuberosa L.	8024-05-3	F2.1
0.17	140-29-4	Tuberose oil	Poliantes tuberosa L.	8024-05-3	F2.12
0.05	140-29-4	Ylang ylang oil I	Cananga odorata (Lam.) Hook. f. & Thomson oil (forma genuine Steenis)	8006-81-3	F2.12.1
0.02	140-29-4	Ylang ylang oil II	Cananga odorata (Lam.) Hook. f. & Thomson oil (forma genuine Steenis)	8006-81-3	F2.12.2
0.02	140-29-4	Ylang ylang oil III	Cananga odorata (Lam.) Hook. f. & Thomson oil (forma genuine Steenis)	8006-81-3	F2.12.3
0.03	140-29-4	Ylang, Ylang oil extra	Cananga odorata (Lam.) Hook. f. & Thomson oil (forma genuine Steenis)	8006-81-3	F2.12 X
0.03	140-29-4	Ylang, Ylang oil, terpene-free	Cananga odorata (Lam.) Hook. f. & Thomson oil (forma genuine Steenis)	68952-44-3	F2.29

This is a non-exhaustive indicative list of typical natural presence for Benzyl cyanide and is intended to be used in the absence of own analytical data. If analysis has shown that the level of the restricted ingredient in a natural complex substance is different from what is provided in this Annex I, then the analytically determined level should be used in place of the indicative level.

It should further be noted that natural complex substances themselves can be restricted by an IFRA Standard.

For a detailed list of natural contributions, please refer to the Annex I of IFRA Standards, publicly available on the IFRA website ([www.ifrafragrance.org](http://www.ifrafragrance.org)).

<b>INTRINSIC PROPERTY DRIVING RISK MANAGEMENT:</b>	<b>RELEASE OF CYANIDE</b>
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**Benzyl cyanide****EXPERT PANEL FOR FRAGRANCE SAFETY RATIONALE / CONCLUSION:**

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

However, the presence of Benzyl cyanide in natural extracts used as ingredients in finished consumer products is tolerated only according to the upper concentration level mentioned in the Notebox if the natural extracts are not being used to provide an alternative, indirect source of the banned substance.

**REFERENCES:**

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

- The RIFM Safety Assessment on Benzyl cyanide 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](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>).

- Potter et al., 2001, *Food and Chemical Toxicology* 39 (2), page 141-146.

- Potter et al., 2001, *Food and Chemical Toxicology* 39 (2), page 147-151.

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](http://www.ifrafragrance.org).