PHENYLCARBINOL

MODULE 1

SUBSTANCE INFORMATION SHEET

PHENYLCARBINOL

CAS number	100-51-6
Natural Origin	Occurs in apricots, almonds, apples, apple juice, asparagus, bananas, black currants, blackberries
Chemical Formula	C7-H8-O
Synonymes	Benzenemethanol,Phenyl carbinol, alpha-Hydroxytoluene, Benzoyl alcohol, Phenyl methanol, Benzyl Alcohol
E number	E1519
FEMA GRAS number	2137

General Information

Council of Europe (CoE)

Number	Comment
58	N/A

US Food & Drug Administration (FDA)

Number	Comment
21 CFR 172.515	Approved by U.S FDA as Direct Food Additives

Joint FAO/WHO Expert Committee on Food Additives (JECFA)

Number	ADI	Comment
25	0-5 mg/kg bw	No safety concern at current levels of intake when used as a flavouring agent. The 1996 group ADI of 0-5 mg/kg bw for benzoic acid, the benzoate salts (calcium, potassium and sodium), benzaldehyde, benzyl acetate, benzyl alcohol and benzyl benzoate, expressed as benzoic acid equivalents, was maintained at the fifty-seventh meeting (2001).

European Food Safety Authority (EFSA)

Number	Comment
02.010	Benzyl alcohols/aldehydes/acids/esters/acetals. Benzyl and benzoate esters included. May also contain aliphatic acyclic or alicyclic ester or acetal component.

Flavors & Extracts Manufacturers Association (FEMA)

Number	Comment
2137	Generally Recognized As Safe. GRAS 3

Uses and Exposure

Phenylcarbynol is used by industry both indirectly as a solvent or chemical intermediate and directly in fragrances and food. It also has some application in photography.

Estimated Intake from Food and Drink

Daily Intake
The daily intake was estimated at 290 µg/kg bw/day in the USA and 270 µg/kg bw/day in Europe.[1,2,3].

Summary of the Toxicological Investigations on the Use of the Substance in Tobacco Products

Smoke Chemistry

Internal Studies	Level Tested ppm	Comment
Carmines for Philip Morris	57, 172, 475, 1,426	The effect of the addition of phenylcarbinol as part of a mixture at concentrations up to 1,426 ppm on the composition of the cigarette smoke was investigated.
Philip Morris	500; 5,000; 21,000;	The effect of the addition of phenylcarbinol at concentrations up to 21,000 ppm on the composition of the cigarette smoke was investigated.

Neutral Red Uptake Assay (NRU)

Internal Studies	Level Tested ppm	Comment
Carmines for Philip Morris	57, 172, 475, 1,426	The effect of the addition of phenylcarbinol as part of a mixture at concentrations up to 1,426 ppm on the cytotoxicity, as measured by the Neutral Red Uptake assay, was investigated.
Philip Morris	500; 5,000; 21,000;	The effect of the addition of phenylcarbinol at concentrations up to 21,000 ppm on the cytotoxicity, as measured by the Neutral Red Uptake assay, was investigated.

AMES Assay

Internal Studies	Level Tested ppm	Comment
Carmines for Philip Morris	57, 172, 475, 1,426	The effect of the addition of phenylcarbinol as part of a mixture at concentrations up to 1,426 ppm on the mutagenic response, as measured by the Salmonella reverse mutation assay, was

		investigated.
Philip Morris	500; 5,000; 21,000;	The effect of the addition of phenylcarbinol at concentrations up to 21,000 ppm on the mutagenic response, as measured by the Salmonella reverse mutation assay, was investigated.

Mouse Lymphoma Assay (MLA)

Internal Studies	Level Tested ppm	Comment
N/A	N/A	N/A

In vivo Micronucleus

Internal Studies	Level Tested ppm	Comment
N/A	N/A	N/A

Inhalation studies

Internal Studies	Level Tested ppm	Comment
Carmines for Philip Morris	57, 172, 475, 1,426	The effect of the addition of phenylcarbinol as part of a mixture at concentrations up to 1,426 ppm on the toxicity of cigarette smoke, as suggested in a 90-day inhalation study, was investigated.
Philip Morris	500; 5,000; 21,000;	The effect of the addition of phenylcarbinol at concentrations up to 21,000 ppm on the toxicity of cigarette smoke, as suggested in a 90-day inhalation study, was investigated.

References

1. JECFA. Joint FAO/WHO Expert Committee on Food Additives. (1997a). Evaluation of Certain Food Additives and Contaminants. Forty-sixth Report. WHO Technical Report Series No. 868. WHO, Geneva. pp. 41-43.

2. Lucas, C.D., Putnam, J.M. and Hallagan, J.B. (1999). Flavor and Extract Manufacturers' Association of the United States. 1995 Poundage and Technical Effects Update Survey. Flavor and Extract Manufacturers' Association, Washington, DC.

3. National Academy of Sciences (NAS) (1989). 1987 Poundage and Technical Effects: Update of Substances Added to Food. PB91-127266. National Academy Press, Washington, D.C.