Preparation	From ethyl alcohol and acetic acid, usually in a multicolumnar distillation system (Arctander,1969)
Natural Occurrence	**Ethyl acetate** is reported to occur in nature.
Use Levels	In public use since the 1920s.

Flavor Consumption (in kg)

1995	USA	210085
1995	EUROPE	195420
1987	USA	148000
1982	USA	144000
1976	USA	246000
1975	USA	210000
1970	USA	143000

Uses (in ppm)

Product	Average Usual	Average Maximum	Mean Daily Consumption (gms)	Updated
Alcoholic Beverage	8.64	17.24	32.5	21-Jul-88
Baked Goods	154.32	210.92	137.2	21-Jul-88
Chewing Gum	1190.0	2300.0	0.2	15-Jul-94
Frozen Dairy	66.17	110.33	25.6	21-Jul-88
Fruit Juice	8.0	15.0	118.3	21-Jul-88
Gelatin Pudding	73.34	122.84	20.4	21-Jul-88
Gravies	20.0	40.0	8.3	21-Jul-88
Hard Candy	149.3	416.16	0.6	21-Jul-88
Meat Products	0.1	0.1	78.4	21-Jul-88
Non-alcoholic Beverage	42.36	61.02	104.0	21-Jul-88
Soft Candy	113.4	152.98	5.8	21-Jul-88

PADI 31.15

Food Products Containing Ethyl acetate (in ppm)

Product	Code	Lower Limit	Upper Limit
Unknown	1-C	0.3	2

Status

Ethyl acetate was listed by the ACGIH as TWA 400ppm, 1440mg/m3. .
Ethyl acetate has a CTFA Cosmetic Ingredient Review guideline: On the basis of the available data, the CIR Expert Panel concludes that ethyl acetate and butyl acetate are safe as cosmetic ingredients in the present practices of use and concentration. .
Ethyl acetate was included by the Council of Europe in the list of substances granted A – may be used in foodstuffs (COE No. 191) .
Ethyl acetate was approved by the FDA as GRAS (21 CFR 182.60) .
Ethyl acetate was listed by the Occupational Safety and Health Administration as PEL – TWA 400ppm, 1400mg/m3 .

Flavor and Extract Manufacturers' Association states: Generally Recognized as Safe as a flavor ingredient – GRAS 3. (2414)

Joint Expert Committee on Food Additives states: ADI 0-25 mg/kg [1967]. No safety concern at current levels of intake [1997]. (1967; 1997)

Other Actions

Indicative Non-Exhaustive List	of fragrance ingredients

FFIDS Volume IX-A

Hazard Statements

1-Jan-01	S33	Take precautionary measures against static discharges.	
1-Jan-01	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.	
1-Jan-01	S16	Keep away from sources of ignition No smoking.	
1-Jan-01	R67	Vapors may cause drowsiness and dizziness.	
1-Jan-01	R66	Repeated exposure may cause skin dryness or cracking.	
1-Jan-01	R36	Irritating to eyes.	 Irritant
1-Jan-01	R11	Highly flammable.	 Highly

			Flammable
1-Apr-89		Vapor is irritating to throat and lungs.	
1-Apr-89		Liquid and vapor may be irritating to skin and eyes.	
1-Apr-89		Breathing high concentrations of vapor may cause anesthetic effects.	

Human Health Data
Environmental Data

Other References to Ethyl acetate

RIFM - FEMA Database

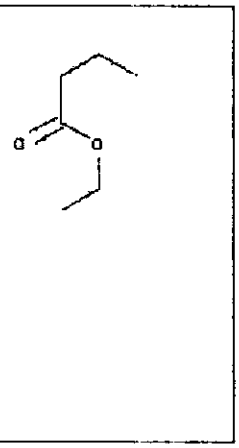
Ethyl butyrate

RIFM – FEMA Database

Comprehensive Computer Generated Synopsis

Skip To –

Synonyms	
Butanoic acid, ethyl ester	CAS
Butyric ether	
Ethyl *n*-butanoate	
Ethyl butyrate	Principal EINECS RIFM
Ethyl normal butanoate	



CAS Number	RIFM ID	FEMA	EINECS	Registration
105-54-4	281	2427	203-306-4	EINECS DSL TSCA

RIFM Monograph: 281 (Published 1974: FCT,v12,p719 (Binder, p353))

FEMA Interpretive Summary for Aliphatic Acyclic Esters

Formula $C_6H_{12}O_2$ Structure CH_3-CH_2-OCO-$[CH_2]_2$-CH_3 Molecular Weight 116.16

SMILES Notation O=C(OCC)CCC

Generic Class (TSCA) Aliphatic Esters

Description Colorless liquid with fruity, banana or pineapple-like odor.

Physical Data

Acid Value (XV.B)	1.0 Max.	FMA	5.0 g.
Boiling Point	120–C	FMA	
Flash Point	75–F;CC	FMA	
Log K_{ow} (calculated)	1.85	Syracuse Research Corp.	
Log K_{ow} (measured)	1.73	Abraham,1995a	
Purity (X.B.2.b.)	98.0 Min.	FMA	0.8 g.|Calc.as C6h12<
Refractive Index @ 20–C (I.B.)	1.391 – 1.394	FMA	
Specific Gravity 20–	0.872 –		

C (I.A.)	0.879	FMA
Specific Gravity 25–C (I.A.)	0.870 – 0.877	FMA
Vapor Pressure (calculated)	11 mm Hg 20C	FMA

Preparation	By the esterification of normal butyric acid with ethyl alcohol
Natural Occurrence	Ethyl butyrate is reported to occur in nature.
Use Levels	In public use since the 1900s.

Flavor Consumption (in kg)

1995	USA	217854
1995	EUROPE	165780
1987	USA	84800
1982	USA	137000
1976	USA	69400
1975	USA	61700
1970	USA	169000

Uses (in ppm)

Product	Average Usual	Average Maximum	Mean Daily Consumption (gms)	Updated
Alcoholic Beverage	16.05	23.97	32.5	21-Jul-88
Baked Goods	95.87	136.64	137.2	21-Jul-88
Chewing Gum	831.94	1393.34	0.2	21-Jul-88
Fats Oils	15.67	25.01	17.5	21-Jul-88
Frozen Dairy	39.68	66.63	25.6	21-Jul-88
Gelatin Pudding	56.37	82.15	20.4	21-Jul-88
Hard Candy	59.74	168.08	0.6	21-Jul-88
Meat Products	5.88	18.6	78.4	21-Jul-88
Non-alcoholic Beverage	25.23	37.88	104.0	21-Jul-88
Soft Candy	71.52	104.11	5.8	21-Jul-88

PADI 19.81

Food Products Containing Ethyl butyrate (in ppm)

Product	Code	Lower Limit	Upper Limit
Unknown	1-C	0.01	4
Orange juice (C. sinensis L. Osbeck)	5-I	0.08	1.7
Grapefruit juice (C. paradisi)	5-VII	10	
Butter	52-I	0.01	
Cognac	64-I	<0.8	
Armagnac	64-II	<0.864	
Weinbrand	64-III	<0.8	
Rum category II (total volatiles 1100-3600 ppm)	65-II	220	
Bourbon whisky	66-I	1	
Irish whisky	66-II	0.2	
Malt whisky	66-III	1.3	
Scotch blended whisky	66-IV	0.1	1.2
Canadian whisky	66-V	0.2	
Japanese whisky	66-VI	0.1	0.2
White wine	70-I	0.015	1.2
Red wine	70-II	0.08	1.8
Port wine	70-IV	0.2	2
Guava (Psidium guajava L.)	8-I	0.01	2.7
Passion fruit juice (purple)	89-I	0.5	35
Concord grape (Vitis labrusca L.)	9-I	0.1	

Status

Ethyl butyrate was included by the Council of Europe in the list of substances granted A - may be used in foodstuffs (COE No. 264) .
Ethyl butyrate was approved by the FDA as GRAS (21 CFR 182.60) .

Flavor and Extract Manufacturers' Association states: Generally Recognized as Safe as a flavor ingredient - GRAS 3. (2427)

Joint Expert Committee on Food Additives states: ADI 0-15 mg/kg [1967]. No safety concern at current levels of intake [1997]. (1967; 1997)

Other Actions

Indicative Non-Exhaustive List	of fragrance ingredients

FFIDS Volume I

Hazard Statements

1-Apr-89	Liquid and vapor may be irritating to skin and eyes.
1-Apr-89	Breathing high concentrations of vapor may cause anesthetic effects.

Human Health Data
Environmental Data

Other References to Ethyl butyrate

RIFM - FEMA Database

Isoamyl acetate

RIFM – FEMA Database

Comprehensive Computer Generated Synopsis

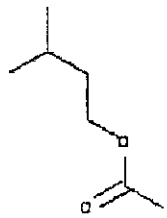
Skip To –

Synonyms

- Acetic acid 3-methylbutyl ester
- Amyl acetate, common
- 1-Butanol, 3-methyl-, acetate
- Isoamyl acetate
- Isoamyl ethanoate
- Isopentyl acetate
- Isopentyl ethanoate
- 3-Methyl-1-butanol acetate
- β-Methyl butyl acetate
- 3-Methylbutyl acetate

CAS

Principal RIFM



CAS Number	RIFM ID	FEMA	EINECS	Registration
123-92-2	454	2055	204-662-3	EINECS DSL TSCA

RIFM Monograph: 454 (Published 1975: FCT,v13,p551 (Binder, p447))

FEMA Interpretive Summary for Aliphatic Acyclic Esters

Formula $C_7H_{14}O_2$ Structure $CH_3-CH(CH_3)-[CH_2]_2-OCO-CH_3$

Molecular Weight 130.19

SMILES Notation O=C(OCCC(C)C)C

Generic Class (TSCA) Aliphatic Esters

Description Colorless liquid with fruity pear- or banana-like odor

Physical Data

Acid Value	.22	EOA,1974 Sample 74-215
Boiling Point	142-C	FMA
Ester Value after Acetylation	98.39%	EOA,1974 Sample 74-215
Flash Point	77-F;CC	FMA
Log K_{ow} (calculated)	2.26	Syracuse Research Corp.
Refractive Index @ 20-C	1.4008	EOA,1974 Sample 74-215
Solubility in Alcohol	3.0am/60	EOA,1974 Sample 74-215
Specific Gravity	0.873	FMA
Specific Gravity 25-C	.8728	EOA,1974 Sample 74-215
Vapor Pressure (calculated)	4.0 mm Hg 20C	FMA

Preparation	By the esterification of commercial isoamyl alcohol with acetic acid
Natural Occurrence	**Isoamyl acetate** is reported to occur in nature.
Use Levels	In public use since the 1900s.

Flavor Consumption (in kg)

1995	USA	200449
1995	EUROPE	159887
1987	USA	53100
1982	USA	73900
1976	USA	72100
1975	USA	58100

Uses (in ppm)

Product	Average Usual	Average Maximum	Mean Daily Consumption (gms)	Updated
Alcoholic Beverage	19.33	38.83	32.5	21-Jul-88
Baked Goods	103.8	167.0	137.2	21-Jul-88
Chewing Gum	860.28	3027.03	0.2	21-Jul-88
Confection Frosting	100.0	100.0	0.3	21-Jul-88

Frozen Dairy	49.17	86.67	25.6	21-Jul-88
Gelatin Pudding	74.2	109.78	20.4	21-Jul-88
Hard Candy	44.45	234.9	0.6	21-Jul-88
Non-alcoholic Beverage	50.89	72.98	104.0	21-Jul-88
Soft Candy	111.79	167.74	5.8	21-Jul-88
Sweet Sauce	100.0	150.0	6.8	21-Jul-88

PADI 24.49

Food Products Containing Isoamyl acetate (in ppm)

Product	Code	Lower Limit	Upper Limit
Unknown	1-C	0.2	6.3
Butter	52-I	<1	
Cognac	64-I	0.8	6
Armagnac	64-II	0.8	
Weinbrand	64-III	<0.8	
Rum Category I (total volatiles > 3600 ppm)	65-I	11	
Rum category II (total volatiles 1100-3600 ppm)	65-II	TRACE	
Rum category III (total volatiles 240-1100 ppm)	65-III	TRACE	
Bourbon whisky	66-I	1.1	5.1
Irish whisky	66-II	0.8	5
Malt whisky	66-III	0.8	30
Scotch blended whisky	66-IV	1.6	8
Canadian whisky	66-V	0.3	0.8
Japanese whisky	66-VI	1.1	
White wine	70-I	0	
Red wine	70-II	0	
Black tea	73-I	1.3	
Guava (Psidium guajava L.)	8-I	0.0002	0.14
Muscat grape	9-II	0.6	1.1

Status

Isoamyl acetate was listed by the ACGIH as TWA 100ppm, 532mg/m3.

Isoamyl acetate has a CTFA Cosmetic Ingredient Review guideline: Based on the information in this report, it is concluded that amyl acetate and isoamyl acetate are safe as presently used in cosmetic products. (7.705) .
Isoamyl acetate was included by the Council of Europe in the list of substances granted A – may be used in foodstuffs (COE No. 214) .
Isoamyl acetate was approved by the FDA as a flavor (21 CFR 172.515) .
Isoamyl acetate was listed by the Occupational Safety and Health Administration as PEL – TWA 100ppm, 525mg/m3 .

Flavor and Extract Manufacturers' Association states: Generally Recognized as Safe as a flavor ingredient – GRAS 3. (2055)

Joint Expert Committee on Food Additives states: Group ADI 0–3.7 mg/kg (as isoamyl alcohol) [1980]. No safety concern at current levels of intake [1997]. (1980; 1997)

Other Actions

Indicative Non-Exhaustive List	of fragrance ingredients

FFIDS Volume II

Hazard Statements

1-Jan-01	S25	Avoid contact with eyes.
1-Jan-01	S23	Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
1-Jan-01	R66	Repeated exposure may cause skin dryness or cracking.
1-Jan-01	R10	Flammable.
1-Apr-89		Vapor is irritating to throat and lungs. May irritate eyes.
1-Apr-89		Breathing high concentrations of vapor may cause anesthetic effects.

National Toxicology Program

1	Last Update 16-Feb-99	Selected for Testing
Unclassified unreported	Nominated for testing by NIEHS – Recommended for tox., neurotox & carcinogen tests-Fed Reg 9/11/97	Project leader assigned (study in design) – NTP report 7/98 Study withdrawn (no reason given) – phone call to NTP on 12/15/98

Human Health Data

Skip To –

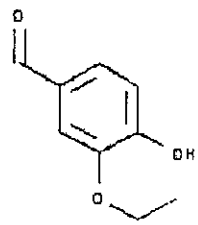
- Physical Data
- Flavor Consumption
- Food Uses
- Status
- Hazards
- Human Health Data
- Environmental Data
- Other References

Ethyl vanillin

RIFM – FEMA Database

Comprehensive Computer Generated Synopsis

Synonyms	
Benzaldehyde, 3-ethoxy-4-hydroxy-	CAS
Bourbonal	
3-Ethoxy-4-hydroxybenzaldehyde	EINECS
3-Ethoxyprotocatechualdehyde	
Ethyl protal	
Ethylprotocatechualdehyde-3-ethyl ether	
Ethyl vanillin	Principal RIFM



CAS Number	RIFM ID	FEMA	EINECS	Registration
121-32-4	161	2464	204-464-7	EINECS DSL TSCA

RIFM Monograph: 161 (Published 1975: FCT,v13,p103 (Binder, p370))

Formula $C_9H_{10}O_3$ Molecular Weight 166.18

SMILES Notation O=Cc(ccc(O)c1OCC)c1

Generic Class (TSCA) Aromatic Aldehydes

Description Colorless flakes with an intense vanilla odor and with a finer and more intense taste than vanillin

Physical Data

Boiling Point	285-C	FMA
Flash Point	>200-F;CC	FMA
Log K_{ow} (calculated)	1.55	Syracuse Research Corp.
Log K_{ow} (measured) (OECD)	1.61	Dai,2001
Log K_{ow} (measured) (OECD 105)	1.61	Jin,1998
Melting Point	77-C	FMA

Melting Point	77 °C	FMA
Vapor Pressure	<0.001 mm Hg 20C	FMA
Water Solubility (OECD 105)	log = -1.77	Jin,1998

Preparation	By ethylation of protocatechualdehyde (Bedoukian,1967)
Natural Occurrence	Ethyl vanillin has apparently not been reported to occur in nature.
Use Levels	In public use since the 1930s.

Flavor Consumption (in kg)

1995	USA	325328
1995	EUROPE	43652
1987	USA	712000
1982	USA	112000
1975	USA	98900
1970	USA	118000

Uses (in ppm)

Product	Average Usual	Average Maximum	Mean Daily Consumption (gms)	Updated
Alcoholic Beverage	5.04	10.04	32.5	21-Jul-88
Baked Goods	42.08	92.97	137.2	21-Jul-88
Breakfast Cereals	270.0	330.0	20.0	21-Jul-88
Chewing Gum	37.46	37.46	0.2	21-Jul-88
Condiment Relish	13.0	13.0	8.8	21-Jul-88
Confection Frosting	95.94	270.48	0.3	21-Jul-88
Fats Oils	0.06	0.15	17.5	21-Jul-88
Frozen Dairy	12.27	26.61	25.6	21-Jul-88
Gelatin Pudding	18.08	39.93	20.4	21-Jul-88
Hard Candy	15.85	30.26	0.6	21-Jul-88
Meat Products	3.9	3.9	78.4	21-Jul-88

Milk Products	1398.1	1403.08	39.5	21-Jul-88
Non-alcoholic Beverage	17.43	29.72	104.0	21-Jul-88
Soft Candy	56.5	89.64	5.8	21-Jul-88
Sweet Sauce	102.08	172.5	6.8	21-Jul-88

PADI 70.54

Status

Ethyl vanillin was included by the Council of Europe in the list of substances granted A – may be used in foodstuffs (COE No. 108) .
Ethyl vanillin was approved by the FDA as GRAS (21 CFR 182.60) .

Flavor and Extract Manufacturers' Association states: Generally Recognized as Safe as a flavor ingredient – GRAS 3. (2464)

Other Actions

Environmental Protection Agency	Added to TSCA PAIR list
Indicative Non-Exhaustive List	of fragrance ingredients
Joint Expert Committee on Food Additives	ADI 0-3 mg/kg. (1995)

FFIDS Volume II

Hazard Statements

20-Nov-01	NL	Based on available data, an IFRA/IOFI/EFFA classification and labeling was not considered necessary. Labeling Manual, March 2001
1-Apr-89		Liquid may be irritating to skin and eyes.

Human Health Data
Environmental Data

Other References to Ethyl vanillin

RIFM – FEMA Database

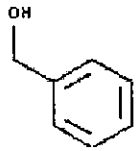
Benzyl alcohol

RIFM – FEMA Database

Comprehensive Computer Generated Synopsis

Skip To –

Synonyms	
Benzenemethanol	CAS
Benzyl alcohol	Principal EINECS RIFM INCI
Benzylic alcohol	
α-Hydroxytoluene	
Phenylcarbinol	
Phenyl carbinol	
Phenylmethanol	
Phenylmethyl alcohol	
α-Toluenol	



CAS Number	RIFM ID	FEMA	EINECS	Registration
100-51-6	107	2137	202-859-9	EINECS DSL TSCA

RIFM Monograph: 107 (Published 1973: FCT,v11,p1011 (Binder, 127))

Formula C_7H_8O **Structure** $C_6H_5-CH_2OH$ **Molecular Weight** 108.14

SMILES Notation OCc(cccc1)c1

Generic Class (TSCA) Alcohols

Description A clear, colorless to very pale yellow liquid having a slight aromatic odor.

Physical Data

Aldehydes (XX.C.1)	0.2% Max.	FMA	10.0 g.|Calc. as C7H8
Boiling Point	205–C	FMA	
Flash Point	>212–F;CC	FMA	
Halogenated Compounds (XXVIII.B)	Negative	FMA	
Log K... (calculated)	1.08	Syracuse Research	

[illegible]	[illegible]	Corp.
Log K_{ow} (measured)	1.1	ProcterGamble,1996
Log K_{ow} (measured)	1.10	Abraham,1995a
Refractive Index @ 20−C (I.B)	1.539 to 1.541	FMA
Specific Gravity 20 −C (I.A)	1.044 − 1.049	FMA
Specific Gravity 25 −C (I.A)	1.042 − 1.047	FMA
Vapor Pressure (calculated)	0.07 mm Hg 20C	FMA

Preparation	By the action of alkalis on benzyl chloride (Bedoukian,1967)
Natural Occurrence	Benzyl alcohol is reported to occur in nature.
Use Levels	In public use since the 1900s.

Flavor Consumption (in kg)

1995	USA	130805
1995	EUROPE	113938
1987	USA	64400
1982	USA	71200
1976	USA	0
1975	USA	47200
1970	USA	41200

Uses (in ppm)

Product	Average Usual	Average Maximum	Mean Daily Consumption (gms)	Updated
Alcoholic Beverage	28.58	95.24	32.5	21-Jul-88
Baked Goods	236.18	401.86	137.2	21-Jul-88
Chewing Gum	176.11	1254.61	0.2	21-Jul-88
Frozen Dairy	103.11	244.67	25.6	21-Jul-88
Gelatin Pudding	52.51	175.72	20.4	21-Jul-88
Gravies	12.0	24.0	8.3	21-Jul-88
Hard Candy	283.86	357.64	0.6	21-Jul-88

Meat Products	30.0	140.0	78.4	21-Jul-88
Non-alcoholic Beverage	15.13	47.93	104.0	21-Jul-88
Soft Candy	105.15	171.29	5.8	21-Jul-88

PADI 41.88

Food Products Containing Benzyl alcohol (in ppm)

Product	Code	Lower Limit	Upper Limit
Unknown	1-C	0.002	5.8
Raspberry (Rubus idaeus L.)	15-I	<0.005	
Asparagus (cooked)	17-II	0.4	
Cabbage (raw)	18-I	0.01	0.2
Grapefruit juice (C. paradisi)	5-VII	0.006	
Bilberry (Vaccinium myrtillus L.)	6-I	0.01	0.08
American cranberry (V. macrocarpon Ait.)	6-II	0.3	0.8
Cognac	64-I	0.02	0.8
Armagnac	64-II	<0.8	
Weinbrand	64-III	0.02	0.8
White wine	70-I	0.008	0.39
Red wine	70-II	0.06	0.8
Port wine	70-IV	0.2	2
Black tea	73-I	1	15
Green tea	73-II	0.4	30
Concord grape (Vitis labrusca L.)	9-I	0.01	
Muscat grape	9-II	0.8	3
Mushroom (raw)	93-I	0.02	3.7

Status

Benzyl alcohol has a CTFA Cosmetic Ingredient Review guideline: Based on the available data, the CIR Expert Panel concludes that benzyl alcohol is safe for use in cosmetic formulations at concentrations up to 5%. The available data are insufficient to support the safety of these ingredients in cosmetic products in which a primary route of exposure is inhalation. Benzyl alcohol is safe for use in hair dyes at concentrations up to 10%. (20.23) .
Benzyl alcohol was included by the Council of Europe in the list of substances granted A – may be used in foodstuffs (COE No. 58) .
Benzyl alcohol was approved by the FDA as a flavor (21 CFR 172.515) .

Flavor and Extract Manufacturers' Association states: Generally

Recognized as Safe as a flavor ingredient - GRAS 3. (2137)

Other Actions

Indicative Non-Exhaustive List	of fragrance ingredients
Joint Expert Committee on Food Additives	Group ADI 0-5 mg/kg. (1997)

FFIDS Volume I

Hazard Statements

1-Jan-01	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.	
1-Jan-01	R20/22	Harmful by inhalation and if swallowed.	Harmful
8-Jul-92		Repeated skin contact may cause allergic dermatitis.	
11-Jun-92		Repeated administration by stomach tube to laboratory animals caused neurological damage. Similar effects have not been reported in humans.	
1-Apr-89		Vapor is irritating to throat and lungs.	
1-Apr-89		Liquid may be irritating to skin and eyes.	
1-Apr-89		Breathing high concentrations of vapor may cause anesthetic effects.	

National Toxicology Program

1	NTP	Last Update 16-Feb-99	Report Published
	Carcinogenicity gavage rat		Report published - No evidence of carcinogenicity in male & female rats or in male & female mice.
2	NTP	Last Update 16-Feb-99	Report Published
	Carcinogenicity gavage mouse		Report published - No evidence of carcinogenicity in male & female rats or in male & female mice.

Human Health Data
Environmental Data

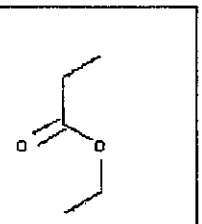
Skip To -

Ethyl propionate

RIFM - FEMA Database

Comprehensive Computer Generated Synopsis

Synonyms		
Ethyl propanoate		
Ethyl propionate	Principal EINECS RIFM	
Propanoic acid, ethyl ester	CAS	



CAS Number	RIFM ID	FEMA	EINECS	Registration
105-37-3	796	2456	203-291-4	EINECS DSL TSCA

RIFM Monograph: 796 (Published 1978: FCT,v16,p749, Special Issue IV)

FEMA Interpretive Summary for Aliphatic Acyclic Esters

Formula $C_5H_{10}O_2$ **Structure** $CH_3-CH_2-OCO-CH_2-CH_3$ **Molecular Weight** 102.13

SMILES Notation O=C(OCC)CC

Generic Class (TSCA) Aliphatic Esters

Description Colorless liquid with fruity, rum-like or pineapple-like odor

Physical Data

Acid Value	Free	EOA,1976 Sample 76-116
Boiling Point	99-C	FMA
Flash Point	39-F;CC	FMA
Log K_{ow} (calculated)	1.36	Syracuse Research Corp.
Log K_{ow} (measured)	1.21	Abraham,1995a
Purity	98.0%	EOA,1976 Sample 76-116
Refractive Index	1.3825	EOA,1976 Sample 76-116
Specific Gravity	.8862	EOA,1976 Sample 76-116
Specific Gravity	0.888	FMA

Vapor Pressure (calculated)	28 mm Hg 20C	FMA

Preparation	By direct esterification of ethanol with propionic acid under azeotropic conditions (Arctander,1969)
Natural Occurrence	Ethyl propionate is reported to occur in nature.
Use Levels	In public use since the 1930s.

Flavor Consumption (in kg)

1995	USA	50873
1995	EUROPE	27047
1987	USA	31500
1982	USA	34900
1975	USA	22100
1970	USA	13500

Uses (in ppm)

Product	Average Usual	Average Maximum	Mean Daily Consumption (gms)	Updated
Alcoholic Beverage	5.0	83.47	32.5	21-Jul-88
Baked Goods	60.1	84.72	137.2	21-Jul-88
Chewing Gum	345.76	678.77	0.2	21-Jul-88
Fats Oils	0.04	0.1	17.5	21-Jul-88
Frozen Dairy	14.16	49.47	25.6	21-Jul-88
Gelatin Pudding	10.32	33.66	20.4	21-Jul-88
Gravies	2.0	4.0	8.3	21-Jul-88
Hard Candy	77.04	77.04	0.6	21-Jul-88
Meat Products	1.5	1.5	78.4	17-Oct-88
Non-alcoholic Beverage	7.52	19.92	104.0	21-Jul-88
Soft Candy	27.28	53.52	5.8	21-Jul-88

PADI 10.17

Status

Ethyl propionate was included by the Council of Europe in the list of substances granted A – may be used in foodstuffs (COE No. 402) . Ethyl propionate was approved by the FDA as a flavor (21 CFR 172.515) .

Flavor and Extract Manufacturers' Association states: Generally