

Properties of fatty acids

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Saturated

Common name	Systematic name	Molecular formula	Molar mass. g/mol	Melting point. °C
Butyric acid	Butanoic acid	C ₄ H ₈ O ₂	88.11	-7.9
Valeric acid	Pentanoic acid	C ₅ H ₁₀ O ₂	102.13	-34.5
Isovaleric acid	3-Methylbutanoic acid	C ₅ H ₁₀ O ₂	102.13	-29.3
Caproic acid	Hexanoic acid	C ₆ H ₁₂ O ₂	116.16	-3.4
Enanthic acid	Heptanoic acid	C ₇ H ₁₄ O ₂	130.18	-7.5
Caprylic acid	Octanoic acid	C ₈ H ₁₆ O ₂	144.21	16.7
Pelargonic acid	Nonanoic acid	C ₉ H ₁₈ O ₂	158.24	12.3
Capric acid	Decanoic acid	C ₁₀ H ₂₀ O ₂	172.27	31.9
Lauric acid	Dodecanoic acid	C ₁₂ H ₂₄ O ₂	200.32	43.2
Tridecylic acid	Tridecanoic acid	C ₁₃ H ₂₆ O ₂	214.35	41.5
Myristic acid	Tetradecanoic acid	C ₁₄ H ₂₈ O ₂	228.38	53.9
Pentadecylic acid	Pentadecanoic acid	C ₁₅ H ₃₀ O ₂	242.40	52.3
Palmitic acid	Hexadecanoic acid	C ₁₆ H ₃₂ O ₂	256.43	63.1
Margaric acid	Heptadecanoic acid	C ₁₇ H ₃₄ O ₂	270.46	61.3
Stearic acid	Octadecanoic acid	C ₁₈ H ₃₆ O ₂	284.48	69.6
Arachidic acid	Eicosanoic acid	C ₂₀ H ₄₀ O ₂	312.54	76.5
Phytanic acid	3,7,11,15-Tetramethylhexadecanoic acid	C ₂₀ H ₄₀ O ₂	312.54	-65.0
Behenic acid	Docosanoic acid	C ₂₂ H ₄₄ O ₂	340.59	81.5
Lignoceric acid	Tetracosanoic acid	C ₂₄ H ₄₈ O ₂	368.64	87.5
Cerotic acid	Hexacosanoic acid	C ₂₆ H ₅₂ O ₂	396.70	88.5
Montanic acid	Octacosanoic acid	C ₂₈ H ₅₆ O ₂	424.75	90.9

Monounsaturated

Common name	Systematic name	Molecular formula	Molar mass. g/mol	Melting point. °C
Caproleic acid	9-Decenoic acid	C ₁₀ H ₁₈ O ₂	170.25	26.5
Myristoleic acid	9- <i>cis</i> -Tetradecenoic acid	C ₁₄ H ₂₆ O ₂	226.36	?
Palmitoleic acid	<i>cis</i> -9-Hexadecenoic acid	C ₁₆ H ₃₀ O ₂	254.41	-0.1
Oleic acid	<i>cis</i> -9-Octadecenoic acid	C ₁₈ H ₃₄ O ₂	282.47	13.4
Elaidic acid	<i>trans</i> -9-Octadecenoic acid	C ₁₈ H ₃₄ O ₂	282.47	45.0
Vaccenic acid	<i>trans</i> -11-Octadecenoic acid	C ₁₈ H ₃₄ O ₂	282.47	44.0
Erucic acid	<i>cis</i> -13-Docosenoic acid	C ₂₂ H ₄₂ O ₂	338.57	34.7
Brassicic acid	<i>trans</i> -13-Docosenoic acid	C ₂₂ H ₄₂ O ₂	338.57	61.9
Nervonic acid	<i>cis</i> -15-Tetracosenoic acid	C ₂₄ H ₄₆ O ₂	366.63	43.0

Diunsaturated

Common name	Systematic name	Molecular formula	Molar mass. g/mol	Melting point. °C
Linoleic acid	<i>cis,cis</i> -9,12-Octadecadienoic acid	C ₁₈ H ₃₂ O ₂	280.45	-120

Triunsaturated

Common name	Systematic name	Molecular formula	Molar mass. g/mol	Melting point. °C
<i>cis</i> -Eleostearic acid	<i>trans,cis,trans</i> -9,11,13-Octadecatrienoic acid	C ₁₈ H ₃₀ O ₂	278.44	49.0
<i>trans</i> -Eleostearic acid	<i>trans,trans,trans</i> -9,11,13- Octadecatrienoic acid	C ₁₈ H ₃₀ O ₂	278.44	71.5
Linolenic acid	<i>cis,cis,cis</i> -9,12,15-Octadecatrienoic acid	C ₁₈ H ₃₀ O ₂	278.44	-11.0

Tetraunsaturated

Common name	Systematic name	Molecular formula	Molar mass. g/mol	Melting point. °C
Arachidonic acid	<i>all-cis</i> -5,8,11,14-Eicosatetraenoic acid	C ₂₀ H ₃₂ O ₂	304.47	-49.5