letter to the editor

To the Editor:

I have been working with fatty acids for many years now and am constantly amazed at the inconsistencies in nomenclature, particularly when changing between agricultural, biochemical, bontanical, and chemical journals.

I have compiled the attached list of common names of fatty acids, with abbreviated formulae, that you may consider would be of use to your readers. Carboxylic acids with the following structural units have been included: alkene, alkyne, keto, epoxy, hydroxy, branched chain, or cyclic. For the sake of reference, the systematic names for the n-carboxylic acids having 1 to 35 carbon atoms are also included, but all other systematic names have been omitted. I believe the list is complete within this framework and would be pleased to hear of any fatty acids that I may have left out.

The list is part of a large data base of ECL values (350 fatty acids, 28 phases, though not all acids have data for all phases) that has been stored on computer, and this explains the system of abbreviations used.

I hope that you may find space in your Journal for this table and save some of your readers from the frustrations that I have suffered.

Yours sincerely,
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EXPLANATION OF ABBREVIATED FORMULAE

Formulae are shown as the number of carbon atoms followed by the number of double bonds, i.e., C18.3 is an eighteen carbon fatty acid with three double bonds. The positions and types of substituents are shown by a number and a letter, the number indicating the carbon atom to which the substituent is attached (numbering starts with carboxyl carbon = 1). Each substituent is labeled individually and in numerical order, di, tri, etc., are not used. The following letters are used: C, *cis* double bond; E, alkene (stereochemistry unspecified); H, hydroxy; K, keto; M, methyl; T, *trans* double bond; Y, alkyne. Dicarboxylic acids are shown e.g., 1,6DIOIC. Bridging atoms forming 3-membered rings are: epoxy, e.g., 9-10E; methylene, e.g., 8-9M. Fatty acids containing cyclopentenyl rings are shown as CPENT.

COMMON NAMES AND ABBREVIATED FORMULAE FOR FATTY ACIDS

COMMON NAME	FATTY ACID STRUCTURE
Acetic	C2.0
Acrylic	C3.1 2E
Adipic	C6.0 1,6DIOIC
Aleuritic	C16.0 9H10H16H
Ambrettolic	C16.0 7E16H
Anteisoheptadecanoic	C16.0 14M
Anteisononadecanoic	C18.0 16M
Anteisopentadecanoic	C14.0 12M
Anteisotridecanoic	C12.0 10M
Arachidic	C20.0
Arachidonic	C20.4 5E8E11E14E
α-Artemisic	C18.2 9T11T13H
Azelaic	C9.0 1,9DIOIC
Behenic	C22.0
Bolekic	C18.1 9Y11Y13Y17E
Brassidic	C22.1 13T
Brassylic	C13.0 1,13DIOIC
Buiolic	C16.0 11H
Butyric	C4.0
α-Calendic	C18.3 8T10T12C
Capric	C10.0
Caproic	C6.0
Caproleic	C10.1 9E
Caprylic	C8.0
Carboceric	C27.0
Catalpic	C18.3 9T11T13C
Cerebronic	C24.0 2H
Ceromelissic	C33.0
Ceroplastic	C35.0
Cerotic	C26.0
Cetoleic	C22.1 11E
Chaulmoogric	C13.0 13-(2-CPENT)
Clupanodonic	C22.5 4E8E12E15E19E
Convolvulinolic	C15.0 11H
Coriolic	C18.2 9C11T13H
Coronaric	C18.1 9-10E12C
Couepinic	C18.3 4K9E11E13E
Crepenynic	C18.1 9C12Y
Daturic	C17.0
Decanoic	C10.0
Densipolic	C18.2 9C12H15C
Dihydroxystearic	C18.0 9H10H
α-Dimorphecolic	C18.2 9H10T12C
β-Dimorphelcolic	C18.2 9H10T12T
Docosanoic	C22.0

COMMON NAME	FATTY ACID STRUCTURE
Dodecanoic	C12.0
Dotriacontanoic	C32.0
Eicosanoic	C20.0
Elaidic	C18.1 9T
Elaidolinolenic	C18.3 9T12T15T
α-Eleostearic	C18.3 9C11T13T
β-Eleostearic	C18.3 9T11T13T
Enanthic	C7.0
Erucic	C22.1 13C
Exocarpic	C18.1 9Y11Y13T
Formic	C1.0
Gadoleic	C20.1 9C
Gaidic	C16.1 2E
Homo-γ-linolenic	C20.3 8E11E14E
Geddic	C34.0
Gheddic	C34.0
Glutaric	C5.0 1,5DIOIC
Gondoic	C20.1 11C
Gorlic	C13.1 6E13-(2-CPENT)
Helenynolic	C18.1 9H10T12Y
Heneicosanoic	C21.0
Henicosanoic	C21.0
Hentriacontanoic	C31.0
Heptacosanoic	C27.0
Heptadecanoic	C17.0
Heptanoic	C7.0
Hexacosanoic	C26.0
Hexadecanoic	C16.0
Hexanoic	C6.0
Hiragonic	C16.3 6E 10E 14E
Hydnocarpic	C11.0 11-(2-CPENT)
Hydrosorbic	C6.1 3E
Hydroxycerotic	C26.0 2H
Hydroxynervonic	C24.1 2H9C
Icosanoic	C20.0
Ipurolic	C14.0 3H11H
Isanic	C18.2 9Y11T17E
Isanolic	C18.1 8H9Y11Y17E
Isoarachidic	C19.0 18M
Isobutyric	C3.0 2M
Isocaproic	C5.0 2M
Isoheptadecanoic	C16.0 15M
Isolauric	C11.0 10M
Isomycomycin	C13.0 3E5E7Y9Y11Y
Isomyristic	C13.0 12M
Isononadecanoic	C18.0 17M
Isopalmitic	C15.0 14M
Isopentadecanoic	C14.0 13M
Isostearic	C17.0 16M
Isotridecanoic	C12.0 11M
Isovaleric	C4.0 2M
Jacaric	C18.3 8C10T12C
Jalapinolic	C16.0 11H
Juniperic	C16.0 16H
α-Kamlolenic	C18.3 9C11T13T18H
Lacceroic	C32.0
Lactarinic	C18.0 6K
Lauric	C12.0
Lauroleic	C12.1 5E
Lesquerolic	C20.1 11E14H
Licanic	C18.3 4K9E11E13E
Lignoceric	C24.0
Linderic	C12.1 4E
Linoleic	C18.2 9C12C
Linolelaidic	C18.2 9T12T
Linolenic	C18.3 9C12C15C
γ-Linolenic	C18.3 6C9C12C
Lumequeic	C30.1 21E
Malonic	C3.0 1,3DIOIC
Margaric	C17.0
Melissic	C30.0
Montanic	C28.0
Moroctic	C18.4 4E8E12E15E
Morotic	C18.4 4E8E12E15E
Mycoceranic	C28.0 2M4M6M
Mycocerosic	C28.0 2M4M6M
Mycolic	C60-C90 Hydroxy
Mycomycin	C13.0 3E5E7E8E10Y12Y
Myristelaidic	C14.1 9T
Myristic	C14.0
Myristoleic	C14.1 9C
Nervonic	C24.1 15C
Nisinic	C24.6 3E8E12E15E18E21E
Nonacosanoic	C29.0
Nonadecanoic	C19.0
Nonanoic	C9.0
Obtusilic	C10.1 4E
Octacosanoic	C28.0
Octadecanoic	C18.0
Octanoic	C8.0
Oleic	C18.1 9C
Oxalic	C2.0 1,2DIOIC
Palmitelaidic	C16.1 9T
Palmitic	C16.0
Palmitoleic	C16.1 9C
α-Parinaric	C18.4 9C11T13T15C
Pelargonic	C9.0
Pentacosanoic	C25.0
Pentadecanoic	C15.0
Pentanoic	C5.0
Pentatriacontanoic	C35.0
Petroselaidic	C18.1 6T

COMMON NAME	FATTY ACID STRUCTURE
Petroselinic	C18.1 6C
Phellonic	C22.0 22H
Phellonic	C22.0 2H
Phloionolic	C18.0 9H10H18H
Phthioic	C23.0 3M13M19M
Physeteric	C14.1 5E
Phytanic	C16.0 3M7M11M15M
Phytenic	C16.1 2E3M7M11M15M
Pimelic	C7.0 1,7DIOIC
Pinolenic	C18.3 5C9C12C
Pristanic	C15.0 2M6M10M14M
Propionic	C3.0
Pseudoeleostearic	C18.3 10T12T14T
Psyllic	C33.0
Punicic	C18.3 9C11T13C
Pyrulic	C17.1 8Y10T
Ricinelaidic	C18.1 9T12H
Ricinoleic	C18.1 9C12H
Rosilic	C18.0 10H
Sabinic	C12.0 12H
Sativic	C18.0 9H10H12H13H
Scoliodonic	C24.5 ?
Sebacic	C10.0 1,10DIOIC
Selacholeic	C24.1 15C
Shibic	C26.5 ?
Sorbic	C6.2 2E4E
Stearic	C18.0
Stearidonic	C22.4 8E12E16E19E
Stearidonic?	C18.4 4E8E12E15E
Stearolic	C18.0 9Y
Sterculic	C18.1 9E9-10M
Stillingic	C10.2 2E4E
Suberic	C8.0 1,8DIOIC
Succinic	C4.0 1,4DIOIC
Tariric	C18.0 6Y
Tetracosanoic	C24.0
Tetradecanoic	C14.0
Tetratriacontanoic	C34.0
Thynnic	C26.6?
Timnodonic	C20.5 4E8E12E15E18E
Triacontanoic	C30.0
Trichosanic	C18.3 9C11T13C
Tricosanoic	C23.0
Tridecanoic	C13.0
Tritriacontanoic	C33.0
Tsuzuic	C14.1 4E
Tuberculostearic	C18.0 10M
Undecanoic	C11.0
Ustilic Acid A	C16.0 15H16H
Ustilic Acid B	C16.0 2H15H16H
cis-Vaccenic	C18.1 11C
trans-Vaccenic	C18.1 11T
Valeric	C5.0
Vernolic	C18.1 9C12-13E
Ximenic	C26.1
Ximenynic	C18.1 9Y11T
Zoomaric	C16.1 9C