

Carboxylic Acid Derivatives

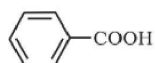
Set – 1

Table 12.3 Names and Structures of Some Carboxylic Acids

Structure	Common name	IUPAC name
HCOOH	Formic acid	Methanoic acid
CH ₃ COOH	Acetic acid	Ethanoic acid
CH ₃ CH ₂ COOH	Propionic acid	Propanoic acid
CH ₃ CH ₂ CH ₂ COOH	Butyric acid	Butanoic acid
(CH ₃) ₂ CHCOOH	Isobutyric acid	2-Methylpropanoic acid
HOOC-COOH	Oxalic acid	Ethanedioic acid
HOOC-CH ₂ -COOH	Malonic acid	Propanedioic acid
HOOC-(CH ₂) ₂ -COOH	Succinic acid	Butanedioic acid
HOOC-(CH ₂) ₃ -COOH	Glutaric acid	Pentanedioic acid
HOOC-(CH ₂) ₄ -COOH	Adipic acid	Hexanedioic acid
HOOC-CH ₂ -CH(COOH)-CH ₂ -COOH	Tricarballic acid or carballic acid	Propane-1, 2, 3-tricarboxylic acid

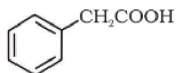
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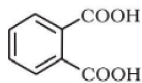
Benzoic acid

Benzenecarboxylic acid
(Benzoic acid)



Phenylacetic acid

2-Phenylethanoic acid



Phthalic acid

Benzene-1, 2-dicarboxylic acid

Q1. Which of the following is the correct IUPAC name for Oxalic Acid?

- A. Ethanedioic acid
- B. Butanedioic acid

- C. Propanedioic acid
- D. Hexanedioic acid

Ans. (A)

Q2. Which of the following is the correct IUPAC name for Malonic Acid?

- A. Ethanedioic acid
- B. Butanedioic acid
- C. Propanedioic acid
- D. Hexanedioic acid

Ans. (C)

Q3. Which of the following is the correct IUPAC name for Succinic Acid?

- A. Ethanedioic acid
- B. Butanedioic acid
- C. Propanedioic acid
- D. Hexanedioic acid

Ans. (B)

Q4. Which of the following is the correct IUPAC name for Glutaric Acid?

- A. Ethanedioic acid
- B. Butanedioic acid
- C. Propanedioic acid
- D. Pentanedioic acid

Ans. (D)

Q5. Which of the following is the correct IUPAC name for Adipic Acid?

- A. Ethanedioic acid
- B. Butanedioic acid
- C. Propanedioic acid
- D. Hexanedioic acid

Ans. (D)

Q6. Which of the following is the correct IUPAC name for the given compound?

- A. 3-carboxy pentanedioic acid
- B. Propanetrioic acid
- C. Propane-1,2,3-tricarboxylic acid
- D. Tricarballic acid

Ans. (C)

Q7. Which of the following is the correct IUPAC name for Phthalic Acid?

- A. Benzene-1,2-dicarboxylic acid
- B. Benzene-1,3-dicarboxylic acid
- C. Benzene-1,4-dicarboxylic acid
- D. Benzene-1,2,3,4,5,6-hexacarboxylic acid

Ans. (A)

Q8. Which of the following is the correct IUPAC name for Isobutyric Acid?

- A. 2-methyl pentanoic acid
- B. 2-methyl butanoic acid
- C. 2-methyl propanoic acid
- D. 3-methyl butanoic acid

Ans. (C)

Q9. Which of the following is the correct IUPAC name for the given compound?

- A. 2-phenylethanoic acid
- B. 1-ethylbenzoic acid
- C. 1-carboxybenzene
- D. None of these

Ans. (A)