Series of exercises N°2 Nomenclature of Organic Compounds

Exercise N°1:

A. Alkanes:

1. Give the name of the following compounds according to the I.U.P.A.C. system:

2. Represent the semi-developed formulas with the following names:

- ✓ 5-isobutyl-6-tert-butyldodecane.
- ✓ 3-Ethyl-4,4-dimethylheptane
- ✓ 8-Ethyl-4-isopropyl-5 (1'-methylpropyl) dodecane.
- ✓ 4-Isopropyl-6-méthyl-3-(1-méthylpropyl) octane.

B. Alkenes, alkynes and polyenes

1. Name the following compounds:

2. Establish the semi-developed formula of the compounds bearing the following names:

- ✓ Hept-5-ene-1-yne
- ✓ Hexa-1,3-diene-5-yne
- ✓ Penta-1,4-diyne

Exercise N°2:

A. The cycles:

Establish the names of the following compounds according to the I.U.P.A.C. system:

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B. Aromatic compounds:

C. Amines, alcohols, aldehydes and ketones:

OH OH CHO
$$OHC$$
 OHC OHC

D. Acides, esters and amides:

HOOC
$$COOH$$
 $COOH$
 OOH
 OOH

Exercise N°3:

Establish the structural formula of the compounds bearing the following names:

- ✓ 1, 2-Diclorocyclopentane
- ✓ 1-Bromo-3-chlorocyclobutane
- ✓ m-Dibromobenzene
- ✓ 1-Methylpropyl Ethanoate
- ✓ 4-Chloro-3-oxobutanoate ethyl
- ✓ 2-Methyl-3-aminohexanal
- ✓ 4-Chlorobut-3-enal
- ✓ 2-Hydroxy-2-methyl-4-oxobutanoic acid
- ✓ 2-Aminobutanoic acid
- ✓ 2-(N-ethylamino)-propanoic acid
- ✓ 2-Hydroxypropanedioic acid