NAMING ORGANIC COMPOUNDS

SUMMARY OF RULES FOR NAMING ORGANIC COMPOUNDS:

1) Find the longest carbon chain which contains the functional group or multiple bond if present and name it (using the correct ending).

2) Number the longest chain (left to right or right to left) so that the functional group/multiple bond/longest side chain (branch) is on the lowest numbered carbon possible.

3) Name each side group but change the ending to -yl.

4) Use a prefix di-, tri-, tetra-, etc. to denote how many side groups of each length are present.

5) Before naming the side group give the number of the carbon to which the side group is attached.

6) Arrange the side groups in alphabetical order ignoring the prefixes di-,tri-, etc.

ORGANIC FUNCTIONAL GROUPS

NAME FUNCTIONOL ENDING

GROUP

|

1) ALCOHOL —C—O—H -ol

|

H

|

2) ALDEHYDE —C=O -al

O

||

3) ACID —C—O—H -oic acid

|

4) ETHER —C—O—C— -yl -yl ether

|

O

||

5) KETONE R—C—R -one

O

||

6) ESTER R—O—C—R -yl -oate

alcohol part acid part

|

7) AMINE —C—NH2 amino-(as a prefix)

|

Name the following compounds.

1) | | | | |

—C—C—C—C=C—

| | |

2) | | | | |

—C—C—C—C—C—

| | | | |

—C—

|

3) | | | | | | |

—C—C—C—C—C—C—C—

| | | | | | |

—C— —C—

| | | |

—C—C—C—

| | |

4) | | | | |

—C=C—C—C—C—

| | |

—C—

|

Write the formula for the following.

5) 3-ethyl-2,2-dimethylhexane

6) 3,4-diethyl-2,3,4-trimethyl-1-hexene

7) 4,4,5-trimethyl-2-hexyne

8) 3-hexanol

9) ethylpropanoate

10) propanal

11) ethylbutyl ether

12) pentanoic acid

13) 3-octanone

14) metadichlorobenzene

15) cyclohexane