VIII.C ALDEHYDES (RCHO)

Aldehydes have the family ending 'al' and are named in a similar way to carboxylic acids. Just like the acids, the aldehyde group must be the end of a chain. Thus, the position of the aldehyde group in is not listed in the name, if it is the parent group.

EXCEPTIONS

- 1. If the aldehyde is NOT the parent group then its position must be numbered.
- 2. If a molecule contains two aldehydes, then the position of both groups are listed. If the aldehyde is a substituent, *i.e.*, if the molecule is a carboxylic acid or a carboxylic acid derivative, the prefix for the aldehyde group is 'oxo'. Finally, if the aldehyde is a substituent on the longest chain, it is called a formyl group.

Example

2. Give the IUPAC name for CH₃CH₂CHCH₃CH=CHCHICH₂CHO

OBSERVATIONS

Redraw the structure

$$CH_{3}CH_{2}CHCH_{3}CH=CH_{2}CHICH_{2}CHO \Rightarrow C-C-C-C=C-C-C-C+O$$
8 7 6 5 4 3 2 1

Fill out the templater IGHTED MATERIAL IME OHIRKE 9/1/1999

	OBSERVATION	IMPLICATION
Parent Group and Site	Aldehyde	-al
Longest Carbon Chain/Ring	8 Carbons	oct
# C=C or C≡C bonds and Site	1 C=C at C-4	4-octen
Final Word		4-octenal
Substituents and Sites	Iodine at C-3 CH ₃ at C=6	3-iodo 6-methyl
Alphabetizing substituents		3-iodo-6-methyl

SOLUTION Compound is: 3-iodo-6-methyl-4-octenal

