

VIII.K AMIDES

Amides are named using in a similar way to amines and carboxylic acids. We shall discuss primary, secondary and tertiary amides separately.

VIII.K.1 Primary Amides (RCONH₂)

Primary amides are named in a similar way to carboxylic acids, except that the -ic acid family ending is replaced by **amide**.

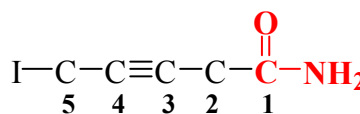
Example

Give the IUPAC name for CH₂IC≡CCH₂CONH₂

OBSERVATIONS

Redraw the structure CH₂IC≡CCH₂CONH₂

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	OBSERVATION	IMPLICATION
Parent Group and Site	(Primary) amide at C-1	amide
Longest Carbon Chain/Ring	5 carbons	pent
# C=C or C≡C bonds and Site	C≡C at C-3	3-pentyn...
Final Word		3-pentynamide
Substituents and Sites	I at C-5	5-iodo
Alphabetizing substituents		5-iodo

SOLUTION: Compound is: 5-iodo-3-pentynamide

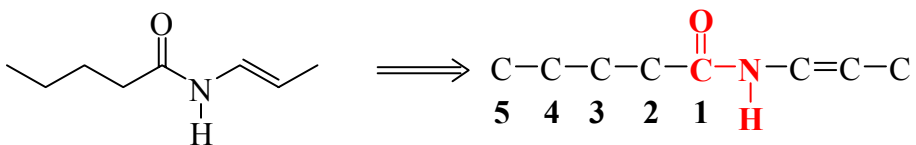
VIII.K.2 Secondary Amides (RCONHR¹)

Secondary amides are named similarly, but the R¹ alkyl group is designated as an N-alkyl substituent.

Example

Give the IUPAC name for the compound.

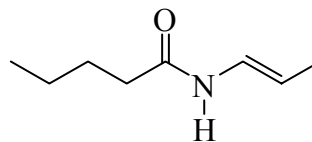
Redraw the structure



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	OBSERVATION	IMPLICATION
Parent Group and Site	(Secondary) amide at C-1	amide
Longest Carbon Chain/Ring	5 carbons	pent
# C=C or C≡C bonds and Site	None	pentan
Final Word		pentanamide
Substituents and Sites	CH=CHCH ₃ attached to N	N-1-propenyl
Alphabetizing substituents		N-1-propenyl

SOLUTION: Compound is: N-1-propenylpentanamide.

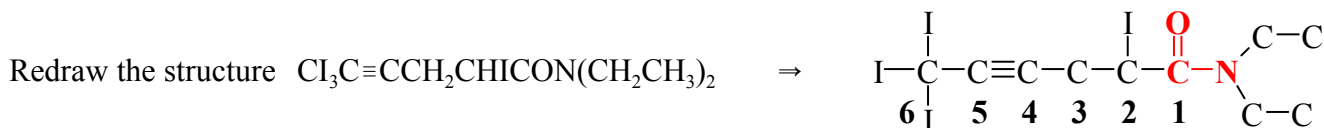


VIII.K.3 Tertiary Amides (RCONR¹R²)

Tertiary amides are named in a similar fashion to secondary amides. The alkyl groups attached to the nitrogen are designated as N-alkyl substituents, and are placed in alphabetical order.

Example

Give the IUPAC name for the compound $\text{I}_3\text{C}\equiv\text{CCH}_2\text{CHCON}(\text{CH}_2\text{CH}_3)_2$



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	OBSERVATION	IMPLICATION
Parent Group and Site	(Tertiary) amide at C-1	amide
Longest Carbon Chain/Ring	6 carbons	hex
# C=C or C≡C bonds and Site	1 C≡C at C-4	4-hexyn
Final Word		4-hexynamide
Substituents and Sites	4 Iodines at C-6, C-6, C-6 and C-2 2 C ₂ H ₅ 's attached to N	2,6,6,6-tetraiodo N, N-Diethyl
Alphabetizing substituents		2,6,6,6-tetraiodo N, N-Diethyl

SOLUTION: Compound is: N,N-Diethyl-2,6,6,6-tetraiodo-4-hexynamide

[**Note.** As the two alkyl groups bonded to nitrogen are the identical, they are named N,N-diethyl]