

Quiz (Homologous Series)

Complete the following table:

Homologous Series	Functional Group	General Formula	The first TWO family members
Alkane	Saturated hydrocarbons		
Alkene			
Haloalkane			
Alkanol			
Aldehyde			
Ketone			
Alkanoic acid			
Ester			
Alkanamine			
Alkanamide			

Suggested Answer

NOTE: There may be more than one answers.

Homologous Series	Functional Group	General Formula	The first TWO family members
Alkane	Saturated hydrocarbons	C_nH_{2n+2}	CH_4 CH_3CH_3
Alkene	Carbon-Carbon Double bond	C_nH_{2n}	$CH_2=CH_2$ $CH_3CH=CH_2$
Haloalkane	Halo group	$C_nH_{2n+1}X$	CH_3X CH_3CH_2X
Alkanol	Hydroxyl group	$C_nH_{2n+1}OH$	CH_3OH CH_3CH_2OH
Aldehyde	Aldehyde group (carbonyl group)	$C_nH_{2n+1}CHO$	$HCHO$ CH_3CHO
Ketone	Carbonyl group	$C_nH_{2n+1}COC_mH_{2m+1}$	CH_3COCH_3 $CH_3CH_2COCH_3$
Alkanoic acid	Carboxyl group	$C_nH_{2n+1}COOH$	$HCOOH$ CH_3COOH
Ester	Ester group	$C_nH_{2n+1}COOC_mH_{2m+1}$	$HCOOCH_3$ $HCOOCH_2CH_3$ / CH_3COOCH_3
Alkanamine	Amino group	$C_nH_{2n+1}NH_2$	CH_3NH_2 $CH_3CH_2NH_2$
Alkanamide	Amide group	$C_nH_{2n+1}CONH_2$	$HCONH_2$ CH_3CONH_2