

Arrange the mechanism steps in order:

Radical Chlorination of Methane

Reaction	$\text{CH}_4 + \text{Cl}_2 \xrightarrow{\text{heat or light}} \text{CH}_3\text{Cl} + \text{HCl}$	
Steps	Mechanism: Free radical substitution reaction	
Chain Initiation Step 1: Halogen dissociation	<p>Under the influence of heat or light a molecule of chlorine dissociates; each atom takes one of the bonding electrons</p> <p>This step produces two highly reactive chlorine atoms.</p>	
Chain Propagation Step 2: Hydrogen abstraction	<p>A chlorine atom abstracts a hydrogen atom from a methane molecule</p>	<p>This step produces a molecule of hydrogen chloride and a methyl radical</p>
Step 3: Halogen abstraction	<p>A methyl radical abstracts a chlorine atom from a chlorine molecule</p>	<p>This step produces a molecule of chloromethane and a chlorine atom. The chlorine atom can now cause repetition of step 2.</p>
Chain Termination	<p>Coupling of any two radicals depletes the supply of reactive intermediates and terminates the chain. Several pairings are possible for radical coupling termination steps.</p>	

