

-Termination Reaction

The initiation reaction consists of producing polymers by free radical polymerization

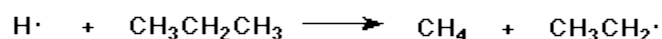
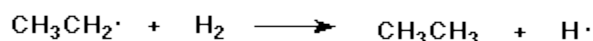
The carbon-carbon double bonds in the monomer makes them susceptible to reaction with the unpaired electron of the radical.

The active centre of the radical will bind with one of the electrons from the double bond of the monomer, in a way which will make the unpaired electron the new active center at the end of the chain.

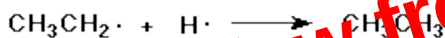
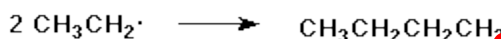
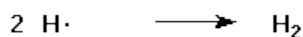
Initiation (break the weakest bond):



Propagation:



Termination:



(Source: <http://web.pdx.edu/~wlnserc/C334S98/E1ans.htm>)

Once the initiation reaction has occurred, **the propagation reaction will overtake**. This stage consists of the transfer of electrons and the motion of the active centre down the chain. This stage occurs very quickly and thousands of monomers are added to the chain.

Termination Reaction

Termination reaction will terminate the propagation reaction, which occurs in two ways:

Combination and disproportionation.

Combination refers to the reaction which stops the polymer's growth by free electrons, which form two growing chains, join into a single chain.