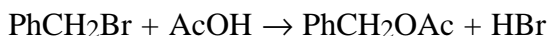


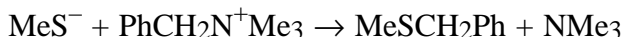
leaving group

An atom or group (charged or uncharged) that becomes detached from an atom in what is considered to be the residual or main part of the *substrate* in a specified reaction.

For example, in the heterolytic *solvolysis* of benzyl bromide in acetic acid:



the leaving group is Br^- ; in the reaction:



the leaving group is NMe_3 ; in the *electrophilic* nitration of benzene, it is H^+ . The term has meaning only in relation to a specified reaction. The leaving group is not, in general, the same as the *substituent group* present in the substrate (e.g. bromo and trimethylammonio in the substrates of the first two examples above.)

A slightly different usage of the term prevails in the (non-mechanistic) naming of transformations, where the actual substituent group present in the substrate (and also in the product) is referred to as the leaving group.

See also *electrofuge*, *entering group*, *nucleofuge*.

1994, 66, 1134