1. If, in a homogenous mixture, also known as solution, the major component by volume is a liquid, is is called the solvent.

eg: Stirring 10 ml of ethanol, a liquid, in 100 ml of water, a liquid, creates a solution in which the solvent is water.

2. To carry out most organic reactions, the reactants and, if any, the catalyst are dissolved in a liquid, called the solvent, and the resultant solution is subjected to the reaction conditions.

eg:

To effect the above reaction, reactants 1 and 2 are dissolved in CCl₄, and the resultant solution is irradiated.

Requirements of the solvent of a reaction:

1. The solvent must not react with the reactants, the products, or, if any, the catalyst under the reaction condition, unless intended to (eg: solvolysis).
2. The solvent must not decompose under the reaction conditions.
3. The boiling point of the solvent must be equal to (reflux conditions) or lower than the reaction temperature.

see also protic solvent, aprotic solvent, nucleophilic solvent

Contributors

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