

## condensation reaction

A (usually stepwise) reaction in which two or more reactants (or remote reactive sites within the same molecular entity ) yield a single main product with accompanying formation of water or of some other small molecule, e.g. ammonia, ethanol, acetic acid, hydrogen sulfide. The mechanism of many condensation reactions has been shown to comprise consecutive addition and elimination reactions, as in the base-catalysed formation of (*E*)-but-2-enal (crotonaldehyde) from acetaldehyde, *via* 3-hydroxybutanal (aldol). The overall reaction in this example is known as the aldol condensation. The term is sometimes also applied to cases where the formation of water or another simple molecule does not occur, as in 'benzoin condensation'.

**Source:**

PAC, 1994, 66, 1077 (*Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)*) on page 1099