Organic Functional Group Encyclopedia Article

Organic Functional Group

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.

Contents

Organic Functional Group Encyclopedia Article.....1

Contents.....2

Organic Functional Group.....3

Organic Functional Group

Organic functional groups are the section of the organic **molecule** which controls the reactivity of the molecule. For example the presence of multiple bonds between **carbon** atoms increases the molecule's reactivity. Functional groups undergo characteristic reactions, these occur regardless of the size of the molecule. The reactions of an organic compound are controlled largely by the **functional group**, or groups, it contains. For further information on each of these groups refer to their main entry in the book. Several functional groups may be contained in any one molecule, giving that molecule the properties of all of the functional groups present.

Molecules or atoms attached to functional groups act as modifiers of the functional group and they alter such characteristics as **boiling point** and melting point of the substance. The carbon-carbon single bonds and the carbon-hydrogen bonds are the unreactive parts of the molecule. Normally the designating letter R is given to the modifier, the **alkyl group**, including the carbon it is bonded to. So for example the **alcohol** has a general formula of ROH. Where two or more alkyl groups are present (e.g. an ether) the symbols R, R', R'', etc. are used. These may be the same or different molecules. An alkyl group is a straight chain molecule, but if the modifier is in the form of a **ring** structure it is more properly called an aryl group. Homologous series are produced for each functional group. These show slight changes in characteristics as increasing numbers of carbon atoms are added as modifier groups.