

Common, Generic and Trade Names of Chemicals

A single chemical substance may be known by different names depending on the purpose for which it is being used. In scientific research and education, chemicals are generally identified by their IUPAC names because these names are systematic and internationally accepted. However, in industries, pharmacies, laboratories, and commercial markets, the same chemical may also be referred to by its common name, generic name, or trade name. Understanding the differences between these naming systems is important because the same substance can appear under different names in textbooks, product labels, safety documents, and industrial catalogues.

Each type of name serves a specific purpose. While the IUPAC name accurately describes the chemical structure, common names are convenient for everyday use, generic names identify the active chemical ingredient, and trade names are used by manufacturers to market their products. Therefore, a basic knowledge of all these naming systems is essential for students of industrial chemistry.

1. Common (Trivial) Name

A **common name**, also called a **trivial name**, is a traditional name that became popular before systematic IUPAC nomenclature was introduced. Common names usually originate from the source of the compound, its appearance, its historical use, or the place where it was first discovered. These names are easy to remember but do not provide information about the chemical composition or molecular structure of the substance.

Although common names are not systematic, many of them are still widely used in laboratories, industries, and everyday life because they are familiar and convenient.

Examples of Common Names

Common Name	IUPAC Name	Chemical Formula
Baking soda	Sodium hydrogen carbonate	NaHCO_3
Washing soda	Sodium carbonate decahydrate	$\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
Quicklime	Calcium oxide	CaO
Slaked lime	Calcium hydroxide	Ca(OH)_2
Vinegar	Dilute ethanoic acid solution	CH_3COOH

2. Generic Name

A **generic name** is the officially accepted name of the active chemical substance, particularly in pharmaceutical and healthcare industries. Unlike trade names, generic names are not owned by any

company and can be used by all manufacturers producing the same active ingredient. Generic names are standardized and recognized by health authorities throughout the world.

The use of generic names ensures that doctors, pharmacists, and patients can identify medicines correctly regardless of the manufacturer. Generic medicines are chemically identical to branded medicines and produce the same therapeutic effect.

Examples of Generic Names

Generic Name	Use
Paracetamol	Pain reliever and fever reducer
Ibuprofen	Anti-inflammatory medicine
Amoxicillin	Antibiotic
Metformin	Treatment of diabetes

3. Trade (Commercial or Brand) Name

A **trade name**, also known as a **brand name**, is the commercial name given to a product by the manufacturing company. Trade names are protected by trademark laws and are used for marketing and product identification. Different pharmaceutical or chemical companies may sell the same chemical substance under different trade names, even though the active ingredient remains the same.

Trade names are designed to be attractive, memorable, and easy to pronounce. They help manufacturers establish a unique identity for their products in the competitive market.

Examples of Trade Names

Generic Name	Example of Trade Name
Paracetamol	Crocin®, Dolo 650®
Ibuprofen	Brufen®
Amoxicillin	Mox®, Novamox®
Metformin	Glycomet®

Note:

The trade names listed above are examples used to explain the concept. The same generic medicine may be marketed under different brand names by different pharmaceutical companies in different countries.

Difference Between Common, Generic, and Trade Names

Common Name	Generic Name	Trade Name
Traditional or local name.	Official name of the active chemical substance.	Commercial name assigned by a manufacturer.
May vary from place to place.	Accepted internationally.	Protected by trademark laws.
Does not describe the structure systematically.	Used in medicine and scientific practice.	Used mainly for marketing purposes.
Anyone may use the name.	Anyone may use the name.	Only the trademark owner has legal rights.

Importance in Industrial Chemistry

Knowledge of different naming systems is essential in industrial chemistry because chemicals are manufactured, transported, stored, and marketed under various names. Scientists generally use IUPAC names in research papers, while industries may use common names in routine operations and trade names for commercial products. Pharmaceutical industries rely heavily on generic names to ensure that medicines are correctly identified and prescribed. Understanding these naming conventions helps prevent confusion, improves communication, and ensures the safe handling and proper use of chemicals.

Key Points to Remember

- IUPAC names are systematic and internationally accepted.
- Common names are traditional names that are easy to remember.
- Generic names identify the active chemical ingredient.
- Trade names are commercial brand names used for marketing.
- A single chemical may have an IUPAC name, a common name, a generic name, and several trade names.

With the study of chemical nomenclature now complete, the next major topic of this unit focuses on **Catalysis**, beginning with its definition, characteristics, and importance in modern chemical industries.