

NITROUS OXIDE N_2O A colorless gas of sweetish odor and taste, used as a general anesthetic Also called "laughing gas"

OLEFINS A class of unsaturated hydrocarbons characterized by relatively great chemical activity Obtained from petroleum and natural gas Examples butene, ethylene and propylene Generalized formula C_nH_{2n}

ORGANIC Term used to designate chemicals that contain carbon To date nearly one million organic compounds have been synthesized or isolated Many occur in nature, others are produced by chemical synthesis See also **INORGANIC**

OXIDATION Process of combining oxygen with some other substance, a chemical change in which an atom loses one or more electrons Opposite of reduction See also **REDUCTION**

PARAFFINS, PARAFFIN SERIES (From *parum affinis* - small affinity) Those straight or branched chain hydrocarbon components of crude oil and natural gas whose molecules are saturated (i.e., carbon atoms attached to each other by single bonds) and therefore very stable Examples methane and ethane Generalized formula $\text{C}_n\text{H}_{2n+2}$

PERIODIC TABLE Systematic classification of the elements according to atomic numbers (nearly the same order as by atomic weights) and by physical and chemical properties

PESTICIDES General term for that group of chemicals used to control or kill such pests as rats, insects, fungi, bacteria, weeds, etc., that prey on man or agricultural products Among these are insecticides, herbicides, fungicides, rodenticides, miticides, fumigants and repellents

PHARMACEUTICALS That group of drugs and related chemicals reaching the public primarily through drug suppliers In Government reports, category includes not only such medicinals as aspirin and antibiotics but also such nutrimentals as vitamins and amino acids for both human and animal use

PH Means used to express the degree of acidity or alkalinity of a solution with neutrality indicated as 7

PHENOL $\text{C}_6\text{H}_5\text{OH}$ Popularly known as carbolic acid Important chemical intermediate and base for plastics, pharmaceuticals, explosives, antiseptics, many other end products

PHOTOSYNTHESIS The process by which plants produce carbohydrates from carbon dioxide and water when the green tissues (chlorophyll) are exposed to sunlight In reducing the carbon dioxide, oxygen is released Were it not for this process, life on the earth would be impossible

PLASTICIZERS Organic chemicals used in modifying plastics, synthetic rubber and similar materials to facilitate compounding and processing, and to impart flexibility to the end product

PLASTICS Officially defined as "any one of a large and varied group of materials which consists of, or contains as an essential ingredient, an organic substance of large molecular weight, and which, while solid in the finished state, at some stage in its manufacture has been or can be formed (cast, calendered, extruded, molded, etc.) into various shapes by flow—usually through application of heat and pressure singly or together" Each plastic has individual physical, chemical and electrical properties Two basic types thermosetting (irreversibly rigid) and thermoplastic (reversibly rigid) Prior to compounding and processing, plastics often are referred to as (synthetic) resins Final form may be as film, sheet, solid, or foam, flexible or rigid See also **RESIN**

POLYMER A high molecular weight material formed by the joining together of many simple molecules (monomers) There may be hundreds or even thousands of the original molecules linked end to end and often crosslinked Rubber and cellulose are naturally occurring polymers Most resins are chemically produced polymers See also **MONOMER**

PROTECTIVE COATING A thin layer of