*** Name Origin:**

From soda (Na_2CO_3); Na from Latin natrium.

*** Sources:**

Obtained by electrolysis of melted sodium chloride (salt), borax and cryolite.

*** Uses:**

Used in medicine, agriculture and photography. Liquid sodium is sometimes used to cool nuclear reactors. Also used in street lights, batteries, table salt (NaCl), and glass.

*** Additional Notes:**

Long recognized in compounds, sodium was first isolated by Davy in 1807 by electrolysis of caustic soda. Sodium is present in fair abundance in the sun and stars. The D lines of sodium are among the most prominent in the solar spectrum. Sodium is the sixth most abundant element on earth, comprising about 2.6% of the earth's crust; it is the most abundant of the alkali group of metals of which it is a member. The most common compound is sodium chloride, but it occurs in many other minerals, such as soda niter, cryolite, amphibole, zeolite, sodalite,etc. It is a very reactive element and is never found free in nature. It is now obtained commercially by the electrolysis of absolutely dry fused sodium chloride. This method is much cheaper than that of electrolyzing sodium hydroxide, as was used several years ago. Sodium is a soft, bright, silvery metal which floats on water, decomposing it with the evolution of hydrogen and the formation of the hydroxide. It may or may not ignite spontaneously on water, depending on the amount of oxide and metal exposed to the water. It normally does not ignite in air at temperatures below 115°C. Sodium should be handled with respect, as it can be dangerous when improperly handled. Metallic sodium is vital in the manufacture of sodamide and esters, and in the preparation of organic compounds. The metal may be used to improve the structure of certain alloys, to descale metal, to purify molten metals, and as a heat transfer agent. An alloy of sodium with potassium, NaK, is also an important heat transfer agent. Sodium compounds are important to the paper, glass, soap, textile, petroleum, chemical, and metal industries. Soap is generally a sodium salt of certain fatty acids. The importance of common salt to animal nutrition has been recognized since prehistoric times. Among the many compounds that are of the greatest industrial importance are common salt (NaCl), soda ash (Na_2CO_3), baking soda ($NaHCO_3$), caustic soda (NaOH), Chile saltpeter ($NaNO_3$), di- and tri-sodium phosphates, sodium thiosulfate (hypo, $Na_2S_2O_3 \cdot 5H_2O$), and borax ($Na_2B_{24}O_7 \cdot 10H_2O$). Seventeen isotopes of sodium are recognized. On a volume basis, it is the cheapest of all metals. Sodium metal should be handled with great care. It should be kept in an inert atmosphere and contact with water and other substances with which sodium reacts should be avoided. Sodium comes from the English word "soda" and from mideval Latin sodanum which means headache remedy. Sodium is the sixth most abundant element on earth comprising 2.6% of the earth's crust. It is the most abundant of the alkali metals. It never exists in nature, but is prepared by electrolysis of absolutely dry fused sodium chloride. Sodium chloride is common table salt which is important in animal nutrition. Other important forms of sodium are soda ash(Na_2CO_3), baking soda

($NaHCO_3$), Chili saltpeter ($NaNO_3$) which is sodium nitrate. In nature sodium is fount in soda niter, cryolite, amphibole and zeolite.