

C. H. Hartshorn

210

TREATISE

ON

MINERALOGY:

SECOND PART,

CONSISTING OF

DESCRIPTIONS OF THE SPECIES, AND TABLES ILLUSTRATIVE OF
THEIR NATURAL AND CHEMICAL AFFINITIES.

BY

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Nitre—Nitrocalcite.

NITRE. Prismatic Nitre-Salt. Mohs.

In capillary crystals and crusts.*

Lustre vitreous. Color white. Streak white.

Transparent . . . semi-transparent.

Sectile. Hardness = 2.0. Sp. gr. = 1.936.

Taste saline and cool.

1. It dissolves very easily in water, is not altered on being exposed to the air, and detonates with combustible substances.

2. *Analysis.*

By Klaproth.

Nitrate of potash	- - - -	42.55
Sulphate	- - - -	25.45
Muriate	} of lime - - - -	0.20
Carbonate		- - - -

3. Nitre generally occurs in thin crusts on the surface of the earth, sometimes upon limestone, chalk, or calcareous tufa; also in limestone caves, and in sandstone.

4. Spain, Italy and Hungary, afford considerable quantities of this salt: in a higher state of purity, also, it is found in India. But especially in the United States, has it been found in large quantity, in limestone caves in the south western states. In Madison county, Kentucky, there is a cave 1936 feet long and 40 wide, which contains Nitre, intermingled with earthy matter and nitrocalcite. One bushel of the earth affords, by lixiviation with wood ashes, from three to ten pounds of Nitre. It is also met with, in the same vicinity, in loose masses, weighing several pounds, or imbedded in sandstone.

5. Its chief employment is in the production of gunpowder.

NITROCALCITE. Calcareous Earthy-Salt.

In efflorescent masses and silken tufts.

Color white or grey.

* The artificial crystals are right rhombic prisms of 120° , which commonly have the acute lateral edges and acute solid angles truncated. Twin crystals are also common, the face of composition being parallel with M.

Nitrogen—Nitro-Magnesite.

1. It is very deliquescent, and soluble in water. On burning coals, it melts slowly, with slight detonation, and dries; the residue does not afterwards attract moisture from the air. It consists of lime 32, nitric acid 57.44, water 10.56.

2. It is found in silky efflorescences, in caverns of limestone in Kentucky.

3. It is employed in the manufacture of saltpetre.

NITROGEN. Pure Nitrogen-Gas.

Gaseous. Transparent.

Sp. gr. = 0.9722.

1. Nitrogen-gas extinguishes flame and animal life, and is destitute of taste and smell. It is absorbable by about 100 volumes of water.

2. It is developed, in a state of purity, or nearly so, from the surface of the ground, over an extent of four or five acres, in Hoosick, Rensselaer county, (N. Y.) becoming manifest wherever there is water. Also, at New Lebanon Springs, in the immediate vicinity, but in smaller quantities. It is evolved, in like manner, by many well known mineral springs of other countries, as those of Cheltenham and Harrowgate.

3. The origin of Nitrogen-gas has been attributed to the decomposition of atmospheric air, contained in cavernous rocks; its nitrogen and oxygen uniting to form nitric acid, which would leave an excess of nitrogen, equal at least to ten times the quantity required for the complete saturation of the oxygen in the compound nitric acid.

NITRO-MAGNESITE. Magnesian Earthy-Salt.

In deliquescent efflorescences.

Color white.

1. It is very deliquescent; and consists, when pure, of

Nitric acid	-	-	-	-	-	-	72
Magnesia	-	-	-	-	-	-	28.

2. It is found in limestone caves, accompanying the Nitrocalcite.

3. It is said to be employed in the manufacture of saltpetre.

NONTRONITE.

Massive: in round shaped masses, composition impalpable.

Color straw-yellow. Opake.