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Research Article

MINERALOGICAL PROPERTIES OF NATIVE SULFUR

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ABSTRACT

A mineral belonging to the group of native elements is native sulfur. It appears as yellow-colored sintered masses, swarms, and crystals. Native sulfur is frequently nearly pure. Volcanic sulfur frequently contains trace levels of As, Se, Te, and Ti. Many deposits of sulfur contain bitumen, clay, different sulfates, and carbonates that contaminate the sulfur. It has gas inclusions as well as a mother liquor-containing liquid with NaCl, CaCl, Na2SO4, etc. Selenium sulfur, or Se, can be found in it up to 5.18% of the time.

KEYWORDS

As well as a mother liquor-containing liquid with NaCl, CaCl, Na2SO4, etc.

INTRODUCTION

A crystalline type mineral is called lump sulfur in the industry. It has the widest usage, such as:

- production of sulfuric acid;
- rubber vulcanization;

production of dyes;

-pulp and paper industry;

-as an insectofungicide in agriculture;

pyrotechnic production;

- addition to building materials.

The crystal has a non-metallic diamond luster. It ignites easily and has a blue flame. At the same time, sulfur dioxide is released, a specific smell appears.

Varieties include:

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Crystalline sulfur - rhombic native (α-S) light yellow and prismatic (β-S) transparent dark yellow with crystals in the form of needles.

1. **Amorphous - plastic rubber-like brown or dark red color and colloidal (sulphurous milk) - white fine precipitate.**

2. **Amorphous-crystalline - sulfur color, sublimated, fine-grained**

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3. **Vulcanite (selenosulfur) - red-brown, orange-red shades give it impurities of selenium.**

The mercury-sulfur hypothesis holds that Arab alchemists worshipped crystal as the father of all metals. The mineral later served as the foundation for the phlogiston theory as the principle of combustibility. Sulfur was categorized as an element in the 18th century by A. Lavoisier. With the introduction of gunpowder to Europe, industrial mining had its start.

Numerous processes lead to the creation of sulfur, although deposits are only found in the top layer of the earth's crust.

Small concentrations of the mineral, which was created as a result of volcanic activity, can be found in Kamchatka, Armenia, Italy, Iceland, the United States, Japan, Mexico, and on the island of Java. In hot places - in the Caucasus, the Kuriles, in Yellowstone Park (USA), Spain.

Large concentrations of native sulfur are created, for instance, in the Urals, as a result of sulfide sulfide's breakdown.

In the USA, Italy, Spain, Central Asia, Russia, and other countries, industrial mining of the mineral is done in sedimentary rock deposits.

Sulfur is a common raw material in the area. Large oil residual reserves, or unrefined sulfur, are currently found in Uzbekistan. On the one hand, it stops pollution of the environment. On the other hand,

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unprocessed sulfur is regarded as a crucial component of scientific research. The Zharkurgan Oil Refinery in the Surkhandarya region and the Mubarak Gas Processing Plant in the Kashkadarya region both process the majority of the local raw materials.

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