Learning About the Three Prominent Areas of Usage of Sodium Hydrosulfite by Royceintl

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Sodium Hydrosulfite, also known by the name of Dithionite, is a multipurpose compound that is extensively used in the manufacture of numerous items of every day usage. Its properties as a reducing agent, sulfonating agent and a source of cation make it perfect for use in the production of wide variety of products ranging from photographic film, wine, fine writing paper and leather products to colored fabrics and metal recovery. While it is extremely difficult to cover all the diverse uses of this chemical workhorse, listed below are the three prominent areas where it is extensively used along with a brief description about its usage.

1. Industrial Applications

Being water soluble salt, Sodium Hydrosulfite is used in most major industries as a reducing agent. In industrial dying, its properties as a reducing agent help in enhancing the quality of color by preventing excessive dying, production of residual oxide as well as the occurrence of undesirable pigments. It is also widely used in the production of Rongalite. Other industrial uses include applications such as water treatment, purification of gas as well as cleaning and stripping. The ability of the compound to produce sodium ion makes it highly useful in industries dealing in products such as leather, foods, photography products, and polymers etc. One of the major reasons for its wide scale industrial use is its extremely low toxicity as compared to other chemicals.

2. Use In Biological Sciences

Sodium Hydrosulfite is widely used for carrying out physiology experiments where its main aim is to reduce the redox potential of solutions. It also finds application in experiments related to soil chemistry that are aimed at determining the amount of iron that is not integrated with primary silicate minerals. The dithionite ion has the property of enhancing the solubility of iron making it a perfect chelating agent used in the extraction of â€œfree ironâ€•.

3. Use In Geo-sciences

In Chemical Enhanced Oil Recovery, Sodium dithionite is largely used for stabilization of polycrylamide polymers which might otherwise face radical degradation when exposed to iron. Additionally, it is also used for environment improvement due to its ability to generate a low Eh front, which helps in diminishing environmental pollutants such as chromium.

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