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Optical glass filters, used to filter out certain wavelengths of light, are extremely versatile scientific and artistic tools. In addition to being used in all manner of scientific technology, optical glass filters are also used in photography to produce special lighting effects.

Cobalt Glass

Cobalt glass is one of the oldest known forms of optical filter glass. We do know that the ancient Egyptians and Persians knew how to make this type of glass, which they used to make exquisite glassware and ornaments of a lovely deep blue shade, but we do not know whether they knew of its scientific properties.

Later in medieval times, cobalt was mixed into the glass mixture to create blue stained glass that can be seen in so many only monasteries and castles. The use of cobalt glass continued to be popular among the nobility and royalty though it was beyond the means of most of the middle and lower classes.

Over the years, the secret of the blue glass was lost. That is, until the 19th century when a chemist named George Brandt from Sweden proved that it was cobalt and not bismuth that gave the glass the deep blue shade.

Why Cobalt is used for making optical filter glass?

There is a very good reason while cobalt is used for making optical filter glass. The material is the strongest of the coloring oxides with just 0.5% concentration of cobalt enough to stain the glass a deep and rich blue. As an optical filter, it is excellent to bring out the deep and rich shades of violets and blues.

Uses of Cobalt Glass

Today, cobalt glass is used by both scientists as well as artisans. The exquisite glassware sculptures of the Murano glassmakers of Venice owe much of their rich blue tones to cobalt glass. The glass continues to be used for other types of decorative items as well as decorative containers and bottles for expensive perfumes. In the east, hookahs or water pipes made of cobalt glass is extremely popular.

However, the material has many uses in the scientific and technological fields as well. Pharmaceutical companies use the glass to pack medicines that may spoil in the harsh glare of white light. Scientists too use the glass when they want to examine certain properties of various substances that are better visible under blue or ultraviolet light.

As such, cobalt glass is one of those rare materials that combine both beauty and functionality.

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