Design Resource **Candle Making - Bengaluru, Karnataka**

Handmade Candle by Prof. Bibhudutta Baral and Rakshitha NID Campus, Bengaluru

Source: http://www.dsource.in/resource/candle-making-bengaluru-karnataka

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Introduction

Since an ancient period illumining objects have accompanied mankind. Initially it was fire and then came the invention of its utilization in diversified forms. The beginning of the evolutionary process of the candle might be considered to be the moment when humans learnt to use fire for their benefits. Candle is considered to be the most ancient and beneficial form of illumination. These candles are usually built in cylindrical shape or similar to cylindrical body of a waxy substance along with a fibrous wick since early ages. The quality of the candle usually depends on the combustible material and the nature of the wick. These two substances with their respective ratio and their building structure play a vital role in accomplishing the required quality of the material.

Candle is nothing but the evolutionary development of the torch. It is an original torch made of a burning branch "wick" which is extremely large and contains little combustible matter. Until the early 1900s candles were the only single source of artificial light. Though the origin of candle is still an unknown factor yet the archeological findings have found candleholders in Egypt that dates back to 4th century BCE. According to some references Egyptians candles were made of chunk of tallow with one end made pointy for ignition. These tallow were extracted from cattle and sheep in the early Egyptian and Roman times. Candles made of these tallows burned scantily and also smelled worse. Candles made during the Roman Empire provide the evidence of those candles that resemble the candles of today. Romans melted the tallow until it gained liquid form and poured it over the fibers of flax or cotton, which later acted as the wick. These candles were used in man religious ceremonies those days.

During the Middle Ages beeswax was introduced to make candles. This beeswax candles was the improved version of candles made of tallow. These beeswax candles resembled the candles of tallow made by Romans. But as the availability of beeswax was limited, the candles made of beeswax got expensive and got obtainable only by the upper class society.

In later days early settlers of colonial America discovered that an appeasing wax could be obtained by boiling berries of bayberry shrub. Though the making of candles by bayberry wax was tedious and tiresome job yet it gave the satisfaction for such galling work when the candles made of bayberry wax created a sweet smell and good burning when lit.

In 18th century though the spermaceti wax derived from whale oil replaced the tallow, beeswax and bayberry wax still it could not sustain its market for a longer period, as it had an unpleasant smell and also it was too hard enough to hold its shape firmly during the hot summer season.

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By 19th century candle making industry got a big breakthrough that enabled candles to reach the homes of all classes as the first patented candle making machines were introduced in this century. The braided wick was also introduced in this century and also the process of candle making drastically improved the quality of candles. It was around mid-nineteenth century paraffin wax was used for preparing candles in UK. Thus paraffin (oil distillate) led to commercial production as paraffin wax burned clean, bright and odorless. To harden paraffin wax, it was blend with stearic acid to create an excellent candle.

Today candle-making industry provides a wide range of candles made of variety of waxes with unique shapes and colors. These products are also manufactured in Bengaluru of Karnataka state, by an artisan named Ms.Saba Shaheen. She is a self-taught artist who is been into this field since two years. She has won first place at a competition held at New Orbit Mall on the occasion of Women's day, which enabled her to publicize the sales of her inventive candles.



Gel Candle in Cocktail Glasses.



Artist and her family members.



Ms. Saba Shaheen, Candle making artist.

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Tools and Raw Materials

Tools and raw materials that are used for making scented wax candles are:

- Wax: Wax is the chief element that is used for candle making.
- Candlewick: Candlewick is the component that is used to light the candle.
- Double Boiler: Double boilers are used for heating and melting the wax chops.
- Metal Holder: Metal holder is used for holding the wax container while pouring the molten wax into the mold.
- Container: Container is needed to carry molten wax.
- Molds: Molds are used for shaping the wax candle.
- Fragrance Oils: Fragrance oils are used to manufacture the aromatic candles.
- Candle Dyes: Candle dyes are used as a component to manufacture the candle.



Glass container and Pre-waxed candle wicks.

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Embed objects for decorative the candle.

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A heat source of gas stove used to melt the wax.



A mold to hold the melted wax.



Paraffin Wax flakes.

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Dye Flakes For Paraffin wax.

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Making Process

Candles are made using wax. Making of these scented candles depend on selecting the wax for their product. Usually paraffin wax is used for making these candles. Some manufactures use soy wax and bee wax along with paraffin wax for the better quality. Initially a solid form of wax is melted in a unique technique called double boiler method. This method is followed to melt the wax as it prevents the wax from catching flame and also controls the temperature. In the boiler that is used for melting the wax, 0.5/4th of water is poured into the boiler and the blocks of wax are allowed to melt at 50-55 degree Celsius. To make the vertically lengthy candles, wax is melt at 59 degree Celsius. To improve the long lasting potency of the candles a hardening agent is added to wax. Desired candle dyes are also added to molten wax to make vividly colorful candles. Fragrance oil of about 15 to 30 ml is added to maximum 45kgs of wax to prepare beautifully aromatic candles. Different types of fragrances used are chocolate, bayberry, sandalwood, jasmine, ocean mist and few others.

After the wax is melted it is shaped to required design using metal molds (made from Aluminium material). Before pouring the molten wax to the mold, a required length of cotton thread is cut according to the candle size. This cotton thread is further used as the wick to light the candle. The chosen cotton thread is then dipped in molten wax and tied it to both the ends of the mold passing through the inner side (in centre). Then the molten wax is poured into the mold and allowed it to cool. Once the wax candle is completely cooled, it is removed from the mold and the excess of wax is trimmed using the knife. These candles are painted using oil based enamels.

There are few candles that are called container candles. They are usually composed in a glass or plastic containers of various shapes. The process of making these candles vary slightly when compared to the vertically lengthy (standing) candles. Here the wick is placed in the candle container at the appropriate place by the help of a metal wick holder. Further molten wax is poured to the container. Few such candles are stored in small aluminum container as well. These container candles are hand carved and dipped in different colors of molten wax. This process continues until the required layers are formed on the candle. When the wax is still hot, the artisan cuts the layer and forms the design. This cutting and designing of wax is only carried on while the wax is hot before the wax gets cooled and dried up. Once the candles are prepared, they are dipped in acrylic solution to polish the product. These products are further decorated with few more decorative accessories to make them look all the more attractive.

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. Candle is made using soy wax, bee wax and paraffin wax.

- 2. This solid form of wax is melted using double boiler technique.
- 3. Color dyes are added to molten wax to make the candles colorful.
- Fragrance oil is added to wax to manufacture aromatic candles.

Flow Chart:

- 5. Cotton thread is cut according to the length of the candle.
- 6. This cotton thread is further used as wick.
- 7. Thread is dipped in molten wax and tied it to both ends of the mold passing through inside.
- 8. The molten wax is then poured into the mold and allowed it to cool.
- 9. Metal mold is used here to shape the molten wax to acquire the required shape.
- 0. Then the wax candle is removed from the mold and is enameled.

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Paraffin wax is kept in smaller container inside the larger pot, creating a makeshift double boiler.



Paraffin wax chips were melted at 59 degree Celsius.



Artisan turn on the flame to high so that the water boils for melting the wax.



Arranging the candle molds for wax pouring.

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Artisan is placing a wick in the center of the candle mold.

Pouring the melted wax into the mold.

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Paraffin candles generally take 24 hours to cool.



Unscrew the wick screw.



Slide the candle out of the mold.

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Artisan removes the completed candle from the mold.

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Gel wax melts in a stainless steel pot over a medium heat.



Arrange the embeds around the bottom of the container.



Artisan stick the wick using glue in the center of the container.



Pour the melted wax into the container.

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Gel wax is allowed to cool for about 4 hours.

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Products

Candles have a rich tradition that has served in various religious occasions with many faiths throughout history. These days' candles are not only the artificial source of light but still it is abundantly used in religious ceremonies, lighting while travelling, used in home for decorations, birthday parties and etc. Currently candle market provides varieties of candles for the candle lovers worldwide. They are also made of variety of waxes like paraffin, vegetable wax, gel waxes and beeswax. The cost of these candles varies from the sizes and the quality of materials used to prepare these candles. The range of candles starts from the smallest candle used during the time of Diwali occasion costs INR.2.00 to and it goes up to INR.75.00 to INR.95.00 for big candles.



Pillar candles with Paraffin wax and chunks.

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Champagne Scented Gel Wax Candle.

Scented sand with embedded Gel Candle.

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Packed and ready for exporting colorful gel candles.

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This documentation was done by Prof. Bibhudutta Baral and Rakshitha at NID Campus, Bengaluru.

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