

## HOW TO MAKE INDONESIAN TRADITIONAL BATIK



### STUDENT COLLABORATION



IN WORKSHOP:

### DESIGN DEVELOPMENT OF BATIK FASHION FOR SPRING/SUMMER 2015-2016

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## INTRODUCTION

### A. Batik, the Traditional Fabric of Indonesia

It would be impossible to visit or live in Indonesia and not be exposed to one of the country's most highly developed art forms, batik. On your first visit to a batik store or factory you will undoubtedly experience an overwhelming stimulation of the senses-due to the many colors, patterns, and the actual smell of batik. Only through repeated visits and a bit of study will the types of designs and their origins become apparent (<http://www.expatriot.or.id/info/batik.html>).

#### 1. Definition of Batik

Batik is a "resist" process for making designs on fabric. The artist uses wax to prevent dye from penetrating the cloth, leaving "blank" areas in the dyed fabric. The process, wax resist then dye, can be repeated over and over to create complex multicolored designs (<http://www.dharmatrading.com/techniques/batik-instructions.html>).

The word batik is thought to be derived from the word '*ambatik*' which translated means 'a cloth with little dots'. The suffix 'tik' means little dot, drop, point or to make dots. Batik may also originate from the Javanese word 'tritik' which describes a resist process for dying where the patterns are reserved on the textiles by tying and sewing areas prior to dying, similar to tie dye techniques. Another Javanese phrase for the mystical experience of making batik is "mbatik manah" which means "drawing a batik design on the heart" (<http://www.expatriot.or.id/info/batik.html>).

Batik is especially unique due to the way certain wax blends will "crackle" during handling, allowing lines of color to come through on resisted areas. Batik can be done with many types of dye & wax on cotton, silk and other natural fabrics. Most weights will work, provided the wax penetrates all the way through the fabric, but the finer weaves work best for detail work. We used cotton, but feel free to use what you want. Silk is a little more challenging to work with because of its unique wicking properties.

Batik masters employ a process of repeated waxing and tub dyeing to achieve their final result. This method requires mastery of color mixing and over dyeing; as each layer of dye is applied over the last a new color

is produced. You don't have to be a batik master, however, to get some great fun results.

## **2. A Brief History**

Although experts disagree as to the precise origins of batik, samples of dye resistance patterns on cloth can be traced back 1,500 years ago to Egypt and the Middle East. Samples have also been found in Turkey, India, China, Japan, and West Africa from past centuries. Although in these countries people were using the technique of dye resisting decoration, within the textile realm, none have developed batik to its present day art form as the highly developed intricate batik found on the island of Java in Indonesia (<http://www.expat.or.id/info/batik.html>).

Although there is mention of 'fabrics highly decorated' in Dutch transcripts from the 17<sup>th</sup> century, most scholars believe that the intricate Javanese batik designs would only have been possible after the importation of finely woven imported cloth, which was first imported to Indonesia from India around the 1800s and afterwards from Europe beginning in 1815. Textile patterns can be seen on stone statues that are carved on the walls of ancient Javanese temples such as Prambanan (AD 800), however there is no conclusive evidence that the cloth is Batik. It could possibly be a pattern that was produced with weaving techniques and not dying. What is clear is that in the 19<sup>th</sup> century batik became highly developed and was well ingrained in Javanese cultural life (<http://www.expat.or.id/info/batik.html>).

Some experts feel that batik was originally reserved as an art form for Javanese royalty. Certainly it's royal nature was clear as certain patterns were reserved to be worn only by royalty from the Sultan's palace. Princesses and noble women may have provided the inspiration for the highly refined design sense evident in traditional patterns. It is highly unlikely though that they would be involved in any more than the first wax application. Most likely, the messy work of dyeing and subsequent

waxings was left to court artisans who would work under their supervision (<http://www.expat.or.id/info/batik.html>).

Javanese royalty were known to be great patrons of the arts and provided the support necessary to develop many art forms, such as silver ornamentation, *wayang kulit* (leather puppets) and gamelan orchestras. In some cases the art forms overlap. The Javanese *dalang* (puppeteer) not only was responsible for the wayang puppets but was also an important source of batik patterns. Wayang puppets are usually made of goat skin, which is then perforated and painted to create the illusion of clothing on the puppet. Used puppets were often sold to eager ladies who used the puppets as guides for their batik patterns. They would blow charcoal through the holes that define the patterns of clothing on the puppets, in order to copy the intricate designs onto the cloth (<http://www.expat.or.id/info/batik.html>).



Other scholar disagree that batik was only reserved as an art form for royalty, as they also feel its use was prevalent with the *rakyat*, the people. It was regarded an important part of a young ladies accomplishment that she be capable of handling a *canting* (the pen-like instrument used to apply wax to the cloth) with a reasonable amount of skill, certainly as important as cookery and other housewifery arts to Central Javanese women.

## **B. Selection and Preparation of the Cloth of Batik**

Natural materials such as cotton or silk are used for the cloth, so that it can absorb the wax that is applied in the dye resisting process.

The fabrics must be of a high thread count (densely woven). It is important that cloth of high quality have this thread count so that the intricate design qualities of batik can be maintained.

The cloth that is used for batik is washed and boiled in water many times prior to the application of wax so that all traces of starches, lime, chalk, and other sizing materials are removed. Prior to the implementation of modern day techniques, the cloth would have been pounded with a wooden mallet or ironed to make it smooth and supple so it could best receive the wax design. With the finer machine-made cotton available today, the pounding or ironing processes can be omitted. Normally men did this step in the batik process.



PRIMISSIMA FABRIC




Strict industry standards differentiate the different qualities of the cloth used today, which include Primissima (the best) and Prima. The cloth quality is often written on the edge of the design. A lesser quality cloth which is often used in Blaco.





### **C. Indonesian Batik Designs**

In general, there are two categories of batik design: geometric motifs (which tend to be the earlier designs) and free form designs, which are based on stylized patterns of natural forms or imitations of a woven texture. Nitik is the most famous design illustrating this effect.

Certain areas are known for a predominance of certain designs. Centra Javanese designs are influenced by traditional patterns and colors. Batik from the north coast of Java, near Pekalongan and Cirebon, have been greatly influenced by Chinese culture and effect brighter colors and more intricate flower and cloud designs.

High fashion designs drawn on silk are very popular with wealthy Indonesians. These exceptionally high-quality pieces can take months to create and costs hundreds of dollars.

No	Batik Designs	Descriptions
1.		<p>Although there are thousands of different batik designs, particular designs have traditionally been associated with traditional festivals and specific religious ceremonies. Previously, it was thought that certain cloth had mystical powers to ward off ill fortune, while other pieces could bring good luck. Certain batik designs are reserved for brides and bridegrooms as well as their families. Other designs are reserved for the Sultan and his family or their attendants. A person's rank could be determined by the pattern of the batik he/she wore.</p>
2.	 <p data-bbox="427 1323 587 1357">SIDOMUKTI</p>	<p>The 'Sidomukti' batik pattern, seen here, is often used at traditional weddings  <a href="http://fitinline.com/article/read/keunikan-makna-filosofi-batik-klasik-motif-sidomukti">http://fitinline.com/article/read/keunikan-makna-filosofi-batik-klasik-motif-sidomukti</a></p>
2	 <p data-bbox="427 1738 616 1771">SIDOMULYO</p>	<p>The 'Sidomulyo' batik pattern, seen here, is often used at traditional weddings  <a href="http://blog.indahnesia.com/entry/200901090525/batik-design-to-become-world-heritage-this-year.php">http://blog.indahnesia.com/entry/200901090525/batik-design-to-become-world-heritage-this-year.php</a></p>

3.	 <p data-bbox="427 667 663 734">KAWUNG</p>	<p data-bbox="675 304 1367 539"><i>Kawung</i> is another very old design consisting of intersecting circles, known in Java since at least the thirteenth century. This design has appeared carved into the walls of many temples throughout Java such as Prambanan near Jogjakarta and Kediri in East Java. For many years, this pattern was reserved for the royal court of the Sultan of Jogjakarta.</p> <p data-bbox="675 539 1367 734">The circles are sometimes embellished inside with two or more small crosses or other ornaments such as intersecting lines or dots. It has been suggested that the ovals might represent flora such as the fruit of the <i>kapok</i> (silk cotton) tree or the <i>aren</i> (sugar palm).</p>
4.	 <p data-bbox="427 1093 663 1151">CEPLOK</p>	<p data-bbox="675 734 1367 1077"><i>Ceplok</i> is a general name for a whole series of geometric designs based on squares, rhombs, circles, stars, etc. Although fundamentally geometric, ceplok can also represent abstractions and stylization of <a href="#">flowers</a>, buds, seeds and even animals. Variations in color intensity can create illusions of depth and the overall effect is not unlike medallion patterns seen on Turkish tribal rugs. A single element of the form is chosen and then that element is repeated again and again in the pattern.</p>
5	 <p data-bbox="427 1496 663 1588">PARANG</p>	<p data-bbox="675 1151 1367 1588"><i>Parang</i> was once used exclusively by the royal courts of Central Java. The Parang design consists of slanting rows of thick knife-like segments running in parallel diagonal bands. Parang usually alternated with narrower bands in a darker contrasting color. These darker bands contain another design element, a line of lozenge-shaped motifs call mlinjon. There are many variations of this basic striped pattern with its elegant sweeping lines, with over forty parang designs recorded. The most famous is the '<i>Parang Rusak</i>' which in its most classical form consisting of rows of softly folded parang.</p>
6	 <p data-bbox="427 1899 663 1993">BATIK MODERN</p>	<p data-bbox="675 1588 1367 1962">Modern batik, although having strong ties to traditional batik, utilizes linear treatment of leaves, flowers and birds. These batiks tend to be more dependent on the dictates of the designer rather than the stiff guidelines that have guided traditional craftsmen. This is also apparent in the use of color that modern designers use. Artisans are no longer dependent on traditional (natural) dyes, as chemical dyes can produce any color or that they wish to achieve. Modern batik still utilizes canting and cap to create intricate designs.</p>

Fashion designers such as Iwan Tirta have aggressively introduced batik into the world fashion scene. They have done much to promote the Indonesian art of batik dress, in its traditional and modern forms.

The horizon of batik is continuing to widen. While the design process has remained basically the same over the last century, the process shows great progress in recent decades. Traditionally, batik was sold in 2¼ meter lengths used for *kain panjang* or *sarong* in traditional dress. Now, not only is batik used as a material to cloth the human body, its uses also include furnishing fabrics, heavy canvas wall hangings, tablecloths, and household accessories. Batik techniques are used by famous artists to create batik paintings which grace many homes and offices.








Fine quality handmade batik is very expensive and the production of such works is very limited. However, in a world that is dominated by machines there is an increasing interest in materials that have been handmade. Batik is one of these materials.





During your stay in Indonesia, take advantage of your time here to learn more about the fascinating world of batik. Have a batik dress or men's business shirt made for you by seamstress or tailor. Visit batik factories in Yogyakarta, Surakarta or Pekalongan to see for yourself how the intricate process is conducted or ask questions of batik artisans giving demonstrations in stores such as Sarinah or Pasaraya in Jakarta. You will come away sense of wonder over the time, effort and patience put into the creation of each batik cloth. You too may soon grow to love the distinctive waxy smell of batik and your batik acquisitions will provide many memories of your stay in Indonesia. Your support of the batik industry will also ensure that this art form grows to even greater peaks.










## HOW TO MAKE INDONESIAN TRADITIONAL BATIK

### A. Tools and Materials of Batik Design

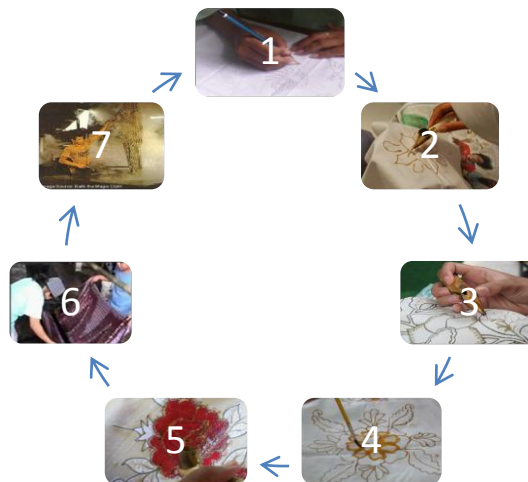
No	Batik Design Tools & Material	Descriptions
1	<p data-bbox="437 499 539 528">Canting</p>   	<p data-bbox="844 499 1374 1301">Although the art form of batik is very intricate, the tools that are used are still very simple. The <i>canting</i>, believed to be a purely Javanese invention, is a small thin wall spouted copper container (sometimes called a wax pen) that is connected to a short bamboo handle. Normally it is approximately 11 cm in length. The copper container is filled with melted wax and the artisan then uses the <i>canting</i> to draw the design on the cloth. <i>Canting</i> have different sizes of spouts (numbered to correspond to the size) to achieve varied design effects. The spout can vary from 1 mm in diameter for very fine detailed work to wider spouts used to fill in large design areas. Dots and parallel lines may be drawn with <i>canting</i> that have up to 9 spouts. Sometimes a wad of cotton is fastened over the mouth of the canting or attached to a stick that acts as a brush to fill in very large areas.</p>
2	<p data-bbox="437 1529 520 1559">Wajan</p> 	<p data-bbox="844 1529 1374 1659">The <i>wajan</i> is the container that holds the melted wax. It looks like a small wok. Normally, it is made of iron or earthenware.</p> 

		<p>The <i>wajan</i> is placed on a small brick charcoal stove or a spirit burner called an “<i>anglo</i>”. The wax is kept in a melted state while the artisan is applying the wax to the cloth.</p>
3	<p>Gawangan</p> 	<p>The fabric that they are working (applying the wax) on is draped over light bamboo frames called <i>gawangan</i> to allow the freshly applied wax to cool and harden.</p>
4	<p>Cap</p>  	<p>Creating batik is a very time consuming craft. To meet growing demands and make the fabric more affordable to the masses, in the mid-19<sup>th</sup> century, the <i>cap</i> (copper stamp-pronounced chop) was developed. This invention enabled a higher volume of batik production compared to the traditional method which entailed the tedious application of wax by hand with a <i>canting</i>. Each <i>cap</i> is a copper block that makes up a design unit. Caps are made of 1.5 cm wide copper stripes that are bent into the shape of the design. Smaller pieces of wire are used for the dots. When complete, the pattern of copper strips is attached to the handle. The <i>cap</i> must be precisely made. This is especially true if the pattern is to be stamped on both sides of the fabric. It is imperative that both sides of the cap are identical so that pattern will be consistent. Sometimes <i>cap</i> are welded between two grids like pieces of copper that will make a base for the top and the bottom. The block is cut in half at the center so the pattern on each half is</p>

		<p>identical. Caps vary in size and shape depending on the pattern they are needed for. It is seldom that a <i>cap</i> will exceed 24 cm in diameter, as this would make the handling too difficult. Men usually handle the application of wax using <i>cap</i>. A piece of cloth that involves a complicated design could require as many as ten sets of cap. The usage of cap, to apply the wax has reduced the amount of time to make a cloth. Today, batik quality is defined by <i>cap</i> or <i>tulis</i>, the second meaning hand-drawn designs which use a canting, or <i>kombinasi</i>, a combination of the two techniques.</p>
<p>6.</p>	<p>Batik Wax</p> 	<p>Different kinds and qualities of wax are used in Batik. Common waxes used for batik consist of a mixture of beeswax, used for its malleability, and paraffin used for its friability. Resins can be added to increase adhesiveness and animal fats create greater liquidity.</p> <p>The best waxes are from the Indonesian islands of Timor, Sumbawa and Sumatra: three types of petroleum-based paraffin (white, yellow, and black) are used. The amounts mixed are measured in grams and vary according to the design. Wax recipes can be very closely guarded secrets. Varying colors of wax make it possible to disguise different parts of the pattern through the various dyeing stages. Larger areas of the pattern are filled in with wax that is cheaper quality and the higher quality wax is used on the more intricately detailed sections of the design. The wax must be kept at the proper temperature. A wax that is too cool will clog the spout of the canting. A wax that is too hot will flow too quickly and be uncontrollable. The artisan will often blow into the spout of the canting before applying wax to the cloth in order to clear the canting of any obstructions.</p>

<p>5.</p>	<p>Batik Dyes (Synthetic dye)</p>  <p>Naphthol</p> <p>Natural Dyes</p>  <p>Mengkudu/<i>Morinda Citrifolia</i></p>  <p>Soga Tingi</p>  <p>Soga Jambal</p>  <p>Soga Jawa (Secang)</p>	<p>Batik dyes used in each different area. Dyes derived from materials contained in the area. Batik dyes made from synthetic dye (made from certain chemicals) and the natural color is the color of the material produced from certain plants for example, dye batik from tree tom, pace or mulberry tree that gives the red color of yellow artificiality, indigo, and timber soga. The traditional colors for Central Javanese batik were made from natural ingredients and consisted primarily of beige, blue, brown, and black. The oldest color that was used in traditional batik making was blue. The color was made from the leaves of the indigo plant. The leaves were mixed with molasses sugar and lime and left to stand overnight. Sometimes sap from the Tingi tree was added to act as a fixing agent. Lighter blue was achieved by leaving the cloth in the dye bath for short periods of time. For darker colors, the cloth would be left in the dye bath for days and may have been submerged up to 8 – 10 times a day. In traditional batik, the second color applied was a brown color called soga. The color could range from light yellow to a dark brown. The dye came from the bark of the Soga tree. Another color that was traditionally used was a dark red color called <i>mengkudu</i>. This dye was created from the leaves of the <i>Morinda Citrifolia</i>. The final hue depended on how long the cloth was soaked in the dye bath and how often it was dipped. Skilled artisans can create many variations of these traditional colors. Aside from blue, green, would be achieved by mixing blue with yellow, purple was obtained by mixing red and blue. The soga brown color mixed with indigo would produce a dark blue-balck color.</p>
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## B. Step by Step Process of Making Batik

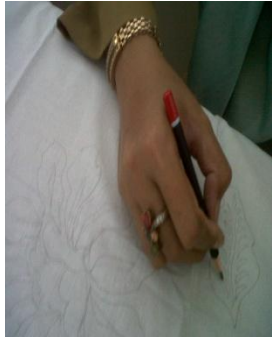







1. First of all, we need to chose and prepare the fabric. It is the best to start with a good quality cotton. We need paints and some tools (there are many materials and tools that are used to create batik and they look a bit different in various countries). We also need some design idea for the theme or pattern that you want to apply on the fabric. Regardless of how experienced we are and how much preparation we will do, the final outcome always is a surprise (even to these most experienced batik artist).
2. The chosen fabric must be prepared. It is recommended to wash it even few times to remove any dirt. Very often fabrics are also boiled to prevent fabric shrinkage afterwards.
3. The next step is to apply the pattern. We can draw with pencil directly on the material or copy paper patterns. Another way is to cut the pattern out from the paper and sprinkle the edges with charcoal or powdered graphite from the pencils.
4. The next step is applying the wax along the drawn lines and ornaments. The fabric is usually stretched on a wooden frame, and a special applicator (known in Indonesia as *canting*) is used to apply melted wax. Handmade wax lines and ornaments are really time consuming. This technique also requires precision and incredible patience. It is much faster to apply wax on fabric using special stamps (in Indonesia the stamps are usually made of metal, but in India, very often you can find a wooden

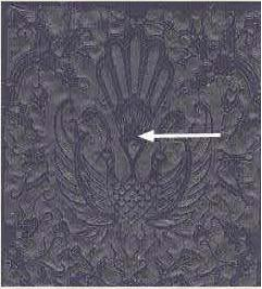




stamps). The stamps can vary in size – some are single motifs (flower, animal, geometric pattern), some are large enough to cover the square meter of fabric at once.

5. When the wax is applied and dry, the fabric can be dyed. Traditionally in Indonesia color is applied in two phases. The first step is to immerse the fabric in a solution of some kind of soda and few other ingredients in order to enhance absorption of color (in the next stage). After that, the fabric is immersed in the actual paint, rinsed in cold water and then it is dried. Modern batik making allows using one stage dyeing specimens, which considerably simplifies the process. If we want few shades of a certain colour on our batik, we repeat the process of waxing and dyeing few times, always starting dyeing from the lightest to the darkest colours. Another way to achieve a multicoloured batik is to apply paint only on the certain areas of the fabric (stretched on canvas) with a small brush or with a stick ended with a sponge or cotton. This technique is used in particularly colorful batiks, where the gradual application of the brightest to the darkest does not work.
6. The last step is to remove the wax. To do this, we immerse batik for few moments in boiling water. There are usually some special substances mixed with the water helping to remove the wax (e.g. soda). Below are some galleries where you can see my first batiks through the different stages of their completion.


### C. The Example of Design Process of Batik

No.	Step of Process	Descriptions
1.	Design process 	The outline of the pattern is blocked out onto the cloth, traditionally with charcoal or graphite. Traditional batik designs utilize patterns handed down over the generations. It is very seldom that an artisan is so skilled that he can work from memory and would not need to draw an outline of the pattern before applying the wax. Often designs are traced from stencils or patterns called <i>pola</i> . Another method of tracing a pattern onto a cloth on a glass table that is illuminated from below which casts a shadow of the pattern onto the cloth. The shadow is then traced with a pencil. In large batik batik

		factories today, men usually are in charge of drawing the patterns onto the cloth.
2	<p>Waxing</p>   <p>Step 1</p>	<p>Female workers sit on the a low stool or on a mat to apply the wax with a canting. The fabric that they are working on is draped over light bamboo frames called <i>gawangan</i> to allow the freshly applied wax to cool and harden. The wax is heated in the <i>wajan</i> until it is of the desired consistency. The artisan then dips her canting into the wax to fill the bowl of the canting.</p> <p>The first wax is applied over the penciled-in outline of the pattern. Almost always the original cloth is white or beige.</p>
3.	<p>Dyeing</p> 	<p>After the initial wax has been applied, the fabric is ready for the first dye bath. Traditionally dyeing was done in earthenware tubs. Today most batik factories use large concrete vats. Beside, the vats are ropes with pulleys that the fabric is draped over after it has been dipped into the dye bath. The waxed fabric is immersed in the dye bath of the first color. The amount of time it is left in the bath determines the hue of the color, darker colors require longer periods or numerous immersions. The fabric is then put into a cold water bath to harden the wax.</p>
	 <p>Step 2</p>	<p>The cloth is dyed in the first dye bath. In this case the first dye bath is indigo blue. The area of the cloth where the wax was applied in Step 1 will remain white.</p>
	 <p>Step 3</p>	<p>Second application of wax is applied. In this case it is a dark brown color. A poorer quality of wax is used to cover larger areas of cloth. The darker color helps to differentiate it from the first wax applied. Any parts that are covered with this wax application will remain the indigo color.</p>


	 <p data-bbox="533 595 624 622">Step 4</p>	<p data-bbox="738 304 1369 405">The cloth is dyed in the second dye bath. In this case it is a navy blue. Any areas that are not covered by wax will become dark blue.</p>
	 <p data-bbox="533 947 624 974">Step 5</p>	<p data-bbox="738 629 1345 763">All the wax that has been applied thus far is removed. This is done by heating the wax and scraping it off and also by applying hot water and sponging off the remaining wax.</p>
	 <p data-bbox="533 1274 624 1301">Step 6</p>	<p data-bbox="738 978 1353 1046">Wax is applied to the area of the fabric that the artist wishes to remain the indigo blue color.</p>
	 <p data-bbox="533 1601 624 1628">Step 7</p>	<p data-bbox="738 1305 1353 1373">Wax is applied to the area of the fabric that the artist wishes to remain white.</p>
	 <p data-bbox="533 1928 624 1955">Step 8</p>	<p data-bbox="738 1632 1361 1767">The fabric is submerged in the final dye bath. In this case it is brown. Any areas of the cloth that have not been covered with wax will become brown.</p>



	 <p style="text-align: center;">Step 9</p>	<p>The finished cloth after all of the wax has been removed.</p>
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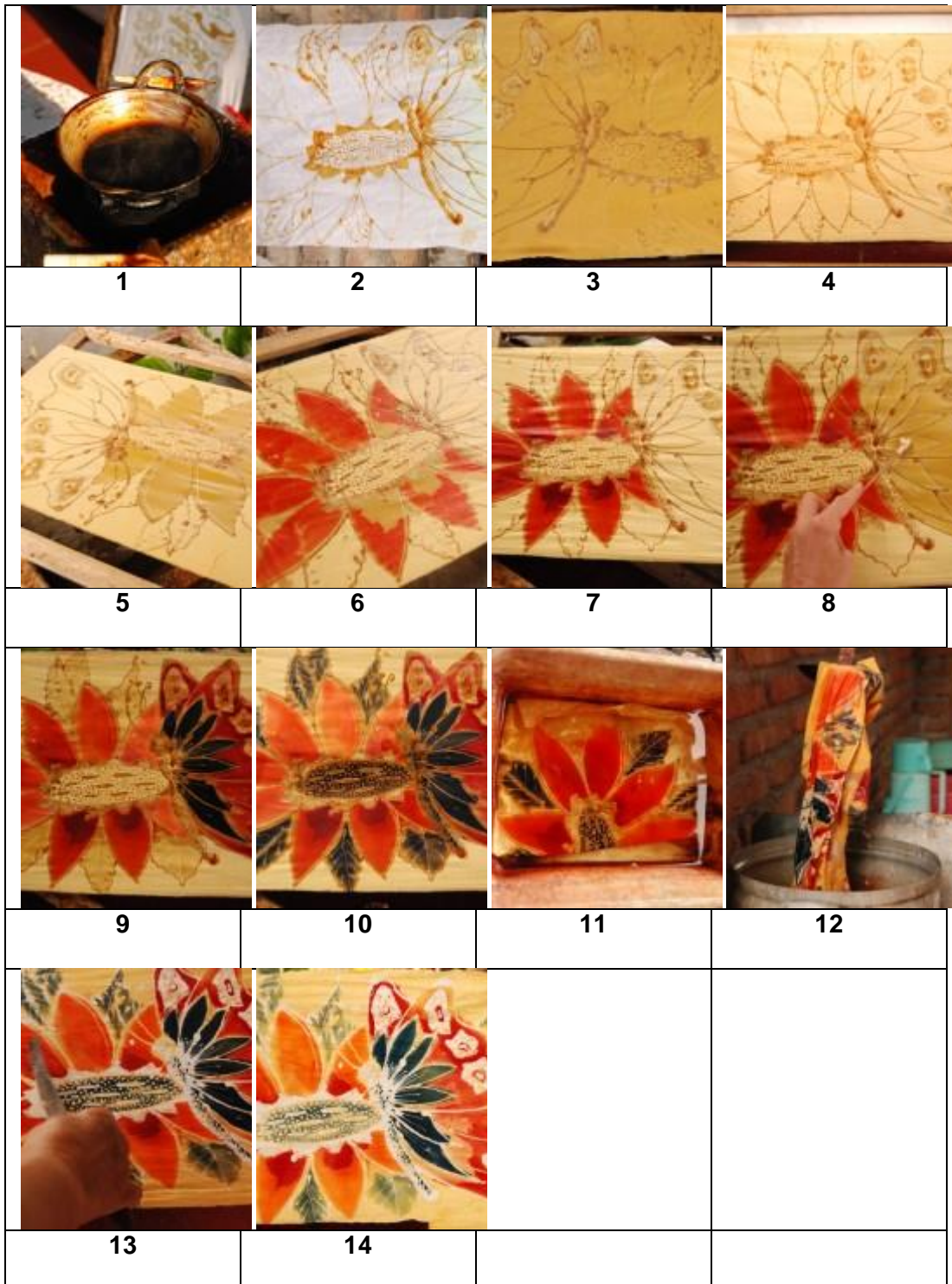
Source: <http://www.expat.or.id/info/batik.html>

**The other Examples of Traditional batik – step by step (a)**

 <p style="text-align: center;">1</p>	 <p style="text-align: center;">2</p>	 <p style="text-align: center;">3</p>	 <p style="text-align: center;">4</p>
 <p style="text-align: center;">5</p>	 <p style="text-align: center;">6</p>	 <p style="text-align: center;">7</p>	 <p style="text-align: center;">8</p>
 <p style="text-align: center;">9</p>	 <p style="text-align: center;">10</p>	 <p style="text-align: center;">11</p>	 <p style="text-align: center;">12</p>

SOURCE: <http://artcave.eu/blog/batik-fabric-wax-and-colours-madness>

The other Examples of Traditional batik – step by step (b)



Source: <http://artcave.eu/blog/batik-fabric-wax-and-colours-madness>