

## **THEMATIC UNIT Nº12**

### **WATERCOLOUR AND GOUACHE.**

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## 12.1. DEFINITION.

The watercolour painting is defined as a mixture of pigments made from thin pigments and rubber that dissolved in water provides a very transparent colors. The foundation of watercolour lies on the clarity, cleanliness, brightness and luminosity of clear-cut colors, its transparency on the paper's whiteness. Therefore it must be applied in aqueous light spots, its vehicle is water and the fluidity of it gives its main feature.

The fund, usually paper, (also parchment, ivory, Crete funds, etc.) should be white and bright.

If we compare the different existing techniques, we can say that watercolor has one of the first places in the degree of transparency and luminosity. Being a non-opaque material allows light to radiate both the support and of the previous strokes.

This procedure provides a very useful experience and enhances the sensitivity to the use of fluid materials in other techniques. Because of its rapid implementation, your aesthetic goal shall be oriented consistently toward the achievement of graceful and sensitive works, not least out of a leaner and firm performance. But the freshness and spontaneity of the first intention is a definite value in the category of this procedure, which is true, can degenerate into "manner" and hence the discredit of this technique for the sake of an aesthetic of short flights, commercial and for beginners. But acting here, as in other types of painting, frankly and without conventional virtuosity prejudices, the dignity of the collected works does not detract from another procedure.

Because of the speed of execution, this technique lends itself to the realization of ideas, notes, and sketches, building management docility.

In fact, the watercolor has been used by many great painters, and even as an element of artistic research, as is the case by citing an example of the frequent notebooks M. Barceló.

## 12.2. A BRIEF HISTORY.

May be considered the earliest forms of watercolor were already present in ancient Egypt and Mesopotamia. Thus the early Oriental ink drawings are actually a form of watercolor monochrome quite common in the papyri of ancient Egypt. These ornamental modes and techniques with some variations are also common on the sarcophagi of Egypt.

Quite a few centuries later, in the Middle Ages, were used in water soluble pigments bonded with egg-derived densifier for manuscripts, in fact it is quite likely that the techniques of watercolor and gouache descended directly from the art of miniature medieval. Another precursor of watercolor in Europe is fresco - mural painting that uses pigments in an aqueous medium on wet plaster. Perhaps the most famous example of buon fresco is the Sistine Chapel, begun in 1508 and completed in 1514.

In any case, despite the above background, the history of watercolor is closely tied to the history of paper, in its present form invented by the Chinese shortly after 100 BC. The art of Chinese watercolors or Shuimo hua dates back to the Tang Dynasty (618-907), a period which began using water ("shui") and India ink ("mo"). The painters of the Tang Dynasty used to use the ink more dilute (more water) to the tones of the picture will become more blurred. From the Yuan Dynasty (1271-1368) appeared another technique to paint Shuimo hua consisting least dilute the ink used to have a wider range of tones. Within that period we highlight artists like Zhao Mengfu (1254-1322) and Huang Gongwang (1269-1354). In the twelfth century the Muslims introduced the manufacture of paper in Spain and the technology spread to Italy decades later. Some of the oldest paper manufacturers in Europe include Fabriano (Italy), around 1276, and Arches (in France), around 1492.

## THE RENAISSANCE WATERCOLOURS.

The first known systematic use of watercolour in Europe is by the Italian Renaissance painter Raffaello Santi (1483-1520), who painted in large cardboard sketches for tapestries. Other figures of the Renaissance who started using watercolor with some continuity are the German Albert Durer, Albert Durer (1471-1528) and the Italian Federico Zuccaro (1542-1609). Albert Durer's watercolors introduce real studies of natural history subjects, animals and plants are taken up with great rigor and detail in watercolor introducing what eventually would be the scientific drawing. In the case of Federico Zuccaro, as did many artists of the period, he used the water-based paint monochromatically, to raise the profile of the drawing. This trend continued in the sixteenth and seventeenth centuries, period in which it was customary to use the bistre (brown pigment, coffee, obtained from soot) and cuttlefish (black pigment from the squid ink), examples of this are the works of Claudio of Lorena and Rembrandt. Both painters used the bistre and sepia in monochrome ink drawings to create expressive effects of clouds on atmospheric landscapes.

## THE FIRST WATERCOLOUR SCHOOL IN EUROPE

The first European school specifically watercolour was led by Hans Bol (1534-1593), clearly influenced the creations of Albert Durer. At this time, it wasn't common to use water-based paint, which if seen in works by other Dutch masters such as winter landscapes made with a mixture of watercolour and gouache of Hendrick Van Avercamp (1585-1634) and some tavern scenes by Adriaen Van Ostade made (1610-1685).

## ROMANTICISM AND ENGLISH SCHOOL

The watercolour technique was not appreciated as worthy artistic method and definitively until the eighteenth century, when the English School won him acceptance. At first the British watercolorists followed the Dutch tradition and were served washes of color to enhance their pen or pencil drawings, but by mid-century with the innovative technique of Britain's Paul Sandy (1725-1809) the use of watercolor gives a radical turn which resulted in the expressive possibilities of staining directly on paper without a previous drawing. Thus Paul Sandby was called the father of British watercolor by the influence generated on other young artists from the second half of eighteenth century. Among them we mention John Robert Cozens (1752-1797), William Blake (1757-1827), Gaspar D. Friedrich (1774-1840), Thomas Girtin (1775-1802), Joseph W. Turner (1775-1851), John Constable (1776-1838), John Sell Cotman (1782-1842), and Richard Parkes Bonington (1802-1828). Perhaps the most famous of these was Joseph M. William Turner, a precursor of techniques that later develop vanguards. His paintings reflect the light and movement beautifully, shortening the process of transcription of the images and fusing them to evoke a subjective atmosphere that activates the imagination of the viewer.

The watercolor was regarded as an ideal technique for painting outdoors for its portability and ease of drying, also allowed to represent themselves comfortably themes of romanticism and the stormy skies, fog, mist and mystery of the thick foliage. In any case, not all were gentle pastoral landscapes, authors such as William Blake, Thomas Rowlandson, John Robert Cozens and later French Romantic painters like Gericault and Delacroix developed mystical compositions of social satire and even about the sublime and grand in the most dramatic sense.

## WATERCOLOR AS A MEAN IN THE SCIENTIFIC ILLUSTRATION

But the great achievements of watercolor should not only be linked to Romanticism and the English school, you must also make a special mention to their proliferation in the field of scientific illustrations. As we

have noted the German Albrecht Dürer opened a territory within the discipline to incorporate the color of the watercolor and gouache for descriptive purposes and didactic example is works such as Iris (1503), Study of a wing (1512) or The Little Owl (1508). Gradually issues related to Botany and Zoology reached an extraordinary artistic quality. Not surprisingly the great powers in the twelfth and thirteenth centuries made scientific expeditions that reached every corner of the planet and which always included a skilled watercolorist to be leaving a graphic file that could contribute to the development and progress of science. Specific examples of scientific drawing applied to these early scientific expeditions are the work of Italian Vincenzo Leonardi (1621-1646) tha betwen 1630-40 made many drawings of minerals, flora and fauna, of North Africa. Thus, in the late seventeenth century achieved great development studies on plant anatomy, which will exert much influence on subsequent classifications. In Spain, during the reign of Carlos III in the eighteenth century, we lived our best science moment. It was the "Illustrated" period in which thanks to the spirit of the age are promoted expeditions to South America, Philippines ... This is a time when it becomes necessary to inventory the natural world so that it can operate rationally. The enormous distances, geographical and climatic conditions and the lack of technology, made botanical illustrations become real scientific papers. Of note were the engravings colored with watercolors of the expeditions of José Celestino Mutis (1732-1808), also the work of Antonio Jose Valencia Cabanilles (1745-1804), and Juan Bautista Bru de Ramón (1740-1799).

## WATERCOLOUR ON TWENTIETH CENTURY

The watercolor technique at the end of ninth century was more widespread in the United States than in Europe. Its main representatives since 1870 were John Singer Sargent and Winslow Homer, the first European with bright scenes and the second with the realistic and absolutely spontaneous forests of Maine and Caribbean scenes, mainly.

In Europe, had no influence watercolor outstanding among the painters of the Impressionist movement although it is an ideal technique to represent the light and atmosphere. Among the Spanish watercolorists can highlight the Catalan Mariano Fortuny (1838-1874) who influenced an entire generation of painters like Jose Tapiró national watercolor artists (1836-1913), Antonio Fabrés (1854-1936) and José Villegas (1844-1921).

In twentieth century, watercolor remains a technique used by many artists to previous phases of work, notes, object books, travel books, etc. In any case, the watercolor has had a relatively small role when it comes to definitive works by the vanguard artists as a preferred technique in the development of their works. As exceptions we highlight the work of

French post-impressionist Paul Cezanne and Paul Klee Swiss vanguard (1879-1940), who investigated with watercolor pursuing innovative techniques and supports. However, in general, watercolor has been overshadowed by other materials as gouache and acrylic paint.

Within the national scene of the twentieth century we highlight in watercolor two masters: Ceferino Olivé (1907-1995) and his disciple, Rafael Alonso Lopez-Montero (1921-2009). In the Canaries Islands, is significant practice this painting technique that has and has had a deeply rooted and development, emphasizing among other artists, Francisco Bonnin Guerin, José Comas Quesada and Alberto Manrique. In the contemporary Spanish scene highlights the frequent use of watercolor by Miquel Barceló (Felanitx, Mallorca, 1957) something that is evident both in his travel books and in the many books he has illustrated with this technique.

### **12.3. AESTHETIC AND PLASTIC CHARACTERISTICS OF WATERCOLOUR.**

Since the nineteenth century until today, the art of watercolor has always enjoyed a wide popular acceptance. Paradoxically, this same popularity has sometimes reported some disrepute. Due to its frequent use by dilettant painters of the second half of last century the phrase "watercolors" is automatically associated with the image of the lady of high society impeccably dressed, putting up his easel in a bucolic setting for paint a landscape with delicate pastel shades. This image still exists today among a profane public, which sometimes tends to see watercolor as an enjoyable hobby, comparable to embroidery. However, artists are a different opinion and a growing number of them prefer it to other mediums, applying it creatively and suggestive in the treatment of different topics.

Another old myth, fortunately dying out, is that there is a "right" way to paint watercolors. Currently, nothing prevents mixing watercolor watercolor with other techniques, using various mediums in the same painting. Even in the relatively narrow context of water-based paint, there are infinite ways to implement it. Learning the possibilities of a medium has a liberating effect that allows you to find your own style and express their own ideas with strength and confidence. Do not forget, however, that the technique is only a tool, a way of painting should never be more important than what is painted.

While it is true that each procedure implies a concept according to their material possibilities, so this should not be conventional and

stereotyped. Manners are always consistent with the physical constraints of the method, but as always, the artist's personality to preside and determine the essence of the work of art so that we must discard all affectation, which is only a distorted of artistic vision, not attributable to the techniques themselves, and will approach the task without prejudice, in all sincerity free from affectation. Thus we'll avoid the pejorative thinking that support many traditional procedures, including watercolor. We see for ourselves the expressive possibilities of water spots. The greater or lesser degree of transparency or opacity of the colors depend on the shape and quantity of water is applied, their basic element. There is in this connection a very important fact: the higher lights are achieved leaving untouched areas of light, ie, making spaces reserved where the colored water does not touch the paper. So, wherever you need a clear zone, as they could be white clouds in a blue sky, it will not touch that area or cover only pure water. This leads us to think and conceive of things in terms very different from other painting techniques which are used in opaque colors, in order to fill all the spaces and in the first or last instance the lights are painted with white or clear pigment. In the case of watercolor proceed in reverse, as you should think of emptying paper's whites, which are in some ways just as important that the areas covered by the pigments. To be precise, "the not painted is as important as the painted." This brings us conceptually a very interesting way of appreciating the world and things and that the watercolorist understands immediately from the moment he starts thinking in terms of masking the whites. Relatively speaking, this concept used in the watercolor technique, has clear parallels with the idea of "empty", taken from centuries by Oriental art. This explains why the Zen art in ancient Japan uses water-based paint as an expression of a philosophical position in which the vacuum is not synonymous with "no things" but rather the opposite: plenitude.

## 12.4. TYPES OF WATERCOLOUR.

### LIQUID WATERCOLOUR

The colors are transparent and an exceptional gloss and brightness, without pigments, and mixed immediately with each other. Dilute with water and do not deposit.

The liquid watercolor is the perfect product for the airbrush, as it is completely water soluble and contains no additives that can clog the valve of the instrument.

## WATERCOLOR PAD AND TUBE IN: BRANDS AND SELECTION OF COLORS.

When it comes to colors in tubes, "the wet colors", the proportion of gum in the liquid watercolor is light with respect to water: 25% for the tablets the normal solution is 50%. Is also lower in the tubes the amount of glycerin and honey because do not need as much as susceptibility of dissolution. Anyway glycerin (or alcohol) facilitate the kneading of dough that is somewhat laborious, to increase the capillarity of the pigment. Thus, the watercolor is in the form of tubes and tablets arranged in boxes of metal or porcelain that can serve as a palette. Both the tube and the tablet must be dissolved very easily. Drying the kneaded can be activated by mild heat to obtain the required consistency.

Anyway the difference between the tube and the tablet is not only in the compositional variation noted, since the tube when the paint dries, it is by no means recoverable and instead the tablet always remains soluble. From this it follows that the question depends not only of provided water. Operation is in the contribution to the tablets of hydrochloric acid (5cc.) which reacts with glycerol (alcohol) to form an ether, to which are added fatty substances of the gum; is also added ammonium carbonate (5gr.) that reacts with the fatty esters constituting a soluble soap by hydrolysis on contact with hot water. This soap is the binder of the tablet, which in some ways be considered a temple of soap or Arabic Gum. The solubility is increased by the greater amount of glycerin level. On trade can be reinforced with half-fat egg tempera: 1 egg, 1 volume of linseed oil or dammar varnish and 2 volumes of water.

### Tablets

100 parts of pigment.

50% gum solution.

30 parts of glycerin.

30 parts of honey.

5cc. of hydrochloric acid.

5cc. ammonium carbonate.

### Tubes

100 parts of pigment.

25% gum solution.

15 parts of glycerin.

15 parts of honey.



Anyway, by the difficulties in its preparation, it is unwise personal preparation of the colors, preferably acquired in the trade.

There are excellent brands of watercolors in pill as Rembrandt, Reevés, Watteau, Lambertye, Bourgeois, etc.. In Spain there are other lower-quality brands such as: Taker, Pelikan, Rosal, Fortuny, Pescador, etc.

In watercolor unstable colors can be used because of the magnificent affect this procedure it is based on, transparency and clarity of tone. For example, carminy lacquers, purple, scarlet, yellow of "Stil of grain" of vegetable nature, Prussian blue, etc. They are colors of little fixity to light, but very suitable for watercolor by the brilliance of his tone. Of course, exposed to direct sunlight, will fade, because in addition carry little binder and films are very dim. That must not be used improperly fitted anilines that will impregnate the mass of the paper. We must take care not to take the brushes in our mouths, as some watercolorists tend to because some colors have arsenic.

Watercolors boxes do not require a huge amount of pills, with 6 or 12 colors can work successfully. There are cases of good quality and economic, Van Gogh of 12 colors (Talens) or Pébéo, Cotman, Rembrandt, etc. The important thing is that within those colors have quinacridone pink, yellow arylamide, and phthalocyanine blue because these colors are equivalent to primary magenta, yellow and cyan.

The white should be the paper one, which defines the character of the method. Determined to use it, we will use a white gouache (watercolor loaded, bound), which is Zinc or lead (yellows), lithopone, titanium, barium, etc.

Regarding the yellows, the safest are the yellow ocher (beware of poor brand, leave stains), cadmium yellow, chrome lemon yellow is not fix, some good artificial mark.

Of the red, red ocher, burnt sienna, earth Seville, and all the earthy reds. Well suited for watercolor is Saturn red (Lead), carmine, red lacquer, the vermilion blackens.

Can be used all blue: ultramarine, cobalt, cerulean, but above all is very suitable Prussian blue.

Greens. Chromium oxides (emerald and matte), Mixtures of blue and yellow in the palette.

Ivory black.

Brown. It is a mixture by superposition and juxtaposition of transparencies. With yellow, carmine, Prussian Blue and Black Ivory, can be achieved many nuances, the three primaries plus black.



Selection of 25 permanent watercolor pigments. Image from the book by Ray Smith. The artist's manual, p. 141.

## 12.5. TOOLING FOR WATERCOLOR.

### BRUSHES

Soft hair brushes, such as red sable, squirrel hair, ox hair or synthetic soft hair. These brushes can hold lots of paint without losing its shape. However, the synthetic traces do not allow as long strokes as the animal's hair given its limited ability to retain water. This circumstance makes them less suitable than the former to the watercolor technique. Overall are interesting round tip brushes, and more of a medium to large size. Since

this type of brush holds plenty of water and control a wide range of thicknesses ranging from the finest line up the stain. Besides brushes, is always interesting to have at hand sponges and paper rolls to spread and dry color.

## PROCESS

Work can start with a drawing in charcoal or graphite pencil, but without deleting rubbing, as these scratches will affect the paper and consequently on the spot. So it is best to tackle the issue directly with the brush in soft tones. Watercolor is a discipline of its own skills, and the fact avoid prejudices and fears caused by distrust on the own resources of the profession releases the students producing a sense of security.

Previously the entire surface of the paper is moistened with the sponge and when the water absorbed, begins drawing with the brush midtones, little embarrassing, perhaps correcting with wet sponge and gradually tightening the set and qualifying the basis of transparencies, trying to act with freshness, without tormenten colors. The lights will be left aside (hard) or obtained by washing with a brush or sponge, wet (soft and toned). It may also be removed with the rubber when dry. Some painters use paraffin (artificial wax, derived from petroleum) colorless, with which preserving the details that must be white and then finished the work, make it jump, scraping carefully. You can correct deleting wet with sponge or absorbing the stain with a brush.

## DRYING

Alcohol accelerates, it slows with glycerol (approximately 5%), there are liquid watercolors more appropriate for large areas.

## CORRECTIONS

By its nature, watercolor requires implementing security, grace and vigor of stroke, a commitment to spontaneity and the imprint of the moment, antagonistic to the idea of going making corrections. In any case, we must know that watercolor can be erased by applying bleach, with this procedure are achieved rinses and special effects of high plastic interest.

The colors used on dry are harder and can be used intentionally. Graphics can be made with the tip of the brush to enhance contours, influencing with the tail of the brush with semi-wet stain removing clears, slightly spatulate with guillete.

## MASKING AND RESERVING

One of the most interesting resources of watercolor and that gives good results, is using masking fluid to protect areas clear from the support itself. It is a liquid with which we paint areas to aside and protect of watercolor paper. It is made of latex with some tone to distinguish from paper and make it visible. Sold in jars and dries quickly, forming a waterproof film to protect the area covered while painting the rest of the paper. Among the brands that we can use secured we have "Liquid Masking Film 052. masking film. "Also Vallejo brand has a watercolor reserving under the name "Liquid Masking. AM-85000 Masker".

This resource is useful because it helps to profiling small and complex forms that should not be painted when we do a wash.

In the watercolor technique you must learn to reserve beforehand white and then apply the paint around. For example, a gull in the sky is small and needs to be protected first before painting the sky. So we reserv the white and the sky will not pitch variations, but will be a single stroke.

When we want to keep white large profiles, straight and precise, we recommend using masking tape instead of liquid maskings. However, when we want to smooth shapes such as clouds, crests of waves or any dithering, it is best to use sponges and brushes to achieve a more natural and integrated.

### How to use the protective liquid watercolor:

- With a clean brush, to necessary size, paint with the liquid on the paper creating the exact shape we want to mask.
- Allow to dry thoroughly.
- It is painted with watercolors being careful not to rub a lot the masking.
- Once dry watercolor, scratching with the finger and remove the masking fluid from the reserved area.
- Finally clean the brush used to mask with soap and water immediately after use, Not to dry, the rubber breaks down much brushes. If some of the liquid remained on the brush, it may be cleaned with fuel oil or other light carburant.

## 12.6. SUPPORTS FOR WATERCOLOUR

WATERCOLOR FOR PAPERS: BRANDS, TYPES AND TENSION.

All papers used today in the arts have a high percentage of cotton cellulose mixed with eucalyptus in different proportions, as appropriate. In the case of a watercolor paper it is very interesting its absorption capacity. Such absorption capacity is in the case of watercolor as important as the adhesiveness of the rubber. The best watercolor papers are made from linen rags and accept a small percentage of cotton.

In terms of brands and types of paper for watercolor, there are a large number and variety of them, among which we highlight: those that offer "Watman", "Canson", "GUARRO", "Fabriano" Sheller "or Grained Caballo.

The grain of the paper is also a factor to consider, whether natural, as in the papers to the "bathtub" produced by the wire in which the water was drained of its bonding, or forced. In most commercial quality, stain vibrated in her womb leaving small deposits of vibrant pigments. The most common is to use a medium grain or high.

Different brands offer wide assortment of both format and weighing personally recommend working with a minimum weight of 200 gr./m. Among the papers that we can easily find and reasonably priced are Guarro paper 240 gr./m., Coarse or medium, and presented in a format of 50 x 70 and 70 x 100 cm. Other interesting watercolor papers are Arches 300 gr./m. or also Canson in 300 gr. / m.

It should moisten the paper to tight it, and has to be in the front side and with a sponge, all alike. It attaches to dashboard with sealing tape. Fix first up and then down the sides. If it's a very thick with pins is enough, is fixed to the frame after making a few cuts and glued behind not by the edge of the frame. The glues to use are cellulosic paste sold to paper.

## 12.7. CONSERVATION OF WATERCOLOR.

According Giuseppe Ronchetti in his book *Manuale per i dilettanti di pittura* is possible to retain the watercolor extending over the outer face of the glass which protects the work, a quinine sulfate solution (which is also colorless and therefore invisible), and that ability to filter ultraviolet rays. This prevents the colors from watercolor paint pale when exposed to light. The light causes discoloration of certain media, especially watercolor, pastel and many drawing inks. It can also darken or weaken the paper. Damage from light is cumulative and irreversible. Conservators recommend that no part is exposed continuously since all light will cause damage. For example, the Thyssen Museum, when he exhibited watercolor works made with great care makes only 3 months showing them every 2 or 3 years, limited to 8 hours daily light exposure (at an intensity below 50 lux), and filter with a total filter of any type of ultraviolet

radiation. The best conditions to exhibit works on paper are those where light levels can be kept low by avoiding daylight. Homemade ordinary bulbs (incandescent or tungsten) contain very little UV are therefore more desirable, as long as they are not too close to the work of art, to prevent the action of heat they generate.

The heat and moisture accelerates the deterioration process of paper, therefore the temperature and relative humidity should not exceed 20 ° C and 60% respectively and also must be kept constant. Climate changes cause expansion and contraction affecting the paper structure and weaken the adhesion of the pictorial medium causing distortions such as undulations. Storage and exposure areas should be free from water pipes to prevent breakage of pipes. The frames and folders to store can provide some protection against daily fluctuations but do not protect the role of prolonged or seasonal environmental changes. The best way to keep most of prints, drawings and watercolors is depositing them in boxes made of acid-free materials (ph neutral) stored in horizontal and within folders are not acidic. The clear plastic covers are not suitable for conservation so that the watercolors will be separated with tissue paper, acid free paper translucent.

## 12.8. WATERCOLOR AND GOUACHE ELABORATION.

### BINDERS FOR WATERCOLOR.

The colors of watercolor pigment are obtained by kneading with the pigment a small proportion of binder, which serves as its subjection. The binder of watercolor is the Arabic Gum, exudation of fruit trees (cherry, almond, apricot, peach, etc..) And especially of an acacia tree in Arabia (hence the name) or Senegal, the fluid solidifies in the tree trunk in contact with air, being soluble in hot water, although there is a danger of losing their adhesive properties in the boiling, it is desirable to leave it in cold water immersion in a certain time. Dissolving in it we can get a gummy solution, at a rate of 1/2, to which we add glycerin to make it flexible again. To diluted gums, usually in proportion 1/2, 1/3 of water is always added alcohol or glycerol to 5.8% or 10% to plastify and prevent become brittle and crystalline when dry. To the gummy solution add sugar syrup or honey (50 gr. Of sugar dissolved in one liter of water) to make it more microscopic and adaptable to the paper, more soluble and flexible, the glycerin is a dense alcohol, very hygroscopic, (it attracts water) and is soluble.

### RECIPES FOR PREPARING THE GUMMY SOLUTION.

#### Gummy solution A

- 30gr. Arabic Gum.
- 60cc. of boiled, warm or distilled water.
- 10cc. Glycerin.
- 10cc. of sugar syrup or honey.

### Gum solution B

- 40gr. Arabic Gum.
- 60cc. of boiled, warm or distilled water.
- 10cc. Glycerin.
- 10cc. of sugar syrup or honey.

You can add 2 to 5g. of ox gall, product obtained from the own gall of the beef, cooking it for an hour and adding alcohol, once cooled, filter. Serves to increase the capillarity of the pigments relative to the molecular tension of water. Therefore facilitates the amalgamation of the paste and its adaptation to the paper's mordant, due to its large higroscopicity and solubility, effects that also produce both glycerin as sugar syrups.

### GENERAL RATE BETWEEN GUMMY SOLUTION AND PIGMENTS FOR PREPARING WATERCOLOR AND GOUACHE.

Proportions for Gouache.

- 1 Vol. Gummy solution.
- 1 Vol. Pigment.

Proportions for Watercolour.

- 1 Vol. Gummy solution.
- 1/2 Vol. Pigment.

The mixing in these temperas is essential to do with a muller.

However, it is extremely difficult to obtain in the workshop permissible quality color to watercolor, since its preparing requires many requirements, the pigment must be finely ground, otherwise it will let caliches, deposits in the stain, polluting it, rendering it opaque, hard edges, "eyes" and so on. Each color naturally requires a special dose of binder, putting us at risk of getting hard and poorly soluble tablets. Anyway we can give some more concrete proportions:

## CUSTOM RATE DEPPENDING ON THE PIGMENT.

### For heavy pigments.

- 50gr. of pigment.
- 7cc. gummy solution.
- 7cc. glycerin.
- 7cc. sugar syrup.
- 2cc. of ox gall.

### Light pigments or lacquers for:

- 50gr. of pigment.
- 20cc. gummy solution.
- 20cc. glycerin.
- 20cc. sugar syrup.
- 3cc. of ox gall.

### For the White Silver (Lead):

- 100 parts of pigment.
- 15 parts of gummy solution.
- 15 parts of glycerin.
- 10 parts water.

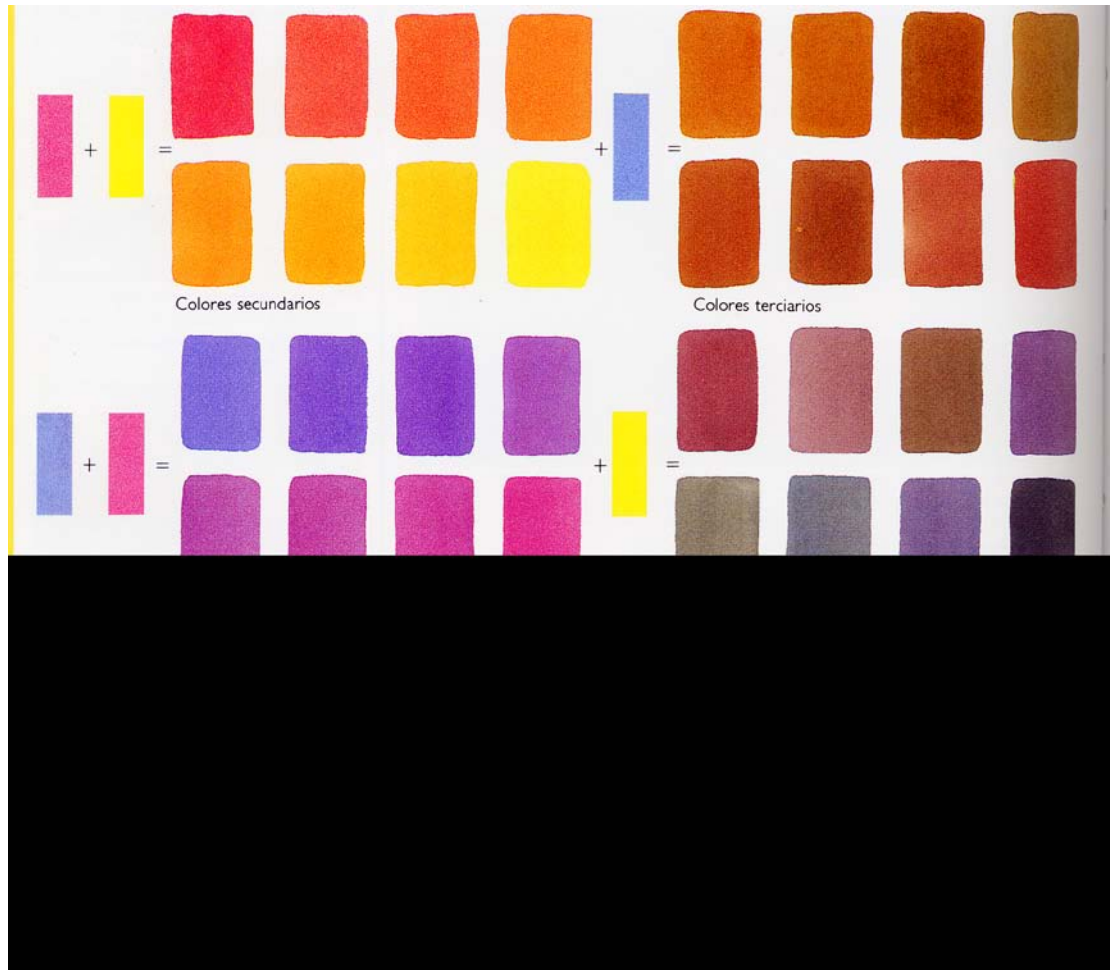
### For Cobalt Blue:

- 60 parts of pigment.
- 25 parts of gummy solution.
- 25 parts of glycerin.
- 10 parts water.

## **12.9. WATERCOLOR APPLICATION: OVERLAPING LAYERS AND TRANSPARENCY.**

The palette is disposed starting to the warmer colors the coldest, in this order: yellows, oranges, violets, blues, greens, and finally all earths. The use of white and black is rare. Watercolor is a technique that requires the transparent color overlay: start with the lightest color and are superimposed on the darkest. For whites not used color, but used the white paper. To darken the colors we recommend using a brown mixture of ultramarine blue, as black may stain the colors.





Above are 48 colors obtained by mixing the quinacridone pink, arylamide yellow and phthalocyanine blue. Image from the book by Ray Smith. The artist's manual, p. 156.

### Range of colors by mixing the three primary colors.

The 48 colors painted in this range on a half tone, were obtained from combinations of quinacridone (pink), arylamide yellow and Phthalocyanine Blue. All colors are obtained by mixing the paint in a dish before applying it to paper. In principle, we could get the same colors optically, overlapping transparent washes of yellow, red and blue, the proper tone.

### Secondary colors.

The color combinations in pairs provide secondary palettes ranging from green/blue to green/yellow, from red to the orange/yellow and from blue/purple to mauve and pink.

### Tertiary colors.

Adding a third primary color in each case results in a range of earthy colors, gray greens and and gray-blued reds that are close to the color of many traditional pigments.

### **12.10. PROPOSED EXERCISES WITH WATERCOLOR.**

The exercises to be performed in class and at home are provided for a period between the 6th and 8th week, with a total of 5 sessions (indicatively between 24 October and 8 November) Of course, these dates may suffer some minor variations depending on the school year.

### Objectives

- Develop different application processes associated with watercolor painting: color mixing fusion, overlap and washed.
- Assimilate through practice the technical and expressive possibilities of color mixing and overlapping potential to be applied to other techniques.
- Develop habits of experimentation combining watercolor with other procedures compatible with, and support.
- Promote interest and respect for the watercolors banishing prejudices about his character as a minor procedure of painting.

These activities pursued aimed to familiarize students with the different application processes associated with watercolor painting: color mixing melt wet dry layering, masked, or effects of subsequent washes.

In watercolor, the progression is usually faster than other methods so it is advisable that the student is not limited to the minimum required since the results often improve when they have just completed two weeks of continuous work. In this regard we encourage further development of this technique well in A4 and A3, or in an experimental sense within their own portfolio or artist's book to be developed by the student throughout the semester.

In each work proposal calls for a minimum of exercises, if done over there is no guarantee of better note though of course the teacher has more material to select the minimum with which to establish the average of the overall work.

With the previous practice of watercolor, it is easier to assimilate the concept of color mixing by overlaying transparencies of color, which subsequently affects other techniques such as tempering and oil glazes.

WATERCOLOR WITH MODEL (Minimum 6 works) 4 during class sessions and 50 minute poses, with a total of 6 hours. Minimum size A4.

WATERCOLOR FREE (Minimum 6 works) Minimum size A4.

We recommend trying to make a landscape from nature.

WATERCOLOR WITH MODEL (Minimum 1 exercise) 1 session during class with a total of 2 hours. Minimum size A3.

WATERCOLOR FREE (minimum 1 exercise) Minimum size A3.

In this proposal we encourage combining watercolor with other materials associated with watery such as India ink, walnut stain, dyes, liquid watercolor, and to using sponges, masking, salt, sugar, coffee, bleach, etc.

To develop properly during the course work will need a free theme continued teacher-student dialogue through tutorials and keep up to date portfolio-book alternative, where we can assess in advance the chances of success of the various proposals for thematic free.

#### Valuation criteria

- Order and cleanness always in the painting process that affects the proper development of the work. (10%)
- Support stable relationship, the primer, the paint layer and the final treatment. (10%)
- Proficiency in handling the wash technique, and control over color transparency and proper proportion with the diluents. (10%)
- Expressiveness of support, materials and textures of the work. (10%)
- Creativity, originality, and suitability between the aesthetic and the technique developed. (20%)
- Composition. (10%)
- Correct use of color in wealth and diversity of hues, saturation and desaturation, scales light to dark, and the relative transparency and opacity. (30%)

## 12.11. BIBLIOGRAPHY AND WEB LINKS.

SMITH, Ray. *Artist's manual*. Hermann Blume, Madrid, 2003, pp. 138-165.