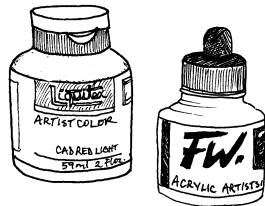


MARBLING ON PAPER

The art of making marbled papers has a long history. One of its classic uses was for creating decorative endpapers for bookbinding. Due to the advances in non-toxic art materials today, this art form is now accessible to all, and can be used in a wide variety of projects in the classroom and at home. It is quite simple and fun to produce your own marbled paper for handmade books, bookmarks, personalized stationery, and cards, or even to use it in fabric painting.

Materials:

- Water
- Carrageenan (seaweed derivative)
- Tablespoon measure
- Blender
- Wire whisk
- Shallow pan, min. 2" - 3" deep (not aluminum)
- Acrylic paint or acrylic-based inks
- Isopropyl alcohol
- Small squeeze bottles with an applicator tip
- Chopsticks, skewer, marbling combs, etc.
- Heavy drawing and/or printmaking paper
- Newsprint or recycled newspaper
- Paper towels or rags
- Apron
- Garbage bags
- Drying rack, clothesline or plastic drop sheet
- Alum (optional)

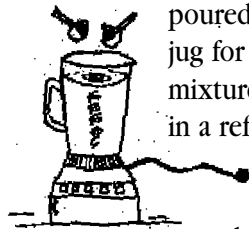


A piece of printmaking paper is then rolled flat onto the surface of the water bath and then lifted carefully off, and voilà, you have a colourful marbled print.

Today, there are non-toxic materials available that produce the same effect as traditional marbling materials, and do not require the use of solvents. At Opus, we use a mixture of Carrageenan and water to produce a bath of thickened water, and fluid water-based acrylics are used in place of oil paints. The fluid colours are dropped onto the carrageenan bath's surface and mimic the relationship between oil and water. When the colours are the correct consistency, they disperse on the surface enabling you to make your marbled print.

MIXING YOUR CARRAGEENAN

To prepare your marbling bath you will need water, Carrageenan, a tablespoon, and a blender. Warm water works best for dissolving the Carrageenan. Fill your blender with a litre of warm water, turn the blender on and add 2 tablespoons of Carrageenan to the water. The mixture will become thick quite quickly and can be poured into a larger container such as a used, clean milk jug for storage. This method produces a *concentrated* mixture of Carrageenan and water which can be stored in a refrigerator for up to six months if uncontaminated and sealed. To use this mixture for marbling, pour it into a shallow pan as needed and thin gradually with water. Use a wire whisk to mix it until the carrageenan bath is the consistency of corn syrup. If you prefer, you can also prepare a thinner consistency of Carrageenan mixture right from the start, instead of working from a concentrated solution.



Tip: This concentrated Carrageenan mixture also works great as a papier mâché paste.

PREPARING YOUR WORK AREA

Marbling is a process suitable for any skill level which produces great, instant results but it can be a bit messy. When preparing your equipment and materials,

INTRODUCTION

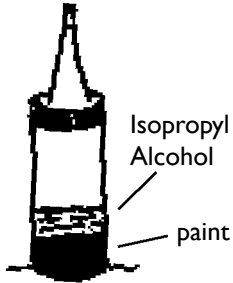
Traditionally marbling involves the use of oil paints, thinners and water. This method is based on the principle that oil and water do not mix. Using this traditional method, oil paint is thinned to an ink-like consistency and then a few colours are added a drop at a time to a shallow bath of water. The oil colours disperse on the surface of the water and a skewer or comb is used to "draw" the colours into patterns. The colours do not mix, but instead float alongside each other on the surface of the water in a pattern of swirls and shapes.

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we recommend using plastic or paper to protect your work surface. Keep a garbage container near your work area, or tape a large garbage bag to the edge of your table so it is easy to access.

Pre-cut your paper to a size that fits your bath and have it ready. Prepare your drying area by protecting any areas you want to keep clean, and hang a clothesline and pins, or place a plastic drop sheet on the floor.

PREPARING YOUR ACRYLIC COLOURS



The safest and simplest paint for the beginner marbler is a water-based, non-toxic acrylic paint. An ideal choice is a medium viscosity acrylic which can be easily diluted

to an ink-like consistency.

To dilute medium viscosity acrylics we have found that the best results are achieved by using Liquitex Jar Colours and isopropyl alcohol as a dispersal agent. Liquitex Jar Colours are simply mixed 50/50 with isopropyl alcohol to produce an ink-like consistency.

In general, when using fresh alcohol and fresh paint, these proportions work well, needing only occasional minor adjustments to allow for the differences in pigment characteristics, evaporation or to top up your paint. Liquitex Jar Colours are not as thick as most tube colours but still have a high pigment load to ensure vivid prints.

A great way to mix your paints is in small, translucent squeeze bottles with applicator tips. These bottles enable you to visually measure your proportions and easily squeeze one drop of colour at a time onto your bath. The use of precise measurements is not necessary, as the best way to attain perfection is to try the paint on the Carrageenan bath and adjust either if necessary.

CHOOSING YOUR PAPER

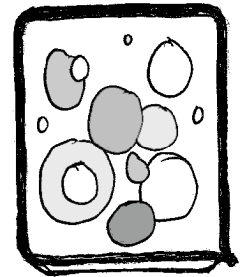
The paper you choose should be heavy enough to hold together when subjected to soaking in water. Heavier drawing paper, student watercolour paper and

printmaking paper work well. If a thinner paper is desired, rice paper will work the best. Rice paper has a greater wet strength than most European papers of similar thickness. It is best to avoid heavily sized papers, as they will resist absorbing the colour of your paint.

Depending on the size of your shallow pan and the intended purpose of your final paper, it is a good idea to cut your paper down ahead of time. For varied results you can have ready a selection of different papers, including white and coloured paper. If using iridescent colours or colours with white mixed in them, black paper can also produce beautiful effects.

Although not always necessary, your paper can be pretreated by coating it with a mixture of water and alum. Alum is a chemical that aids in rendering a surface more receptive to colour, it is also called a mordant. It is used extensively when dyeing natural fibre fabrics and is also used when marbling clothing, wood and papier mâché objects.

Simply dissolve two level tablespoons in one litre of warm water and use this mixture to sponge onto the surface of the paper. Or, place the mixed solution in a pan and soak the paper in it briefly. The alum and water mixture can be kept indefinitely, and the excess that runs off the paper can be allowed to drain back into the container for re-use.



TESTING

Now that your Carrageenan mixture, paints, paper and equipment are ready, the next step is to test the Carrageenan bath and the paints, to ensure they are the right consistency.

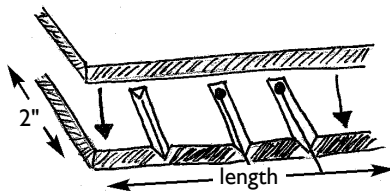
If your paint mixture sinks to the bottom of the Carrageenan bath as soon as it is dropped on the surface, the bath may be too thin or the paint too thick. As well, the paint may have been dropped too far from above the surface or with too much force. If your paint spreads with such extreme rapidity that it seems to disappear, there may be too much isopropyl alcohol mixed with it. Experiment with your paint by adding more isopropyl alcohol or more paint, until the colours spread on the surface rapidly and *stay* on the surface.

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Before continuing, clean the surface of the Carrageenan bath by laying a piece of newsprint or recycled newspaper on it and pulling it towards you. Then discard this piece of paper in the garbage.

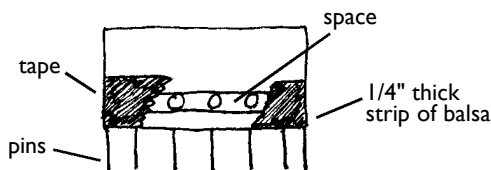
If the Carrageenan bath seems too thick, add more water in small increments, ensuring first that any prior colour testing has been cleaned off of the surface with newsprint. If the Carrageenan is too thin, do not add powdered Carrageenan, instead use the concentrated Carrageenan mixture you made earlier. Add it to the marbling bath a bit at a time, mixing it with a whisk until it is the consistency of corn syrup. When you test the paint again, the drops of colour should move about on the surface when manipulated, but not with uncontrollable speed.

MAKING YOUR OWN MARBLING COMB



You will need cardboard or balsa wood, dressmaker pins and an adhesive to make your own marbling comb. First,

cut two strips of cardboard which measure 2" wide by a length slightly smaller than the inside width of your marbling pan. Next, mark off evenly spaced positions for the pins using a pencil. The amount of space in between the pins will result in either a fine pattern (1/8") or a looser pattern (1"). Notch each of these spaces and place the pins in these notches. The pins should project by 1/4" to 3/4". Once you have placed the pins in the notches, glue the second piece of card over the first.



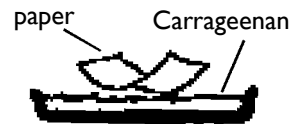
If you are using balsa wood, the process is similar. Measure one piece of 1/4" balsa wood and cut a 1/4" strip off the length of the wood. Mark evenly spaced positions along the cut side of the strip and then push the pins through the centre of it. Once you have done this, simply use packing tape to adhere the two pieces of

balsa wood together, and voilà you have your own marbling comb.

MARBLING ON PAPER

First, randomly drop a few single drops of colour from approximately two inches above the surface onto your Carrageenan bath. Do this using three or four colours, with one or two drops each. Next, using a stick or skewer draw through the paint, first toward you then away, and then repeat in a criss-cross manner or as desired. You can use a marbling comb for a finer pattern. Patterns can be simple, including using the circles the drops of colour produce as is, before further working of the surface with a tool or comb.

A large part of the excitement of marbling is experimenting to find the methods, colour combinations and results that please you. Check for books on marbling for specific patterns and the instructions to make them.



To pull a print bend your paper into a "U" shape. Touch one end of the paper to the surface and gently roll the paper onto the surface towards the other end so that it is flat on the surface of the Carrageenan bath. The smooth motion will help to prevent trapping air or creating unwanted lines in your final piece.

It is not necessary to leave the sheet of paper in place for very long, a few seconds should be enough. Pick up a corner and peel back the paper. Hold it over the pan or tray until some of the Carrageenan has run off and then hang or lay flat to dry.

Marbling is a monoprinting process, and as a result you will generally only get one good print off of the surface. It is, however quite simple to clean off the surface with newsprint and start fresh. Several people can produce multiple original prints from one bath over the period of a work session and use very little paint.

Now you can marble until your heart's content!

Tip: Before cleaning your bath surface with newsprint, use the remaining paint to create decorative borders on additional pieces of paper. Dip each edge of the paper briefly into the bath at a 90 degree angle and then pull it out. The depth at which you dip the paper will

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determine the width of the border. You can use these bordered papers to frame pictures, poems or drawings.

DRYING YOUR PRINTS

If you wish to rinse the size off your image, do so under gently running water or with a spray bottle. Whether or not the colour remains or is washed away will depend on the paper's absorbency and whether or not an alum mordant was used. However, as it dries, the size will not be visible on the surface unless it was far too thick, or not drained off enough after marbling. Fabric items should be dried, heat set if necessary, and then laundered.

MARBLING ON FABRIC

Fabric must be well washed prior to applying an alum mordant and marbling. Once washed, pre-treat your fabric by soaking it in an alum solution, according to the directions on the package, and then wring the fabric out and hang to dry. The fabric cannot be washed between the mordanting and marbling steps, however a final wash will remove the alum after your marbling is completed.

Fabric should be marbled in a similar fashion to paper, although you may want to experiment with fabric paint or Jacquard Dye-Na-Flow for your colours. Acrylic paint will dry to be quite stiff and may crack when washed. Due to the handling properties of fabric, it is a good idea to have two people working on the piece at the same time. Alternately, you can attach the ends of the

cloth to rigid supports, such as dowels, to make placing it easier. Garments should have a cardboard or plastic insert to hold them flat, and to prevent the colours from soaking through to the other side.

With three dimensional objects start at one end of the object, touching it to the size, and then rolling it across until it is completely patterned.

EXPERIMENTATION

There are many materials to choose from that will give you excellent results beyond what we have described here. A number of variables can influence the final effects you want to achieve. Thus, no one brand of paint or ink will guarantee success, since results will vary depending on how thick the marbling base is, how much and what kind of dispersal agent is used, the type of paper and the individual taste and skill of the marbler.

Golden Fluid Acrylics work well with a Carrageenan marbling bath with no need for a dispersal agent. If a colour does not readily disperse when dropped onto the Carrageenan bath, simply add water or a combination of water and a dispersal agent such as Golden Acrylic Flow Release. Golden Artist Colors suggests a mixture of one part Golden Acrylic Flow Release to seven parts distilled water by volume. Daler Rowney Pearlescent Inks and Golden Airbrush Colours also work well as good ready-made fluid acrylics, on their own or with a dispersal agent. *Have fun!*



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