Martha Cole - Foundations 2001

This year's Foundation Session was presented by Martha Cole, a Canadian fabric artist. Martha's main topic was making decorated bookcloth and paper using wheat starch paste tinted with various acrylic media. She began her talk with a thorough discussion of color mixing and matching based on the color theory of Johan Itten. A folder, adorned with a strip of Martha's paste papers, contained a color reproduction of Itten's color wheel, showing the interaction of the primary colors red, yellow and blue and the "light" color wheel showing the interaction of the primaries magenta, cyan and yellow.

Martha went onto discuss the various "harmonious color schemes" based on the color wheel. These include: Monochromatic which is one color, such as red, and its variation as modified by the addition of black and white; Analogous which are any 3 to 5 adjacent colors accented by a color opposite on the wheel such as yellow, yellow-orange, orange accented by blue-purple; Complementary which are colors opposite on the wheel such as red and green or maroon and lime-green; Split-complementary which is 1 dominant color, such as blue, then the color adjacent to its complementary, such as yellow-orange; and finally, Triads which are any 3 colors equidistant on the wheel, the primaries, red, yellow and blue, being one example.

Another invaluable resource found in our handout is Liquitex's "The Acrylic Book" (available from your art material supplier or at www.liquitex.com). It offers a broad insight into the nature of acrylic paint systems, their applications and the many different products available. Martha points out that many important changes have occurred in the last 20 to 30 years in pigment chemistry and acrylic emulsion paint products available to the artist today. The aniline and related dye chemistry that began in the 19th Century resulted in many new colors available to the artist; however, many of these new colors lacked long-term light-fastness though they may have offered a high degree of staining power. Recent improvements in the synthesis and processing of the chemicals used as pigments have resulted in much smaller particle sizes. This has allowed pigments to be used in place of dyes offering products with improved light-fastness, though not all pigments have the same degree of light-fastness. As such, one can purchase pigmented-pens and inks. For example, Dr. Martin's transparent watercolors, which come in the familiar bottle with a dropper, are available now in a pigmented formula and offer improved permanence.

One advantage over watercolors is that acrylic media are waterproof when dry. Most brands of paints are available in 2 grades: professional and student. The professional grade is a higher priced and higher quality grade suitable for conservation as well as most artistic endeavors. Each tube of professional grade paint has an analysis of its components as well as light-fastness ratings. When issues of permanence and durability are important, only professional grade materials should be used.

Acrylics are available in 3 different viscosities. Liquid acrylic inks come in a bottle and are the most fluid. Medium viscosity acrylics are available in the familiar tubes. Gel media are high viscosity acrylics available in jars and can be used to create very thick impastos. Pigmented fabric paints have an acrylic emulsion formulated with an increased degree of flexibility (Martha uses Setacolor). In addition, various media are available for base coats, mixing with the paints and for varnishes. Gloss medium which dries shiny can be mixed with paint to increase transparency, as a layer between paint films or as a varnish. Matte medium which dries dull can also be used as a varnish, is the "stickiest" of acrylic media and can be used as an adhesive. Fluid medium produces a wash effect. Fabric or textile medium provides increased flexibility in the binder to prevent cracking and flaking as the fabric support moves. Familiarity through experimentation with these media is the key to success.

Next, Martha discussed the variety of fabrics available for use. Natural fibers include cotton, linen, cotton/linen blends, hemp and abaca. Regenerated natural fibers include rayon, acetate and the new fiber on the market, Tencel, which can imitate any other fabric. Protein based natural fibers are wool and silk. Synthetics include Nylon, acrylics, polyester and spandex. Martha provided a "burn test" chart used for identifying fibers. Although most any fiber can be used to create bookcloths, the natural fibers are the easiest to use and give the best overall results. Fabrics should first be washed to remove factory-applied coatings and then well ironed. Always be aware of the grain of the cloth which runs parallel to the selvage edge.

The first step in making bookcloth is to fill the cloth with wheat starch paste. Once dry, flip the cloth over, stretch and begin to apply colored paste to create the desire effect. Allowing layers of color to dry between applications creates richer and deeper colors; wet application will produce more muddy tones. The colors can be manipulated with brushes, combs, sponges or whatever else you can think of to create a pattern. Once your desired effect is achieved, allow the cloth to dry thoroughly. Martha warns us that if the cloth is used in the next couple of days, the pattern can smudge.

The next important step is to apply a paper backing to the cloth. This gives the cloth more body and also prevents the adhesive from striking through when the cloth is glued out for use. Through experimentation, Martha has found the best paper for a backing is the acid-free tissue paper available at some art stores and through archival supply catalogs (Martha has found that Japanese papers tend to delaminate from the cloth). Since the tissue paper tends to disintegrate when wet, one needs to apply the adhesive to the back of the cloth and lay the tissue on dry. Then using a pounding brush, pound the tissue onto the cloth.

Martha brought with her samples of her many experiments using different cloths and fibers, backing papers and adhesives. She took swatches of decorated cloth, representing cotton, linen, polyester as well as various blends, and adhered them to board using wheat paste, PVA, Mix, acrylic matte medium and methyl cellulose. She found that PVA, Mix (50% PVA/50%Paste) and Acrylic Matte Medium provided the best adherence when gluing backing tissue to the cloth as well as gluing cloth to board. She tested each combination by a pull test and delamination test.

In this Foundation Session, Martha presented us with a world of information and techniques from her many years as a fabric artist. The review of color mixing and theory and information on acrylic emulsion media are particularly useful. Her wonderful samples of decorated cloth are inspirational to those of us who mourn the demise of commercially produced starch filled bookcloths.

ACRYLIC BASED FABRIC PAINTS

GENERAL CHARACTERISTICS:

All professional-quality fabric paints are pigment based. Some colors also have a "staining" effect that is permanent immediately and extends the color into the fibres. The pigments are suspended in an acrylic polymer emulsion that has added adhesion and flexibility to make them more easily absorbed into the fibres while retaining the fabric suppleness. Regular acrylic paints in combination with a fabric or textile medium can also be used. There are number of different brand names available: Setacolor (by Pebeo), Createx, Liquitex, Ceramcoat (student grade), etc.

They can be used on ALL fabrics, including naturals (cotton, silk, linen), regenerated fibres (rayons, acetates) and the whole range of synthetics (polyesters, nylons, etc.). Fabrics must be washed before using so that all sizes and "dressings" have been removed. When dry, it is necessary to "heat set" the colors by ironing them for 3 minutes at the "Cotton" setting. They are then completely resistant to washing and to drycleaning. Being acrylic, there is also some resistance to UV radiation, good lightfastness, and a bit of a protective cover on the fibres themselves.

WORKING GUIDELINES: (Refer to chart for all the variables)

1. Colors can be either mixed directly and applied or layered. Layering creates richer and deeper colors, rather than "muddy" ones.

2. Layer your colors from light to dark to create luminosity.

3. Put denser paint down first, progressing to thinner washes.

4. Create more "drama" by working on dry fabric rather than wet.

5. The heavier the fabric, the less the paint will bleed or migrate. The consistency of the paint can be controlled by using either a thickener or an extender (two other mediums that are available).

FABRIC PAINT VARIABLES

1	**3 Types of Paint:** Transparent: Multilayering possible Opaque: Under – sharp but less contrast Over – sharp, distinct color contrast - for dark fabrics Metallic: Over – adds sharp accents Mixed in – gives overall glistening effect
2	**Different fabrics:** 1st Choice: cottons, natural fabrics of medium weight Also: synthetics, sheers, heavy naps
3	**Wet vs. Dry: (Fabric Base)** Wet: softer, smoother, easily blended Dry: Distinct, textured, high contrast, bolder colors
4	**Thick vs Thin Paint:** Thick: Distinct, more intense, lays more on surface, doesn't bleed Thin: blends, bleeds for subtle color changes, Creates pastels & graduated colors (Can be used in combination. Usually best to start with thicker paints moving to thinner consistencies.)
5	**Different Effects with Different Tools:** i. Brushes: bristle, foam, soft/wide ones for washes ii. Sponges: for washes, irregular pieces for textures iii. Rollers iv. Spray bottles (Can be used in combination for endless variety!)
6	**Special Effects:** i Paints migrates to the surface/to creases & pleats: crumbling, typing into balls, pleating, wrapping around PVC tubes create interesting effects ii Rock salt creates filigree, feathered patterns iii Rubbings on textured surfaces with oil pastels either under/over paint

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CREATING YOUR OWN BOOKCLOTH

Paper backings are added to cloth to prevent paste or glue from striking through and to stabilize the fibres making a firmer cloth.

The paper grain should be parallel with the selvage edge of the fabric. This aligns the grains of both materials. If the selvage isn't known, gently stretch the fabric in both directions - one will be quite taut and the other will "bow". The taut direction is the grain direction.

While theoretically any fabric could be used, tightly woven natural fibres of medium weight (shirt weight) will yield the best and most consistent results.

I have used wheat paste for both of these procedures, but any of the other adhesives can be used instead. Refer to the Adhesive Performances with Different Backing Papers and Fabrics sheet which compares different backing/adhesive combinations.

"JAPANESE" METHOD:

Based on information in Japanese Bookbinding, by Kojiro Ikegami, Weatherhill, 1986.

1. Lay fabric face down and spray evenly with water. Fabric will shrink, so restretch aligning the fibres.
2. Making sure to keep the grains parallel, cut a piece of thin flexible mulberry paper or shikeshu (works best) approx. 2" bigger in all dimensions than the fabric.
3. Spread a thin layer of "mayonnaise-consistency" wheat paste over whole surface of the paper. Give it time to relax.
4. Using a dowel or ruler across on end of the paper, lift the paper and transfer paste side down onto the fabric.
5. Press the paper into the fabric using a rolled up towel. Avoid wrinkles if at all possible.
6. Pound the surface vigorously with the end of the towel or with a stiff tightly-packed bristle brush to fuse them together. This firmly adheres the paper into the fabric "valleys".
7. Brush a line of paste along the outer edges of the backing paper, attach a paper tab on one side to aid in the removal of the bookcloth after it has dried.
8. Using the dowel or ruler again, reverse the bookcloth onto a smooth-surfaced drying board. Pat down the edges to the board.
9. Let dry. It will take at least 3-4 hrs. or longer.
10. When completely dry, insert a thin knife under the tab to loosen and remove the cloth. It is ready for use.

"REVERSE" METHOD:

The paper that seems most similar to the one used on commercial bookcloth is an acid-free tissue paper available from most art and archival supply stores. This paper is too brittle and/or fragile to have the paste applied directly to it – it disintegrates and cannot be lifted and moved. However, it has very good laminating abilities and almost never delaminates with any of the possible adhesives and therefore is worth working with. (Refer to the Adhesive Performances with Different Backing Papers and Fabrics sheet) It is more readily available than the Japanese papers. An alternative way of applying this tissue to the cloth follows. The one danger with this method is that the paste (or any other adhesive) is more likely to strike through the fabric since the paste/glue is applied directly to it.

PROCEDURE:

Based very loosely on information supplied by Betsy Palmer Eldridge.

1. Lay fabric face down and spray evenly with water. Fabric will shrink, so restretch aligning the fibres.
2. Making sure to keep the grains parallel, cut a piece of acid-free tissue paper 2" bigger in all dimensions than the fabric.
3. Spread a thin layer of "mayonnaise-consistency" wheat paste (or other adhesive) over the whole surface of the fabric.
4. Using a dowel or ruler, lift the cloth and gently lay over the paper trying to minimize any air pockets or wrinkles.
5. Use a rolled up towel to firmly adhere the paper to the fabric and to remove any air pockets. Pound the surface of the fabric vigorously with the end of the towel or with a stiff tightly-backed bristle brush.

   A POSSIBLE OPTION: I think that it would be possible to reverse the bookcloth (the next step) and then vigorously pound directly on the paper itself. This would depend on the actual strength of the paper and the relative stiffness of the brush and whether it tears or damages the paper. If not, I think this would be preferable.

6. Brush a line of paste along the outer edges of the backing paper and attach a paper tab to one side.
7. Using a dowel or ruler, reverse the bookcloth onto a smooth-surfaced drying board. THE BOOKCLOTH SURFACE WILL BE FACE DOWN. Pat down the edges to the board.
8. Let dry. It will take at least 3-4 hrs. or longer.
9. When completely dry, insert a thin knife under the tab to loosen and remove the cloth. It is ready for use.

ADHESIVE PERFORMANCES WITH DIFFERENT BACKING PAPERS & FABRICS

ADHESIVES	100% COTTON	100% RAYON	COTTON POLYESTER W/ACRYLIC PATTERN			
	Mulberry Paper	Mulberry Paper	Mulberry Paper	Shikeshu	Tissue Paper	Polyester Interfacing
WHEAT PASTE	Separates easily	Separates easily	Separates easily Delaminates	Separates easily Delaminates	GOOD	Separates easily Delaminates
PVA (Polyvinyl-acetate)	Bled through when wet GOOD	GOOD	Separates w/some pull (bled through when wet)	GOOD	GOOD	Separates w/some pull Delaminates
MIX (50% PVA, 50%Paste)	GOOD	Separates w/some pull	Separates w/some pull Tearing	GOOD	GOOD	GOOD
ACYRLIC MATTE MEDIUM	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
METHYL CELLULOSE	Separates easily	Separates w/some pull	Separates w/some pull Delaminates	Separates easily Delaminates Tearing	Paper brittle Unable to do	Separates w/some pull

Compiled by Martha Cole for GBW Standards Conference, 2001

Two tests were performed:

(1) **'PULL BACK' TEST:** To test general adhesion.
Three ratings were used: No separation
Separates with some pull
Separates easily

(2) **DELAMINATION TEST:** I krinkled and rumpled the test piece quite vigorously to see if it would delaminate with repeated bending , as at a hinge.
Three ratings were used: No delamination
Delaminated, but didn't tear
Delaminated and tore

GENERAL CONCLUSIONS:

1. The Acrylic Matte Medium gave the best overall results(!) – better than either the PVA or the Mix.

2. The acid-free tissue paper, most like the paper used on the commercial cloths, held up better than the traditional Japanese papers although they are more difficult to apply and must be done by putting the adhesive on the cloth and laying the paper on it, rather than the other way around.

3. Both the pure paste and methyl cellulose adhesives performed poorly. (This may have more to do with my "pasting techniques" than with the adhesives themselves!)

ADHESIVE PERFORMANCES WITH DIFFERENT FIBRES AND FIBRE BLENDS

ADHESIVES	COTTON/LINEN BLEND				COTTON/POLYESTER W/ACRYLIC FABRIC PAINTS		RAYON/ POLYESTER BLEND	100% POLYESTER
	Untreated	Paste-Filled	Acrylics In Paste	Acrylics Only	Untreated	Paste-Filled	Untreated	Untreated
WHEAT PASTE	GOOD	Slippery when being attached GOOD	Slippery when being attached GOOD	Separates w/some pull	Wouldn't grab at all Separates easily	Separates w/some pull	Needs A LOT of paste to grab Separates easily	Wouldn't grab at all Separates W/some pull
PVA (Polyvinyl-acetate)	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
MIX (50%PVA' 50% paste)	GOOD	GOOD	GOOD	GOOD	Moisture wicks through GOOD	GOOD	GOOD	Wouldn't grab at all Separates easily
ACRYLIC MATTE MEDIUM	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	Wouldn't grab easily GOOD
METHYL CELLULOSE	Separates w/some pull	GOOD	GOOD	Separates easily	Wouldn't grab at all Separates easily	Separates w/some pull	Moisture wicks through Separates with some pull	Grab wonderful! Separates very easily!

Compiled by Martha Cole for GBW Standards Conference, 2001

GENERAL CONCLUSIONS:

- The natural fibres were certainly the easiest to use and had the best overall ratings. Using straight wheat paste was more difficult to work with than the other adhesives.

- The cotton/linen blend with the acrylic patterning was only effectively held using PVA, Mix or Acrylic Matte Medium.

- Acrylic Matte Medium was as effective, or more so, than all the other adhesives tried.

- With all the synthetics or synthetic/natural fibre blends, the most effective adhesives were the PVA, Mix or Acrylic Matte Medium. Neither the paste or the methyl cellulose had sufficient grab.

- With the 100% polyester fabric, only the PVA was effective.

CHARACTERISTICS OF DIFFERENT FABRICS

NATURAL FIBERS	
CELLULOSE BASED	**COTTON:** Best flex-strength for spine, etc. Common bookcloth
	LINEN: (from flax plants) Best tensile strength Common bookcloth
	COTTON/LINEN BLENDS: This gives you the best of both!
	HEMP: (a grass) Becoming more readily available
	ABACA: (banana family)
REGENERATED & EXTRUDED CELLULOSE PRODUCTS	**VISCOSE RAYON:** Wood pulp with alkali Common bookcloth (Iris cloth)
	ACETATE: Wood pulp w/acetic & sulphuric acids
	TENCEL: Wood pulp with recyclable solvent The newest fabric, can imitate anything – e.g. "linen-like", "silk-like", etc.
PROTEIN BASED	**WOOL:** (from sheep) Strong, highly responsive to humidity
	SILK: (from cocoons of silk worms) Common bookcloth
	EXOTICS: llama, angora, mohair, etc.
SYNTHETICS	
Derived from coal/oil Composed of long Polymer chains Generally are "melted down" & extruded into fibers	**NYLON:** First one made, "stretch" fabric
	ACRYLICS: Natural gas & air – liquid derivative Most "wool-like" of all synthetics
	POLYESTER: Most used synthetic – often in blends Strong, washable, shrink-proof
	SPANDEX/LYCRA: Extremely "stretchable"

"BURN TEST" RESULTS FOR FIBRE IDENTIFICATION

Fibers	Burns/Melts	Burning rate	Flame	Smoke	Residue	Smell
Natural cellulose						
COTTON	Burns	Fast (crease resistant finish: less rapid)	Yellow	Gray	Small amount of fine, soft gray feathery ash	Burning paper
LINEN	Burns	Fast (crease resistant finish: less rapid)	Yellow	Gray	Small amount of fine, soft gray feathery ash	Burning paper
Natural protein						
WOOL	Burns	Slow	Irregular, splutters	Gray	Brittle, spongy black, easily crushable ash	Burning feathers or hair
SILK	Burns	Slow	Irregular, splutters	Gray	Brittle, spongy black, easily crushable ash	Burning feathers or hair
Man-made regenerated						
CELLULOSE ACETATE	Melts	Fairly slow	Yellow	Gray	Crushable black bead	Acetic acid or vinegar
CELLULOSE TRIACETATE	Melts	Fairly slow	Yellow	Gray	Crushable black bead	Acetic acid or vinegar
TENCEL	Burns	Fast	Yellow	Gray	Small amount of fine, soft gray feathery ash	Burning paper
VISCOSE RAYON	Burns	Fast	Yellow	Gray	Small amount of fine, soft gray feathery ash	Burning paper
Man-made synthetic						
ACRYLIC	Melts	Rapid	Very hot, luminous	Black	Irregular black bead	Acrid, sharp, unpleasant
MODACRYLIC	Melts	Very slow, extinguishes when removed from flame	Not really noticeable	Black and irregular	Rubbery black bead	Sweet, rubbery
POLYAMIDE (NYLON)	Melts	Fairly fast	Yellow	Gray	Hard uncrushable brown bead	Cooked celery
POLYESTER	Melts	Fairly fast	Yellow	Gray	Hard uncrushable black bead	Hot oil, aromatic, sweetish
POLYETHYLENE	Melts	Fairly fast	Luminous	Waxy vapor	Hard black bead	Molten wax
POLYPROPYLENE	Melts	Fairly fast	Luminous	Waxy vapor	Hard black bead	Molten wax

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Bryan Draper

2001 Standards
FOUNDATION SESSION (Martha Cole)

This year's Foundation Session was presented by Martha Cole, a Canadian fabric artist. Her main topic was decorating paper and bookcloth with various acrylic media. She also gave a comprehensive overview of color theory—both the traditional Itten Color Wheel based on opaque pigments, and the more contemporary MYC System or "Light" Color Wheel based on a direct translation of the visible spectrum into pigment. The latter system is relevant to transparent media such as fabric dyes. Martha's use of acrylic is based on a system she has devised from the MYC System, and includes identifying warm and cold colors, how to move from light to dark or the reverse, and guides her in harmonic color combinations.

Martha lives isolated from colleagues in the arts with whom she might trade ideas and also sources of supplies, so she has developed her own simplified methods, suitable to her situation. Her approach to all the subjects she presented was refreshingly down-to-earth and commonsensical. Nearly everything she discussed was backed up by her comprehensive handouts and instruction sheets.

She relies on acrylics for her work. They are almost endlessly versatile, in many hues and able to be mixed to produce many others, available in different forms, from liquid inks to medium viscosity acrylics in tubes to gel or high viscosity available in jars. In all their forms, they can be mixed with gloss or matte medium, or any combination of the two. Wash effects, like watercolors but permanent when dry, can be achieved by mixing acrylic pigments with a fluid medium.

One handout was the invaluable "The Acrylic Book," available from acrylic manufacturer Liquitex, which was full of insight into the nature of acrylic paint systems, their applications and the many different products available. Recent improvements in the synthesis and processing of the chemicals used as pigments have resulted in much smaller particle sizes. This has allowed pigment to be used in place of dyes offering products with improved light-fastness.

Martha discussed the variety of fabrics available for use, from natural, regenerated natural and protein based natural fibers to synthetics and their various properties as potential decorated fabrics. She then detailed the methods for decorating the various clothes for the best results.

Alone out on the prairie in Lumsden, Saskatchewan, Martha devised her own method on how to back cloth with paper, and shared with us what paper to use, which adhesives work best and how to test them. We who also mourn the demise of commercially produced starch filled bookcloth now have a rich realm of possibilities to make out own.

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MENDING PAPER (Christine Smith)

Christine Smith, a paper conservator in private practice does not usually work on books, but the basics of paper repair and conservation are applicable to many situations in the book world. She outlined the basic principles underlying mending of paper as well as hinging art onto paper, including such small but important details such as the relative strength of the mend and the object mended, when it is appropriate to mend cross-grain rather than with the grain, how to tear mending strips, how to dry mends, and many other subjects of great interest. She touched in her talk on the background and purpose of each detail in the process of mending, and followed up with demonstrations of how they should be done. She outlined what mending papers are best in

a variety of applications and spoke of how mending papers may be modified in the conservation lab to attain certain desirable aesthetic effects both before and after making the mend.

Christine's demonstration on Japanese wheat starch paste making was complete and exhaustive. She demonstrated methods for making and using other adhesives. Unsupported adhesive films can be cast by brushing the adhesive onto Mylar and when dry, the film can be peeled off as used as needed. Her methods are precise and extremely detailed.

She touched on the philosophy of mending. Whether the mend should be invisible or show where the damage has occurred, and showed us slides of mended Japanese ceramics to underscore the point. There were so many valuable suggestions and details that it is fortunate that Christine had prepared a comprehensive syllabus on her presentation. The syllabus, includes a list of supplies and sources for materials, and will be a treasured addition to any bindery or conservation studio.

CONTEMPORARY APPLICATIONS OF WHEAT PASTE ON CLOTH

by

MARTHA COLE

GBW Standards of Excellence Presentation, 2008
Toronto, Canada

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CONTEMPORARY APPLICATIONS OF WHEAT PASTE ON CLOTH

There is a wide range of wheat paste recipes. Any of them can be used as the base for wheat paste designs on cloth, depending on your familiarity and preferences and the somewhat different effects that are created by the different starch/flour bases.

Wheat paste recipes can be divided into 3 basic categories: flour based, starch based, and those including acrylic polymer medium to either.

Wheat paste cloths can be created from any medium weight fairly tightly woven natural fibre cloth, including cotton, silk, rayon and wool. Synthetic fibres can be used if you include acrylic polymer medium with your paste.

Any techniques and methods used for wheat paste papers can be applied to the cloths – including chalk or oil pastels, rubber stamps, stencils, and colored pencil. If polymer medium is added to the paste, a wide range of collage materials can be incorporated also, as well as the creation of semi-rigid cover laminations.

FLOUR BASED RECIPE

From Suzanne Moore, GBW Standards Seminar, 2001

1 part sifted cake flour
8 parts water

(If your basic measurement is ½ c., this will make 4 c. paste.)

Sift 1 part cake flour into 2 parts water; whisk together and let stand for 15-20 minutes. In a heavy stainless steel pot, boil 5-6 parts water (depending on thickness desired). Pour flour/water slurry through sieve and adjust the heat to bring the mixture to a "burble". Cook for 10 minutes, stirring constantly. Pour through a sieve into a stainless steel or glass bowl. Spritz with water, cover with plastic wrap (directly on surface of paste) and cool thoroughly until firmly set.

If paste is too thick/stiff after cooling, whip with a whisk or fork (or process in blender/processor) and whisk in water if necessary.

Divide into smaller containers and add acrylic paint as wanted.

STARCH BASED RECIPE

From Martha Cole, GBW Standards Seminar, Foundation Session, 2001

1 part wheat starch
9 parts water

(If your basic measurement is ½ c., this will make 4.5 c. paste.)

In a heavy bottomed pot, heat 8 parts water to a near boil. Put 1 part starch in glass bowl and add 1 part cold water. Mix until dissolved. Slowly pour dissolved starch into the hot water when it is close to a boil. Mix constantly on medium/high heat until mixture comes to boil and begins to thicken. Lower heat to low/medium, continue to stir for another 2-3 minutes. Pour into glass or plastic container. Cover leaving lid slightly ajar until cool. Close lid firmly and let set completely.

When cool, strain through a nylon and/or sieve to remove any lumps. Whisk in more water if too thick.

Divide into smaller containers and add acrylic textile paints as wanted.

MAKING WHEAT PASTE CLOTH

- Lightly spritz front with water.
- Flip over & attach to smooth surface.
- Cover with layer of clear wheat paste.
- Flip over, attach to smooth surface & align grains of fabric.
- Work a clear layer of paste into front surface (optional).
- Brush colored pastes onto front surface & create designs. You can use any wheat paste paper techniques on your cloth.
- Let dry on smooth surface.
- Add another layer of wheat paste to top surface for added protection (optional).
- Remove. It is ready for use on your book.

WHEAT PASTE WITH POLYMER MEDIUM

From Susan Kristoferson©, 2002

1 c. unbleached wheat flour
½ c. rice flour
½ c. corn starch
½ c. potato starch
½ c. wheat starch
13-14 c. water
2 TBsp. glycerin (optional)
2 TBsp. tincture of green soap (optional)

Mix dry ingredients together in a bowl. In a heavy non-reactive pot, add 8 c. water and dry ingredients. Mix and let soak for awhile. Using a high heat and stirring constantly, bring to a boil. Lower heat to create a "burble" and continue stirring for another 3-5 minutes. Some "lumping" will occur as some of the ingredients thicken at different times, but should all "even out" during the cooking process. You want a consistency where the mixture will fall from the spoon and leave a slight rounded mound on the top surface. Add more water until this happens. Sieve and pour into a non-reactive container, cover surface directly with plastic wrap, add lid to container and cool completely.

When ready to use, mix up to 1:1 with acrylic gloss or matte medium.

Divide into smaller containers and add acrylic paint as wanted.

ADVANTAGES OF ADDING ACRYLIC POLYMER MEDIUM

Adds more flexibility to the wheat paste and prevents "crocking".

Turns a crisp edge for a cover.

Is completely waterproof and non-reversible.

Stronger adhesive strength allows for a wide range of collage materials to add textural interest to the book cover.

Stronger adhesive strength combined with the added flexibility allows for custom designed semi-rigid cloth covers using combinations of various weights of both papers and cloths.

DRYING SURFACES FOR WHEAT PASTE WITH MEDIUM

- 6 mil vapor barrier
- Teflon sheets
- Resist paper for dry mount presses
- Fibreglass window screening

CONTEMPORARY APPLICATIONS OF WHEAT PASTE ON CLOTH