BRYANT LABORATORY, INC.

Bryant Laboratory, Inc.
1101 Fifth St.
Berkeley, CA 94710
(510) 526-3141 Voice
(510) 528-2948 Fax

* The following Patina Formulas are but a sampling of the thousands in existence. The formulas selected illustrate a wide range of application methods and rich variety of colors. The author makes no warranties either expressed or implied with respect to the color, reliability, or safety created through the use of these formulas.

PATINA FORMULAS FOR BRASS, BRONZE AND COPPER

1. LIGHT TO DARK-BROWN (BASIC BROWN)

(Clarke with variations[1])

Ferric Nitrate ..... 1-4 tablespoons
Water ..... 1 pint

* A hot process patina which produces a gold to brown color. A fresh mixture is necessary for each coloring. A preservative is optional.

2. MATTE BROWN

(Rich)

Barium Sulfide ..... 1 ounce
Potash (Sulfurated) ..... ¼ ounce
Ammonia (Household solution without detergent) ..... 2 fluid ounces
Water ..... 3 to 5 quarts

*An excellent cold process, opaque patina that darkens immediately after application. The matte color is best without a preservative, although you may use one.

3. YELLOW GREEN

(Clarke)

Ammonium Chloride ..... 7 parts by weight
Copper Acetate ..... 4 parts by weight
Water ..... 8 parts by weight

*A cold process, heavy opaque patina that takes effect after several applications. A preservative is optional.

4. RUST BROWN (Payne **with** variations[1])

Ferric Nitrate ..... 3 ounces
Ferric Chloride ..... 2 ounces
Water ..... 1 to 3 quarts

*An excellent, cold process, opaque patina. It achieves immediate results. A preservative is not necessary.

*_**This patina produces corrosive fumes. Wear a respirator and work in a well ventilated area.**_*

5. BLUE **(Miller)**

Sodium Thiosulfate ..... **60 grams**
Nitric Acid, 35% ..... **2 teaspoons**
Water ..... **1 quart**

***A transparent, dip process patina. A preservative is necessary.**

This Patina is reported to produce a grey blue when tap water is used.

6. LIGHT GREEN **(De Marco with variations[1])**

Ammonium Chloride ..... **16 parts**
Sodium Chloride ..... **16 parts**
Ammonium Hydroxide ..... **16 parts**

***A cold process, opaque patina which can be applied time and time again. A preservative is optional. For a deeper green add 16 parts of Cupric Sulfate**

7. BROWN TO BLACK (Clarke)

Antimony Sulfide ..... **2 parts**
Sodium Hydroxide ..... **4 parts**
Water ..... **256 parts**

***An excellent, hot process, semi-opaque patina. Color appears immediately after application. This patina can also be applied cold. A preservative is necessary.**

8. BASIC BROWN TO BLACK **(Clarke)**

Potash (Sulfurated) ..... **A grape size lump (crushed)**
Water ..... **1 pint**

***A transparent, hot or cold process patina. A preservative should be used.**

9. SHIMMERING GREY **(Young with variations[1])**

Silver Nitrate ..... **8 grams**
Water ..... **1 pint**

***This is a hot process patina. The hotter the piece, the greater the silver appearance. Reheating the piece and rubbing it with a 000 steel wool will raise the shimmering qualities of your sculpture. This patina works well as an undercoat or as an overcoat to almost any patina.**

10. SILVER **(Young)**

Silver Nitrate ..... **30 grams**
Water ..... **1 pint**

***This is a hot process patina. The hotter the piece, the greater the silver appearance. Reheating the piece and rubbing it with a 000 steel wool will raise the shimmering qualities of your sculpture. This patina works well as an undercoat or as an overcoat to almost any patina.**

11. COBALT BLUE **(Anonymous with variations[1])**

Mix #1
Cupric Nitrate ..... **125 grams**
Cobalt Nitrate ..... **85 grams**
Water ..... **1 gallon**
Mix #2
Cupric Nitrate ..... **250 grams**
Water **1gallon**

***This is hot process patina. It is a semi-transparent, blue and black, marbled patina.**
Mix solution#1 and solution #2 together in a one-to-one ratio. Spray combined solution over the heated metal. This recipe requires several applications (too many applications will result in the patina flaking). A preservative is necessary.

12. AQUA MARINE BLUE **(Anonymous with variations[1])**

Cupric Nitrate ..... **250 grams**
Blue Dye
(Cerulean Blue) ..... **2 ounces**
or
(Methylene Blue) ..... **2 grams**
Water ..... **1 gallon**

***This is a hot process semi-transparent patina which is light aqua blue in color. It works well in combination with the other hot process blue and green patinas. A preservative is necessary.**

13. BASIC GREEN **(Clark with variations[1])**

Cupric Nitrate ..... **1-4 tablespoons**
Water ..... **1 pint**

***A hot process, semi-transparent patina.**

14. PEACOCK BLUE (Krause with variations[1])

Sodium Thiosulfate ..... **150 grams**
Lead Acetate ..... **25 grams**
Potassium Bitartrate ..... **30 grams**
Water ..... **1 liter**

***An intense, dip process, transparent patina. Immerse object for 20 to 30 minutes. A preservative should be applied immediately after the solution is removed and dried.**

15. BASIC BLUE-BLACK (Clarke with variations[1])

Ammonium Sulfide ..... **1 - 3 teaspoons**
Water ..... **1 pint**

***A hot or cold process, transparent patina. A preservative is optional. This is a nice fumed patina when used 2-4 tablespoons Ammonium Sulfide per pint of water. A preservative is necessary.**

16. BLUE GREEN (Anonymous)

***Bronze object should be buried in sawsdust, saturated with vinegar for several days. The sawdust should be left moist by reapplying the patina as necessary. This patina is opaque. A preservative is optional.**

17. ANTIQUE WHITE (Soroka)

Bismuth Nitrate ..... **2 teaspoons**
Water ..... **1 pint**
Potash (Sulfurated) ..... **A pinch**

***This is a semi-opaque, hot process patina. The object should be slightly oxidized with the torch before the solution is applied. Ferric Nitrate or Cupric Nitrate may be substituted for the Potash (Sulfurated), depending upon the effect desired. A preservative is necessary. The author has found that this patina is a poor substitute for the #29 white. You might like to try that patina instead.**

18. BROWN (Clarke with variations[1])

Sodium Thiosulfate ..... **1 part**
Ferric Nitrate ..... **8 parts**
Water ..... **128 parts**

***An excellent cold process, semi-opaque patina. It works well with a preservative. The author has found this to be a very pleasing patina.**

19. VERDE **(Anonymous with variations[1])**

Cupric Sulfate ..... **8 parts**
Ammonium Chloride ..... **4 parts**
Sodium Chloride ..... **4 parts**
Zinc Chloride ..... **1 part**
Acetic Acid, Glacial ..... **3 parts**
Water ..... **128 parts**

***This is a dip process patina, immerse object in solution for a few minutes, then remove. Repeat until a color appears. A preservative is optional. This patina produces more of a turquoise color than a green one. Color appears when removed from solution. A preservative is recommended.**

****It is OK to brush this patina solution on.****

20. METALLIC BLUE-BLACK **(Anonymous)**

Barium Sulfide ..... **1 part**
Water ..... **128 parts**

***A dip process, semi-opaque patina, immerse object in solution overnight at normal temperature. A preservative is necessary.**

21. WINE VINEGAR GREEN **(De Marco)**

Red or White Wine Vinegar ..... **1 pint**
Water ..... **1 pint**
Ammonium Hydroxide ..... **1 tablespoon**
Muriatic Acid ..... **1 tablespoon**
Sodium Chloride ..... **1 teaspoon**
Ammonium Chloride ..... **100 grams**

***An excellent, cold process, opaque patina. Apply solution for several days at 12 hour intervals. A preservative is optional.**

22. APPLE GREEN **(Anonymous)**

Sodium Chloride ..... **5 parts**
Ammonia (Household solution without detergent) ..... **4 parts**
Ammonium Chloride ..... **5 parts**
Acetic Acid, Glacial ..... **4 parts**
Water ..... **4 parts**

***A cold process, heavy opaque patina. A preservative is optional.**

23. TRANSPARENT BLACK (Gadberry)

Gold Chloride Crystals ..... **½ gram**
Water ..... **100 ml**

*** Paint or spray one coat of this solution. Can also be used as a dip. A preservative is optional.**

24. ANTIQUE GREEN (Coleman with variations[1])

Step #1
Do a hot process "Basic Green" patina (#13)
Step #2
While the piece is still hot apply a solution of:
Potassium Thiosulfate ..... **2 ounces**
Water ..... **1 quart**

***This is a beautiful and versatile patina. Different results can be achieved by substituting Ferric Nitrate or Ferric Chloride for the Potassium Thiosulfate.**

25. ROYAL BLUE (Hess)

Cupric Sulfate ..... **8 parts**
Ammonium Chloride ..... **4 parts**
Sodium Chloride ..... **1 part**
Acetic Acid, Glacial ..... **3 parts**
Water ..... **128 parts**

***An excellent hot process semi-transparent patina. It works as a cold process as well.**

26. WHITE (Young)

Bismuth Nitrate ..... **3 ounces**
Stannic Oxide ..... **1 ounce**
Titanium Dioxide ..... **1 ounce**
Water ..... **24 ounces**

***Mix the above ingredients and add 1-2 ounces colloidal silica. Let this solution rest for 3 days before using. This is a hot process patina. If you find more bite is necessary, add 5 or 6 drops of nitric acid.**

27. NATURAL GREEN (Anonymous with variations[1])

Ammonium Chloride ..... **8 parts**
Cupric Sulfate ..... **8 parts**
Water ..... **128 parts**

***This is a cold process patina which needs a preservative if contact is expected. Works well with brown patinas.**

Reported to be dusty.

It is all right to vary chemical content to change the color slightly.

28. SUNRISE COLORS (Haws with variations[1])

Dip #1
Sulfuric Acid ..... 1 part
Water ..... Approximately 10 to 15 parts
Dip #2
Potash ..... 1 small lump
Water ..... Approximately 1 pint to 1 quart

***Dip or brush with dip #1 then dip in fresh water. Dip or brush with dip #2 then dip in fresh water. Dip or brush with dip #1 then dip in fresh water. Continue until desired results are achieved. A preservative is necessary.**

29. RUST BROWN/BLACK/RED (Anonymous/Rohan)

Step #1
Citric Acid ..... 1-2 teaspoons
Water ..... 1 pint
Step #2
Rinse well with water.
Step #3
Potash ..... pea-sized lump
Water ..... 1-2 gallon
Step#4
Rinse well with water.
Steps 3 and 4 may be repeated until your desired results are achieved.

***This patina works very well to attain a red/brown heavily verigated patina. A preservative is necessary immediately after application.**

30. GREEN (Anonymous/Rohan)

Sodium Thiosulfate ..... 4 ounces
Sulfuric Acid (1.84 sp. gr) ..... 1.6 fluid ounces
Water ..... 1 gallon

***This is a cold process patina a preservative is recommended.**

*** All comments courtesy of T. B. Rohan, Patina Specialist.**

[1] All variations courtesy of T. B. Rohan, Patina Specialist.

B001 RON YOUNG'S NEW BOOK - *CONTEMPORARY PATINATION* **featuring color plates for most patina recipes 45.00**

B002 *THE ART OF PATINAS FOR BRONZE* - **MICHAEL S. EDGE 24.95**

B003 *METHODS FOR MODERN SCULPTORS* - **YOUNG & FENNEL 16.95**

B004 *THE COLOURING, BRONZING AND PATINATION OF METALS* **80.00**
- HUGHES & ROWE featuring color plates for most patina recipes

Patina Videos by Ron Young * Sculpt Nouveau

Each video is complete. In every video Ron covers the tools and equipment needed, surface preparation, primers, sealers, all the formulas, "do's" and "don'ts" and techniques. Each patina and finish is thoroughly explained and demonstrated. A booklet is supplied with each video giving all the formulas and suppliers.

Hot Patina Video for Bronze, Brass & Copper

Go step by step through the hot patina process and the patinas. Begin with safety, tools, alloy of metal and surface preparation. Then learn how to make and apply over 15 different hot patinas and how to protect them indoors and out. Included is information on how to use paint, dye, pigment, oxides and mica powders together with patinas to achieve varied finishes. **One hour and 20 minutes**
VIDE01-001 ..... $59.95 **plus shipping.**

Cold Patina Video for Copper, Brass & Bronze

All cold patina techniques including: buried, wrapped, fumed, and paste patinas; plus pigments, oxides, carbonates and mica powders. Learn how to do over 15 traditional and exotic patinas. Begin with safety, tools and base patinas. Ends with protective coatings and waxes. **One hour and 15 minutes.**
VIDE02-001 ..... **$59.95** plus shipping.

Patina Video for Iron, Steel & Aluminum with Ceramic, Glass and Wood applications

Learn how to apply over 20 incredible patinas to Iron, Steel and Aluminum. Finishes for these metals include patina formulas that go directly on the metal surface and dyes that may be applied directly to the metal. Liquid metal coatings with patinas and leafing with patinas or dyes over it. Begin with safety, tools, surface preparation and end with clear protective coatings and waxes. All the latest finshes.**One hour and 20 minutes.**
VIDE03-001 ..... $59.95 **plus shipping.**