



FLUID USAGE GUIDE

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The following baseline usage and dilution recommendations for our embalming fluids were developed with input from our consulting embalmers and chemist. Of course body condition and desired final result, plus your experience, can modify these ratios. Intermittent drainage technique is recommended to assure adequate vascular pressure and thorough distribution of arterial fluids. Rose Colortone may be added at ½ -1 ounce per gallon for additional cosmetic effect based on the embalmer's desired results.

Arterial Fluids

In descending index order

RIGID (35 index)

- Normal cases: use 10 to 12 ounces of Rigid per gallon of diluted fluid.
- Difficult cases or extended stay cases: use at least 16 or more ounces per gallon of diluted fluid.

Special Circumstances:

- If the body displays medium to severe discoloration of the face and hands, it is best to start with a mild solution to clear lividity then increase strength to desired firmness.
- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Other Considerations:

- In hard water areas add 2 to 4 ounces per gallon of Water/Clot Guard.

Additional Uses:

- Rigid is also effective as a co-injection to other embalming solutions to increase firmness as desired by the embalmer.

36 PLUS (33 index, Silitech)

- Normal cases, where normal firmness is desired: use 6 or 8 ounces in the first gallon of cool water. The number of ounces of fluid can be adjusted in the second and subsequent gallons of diluted fluid as determined by body condition and the desires of the embalmer.
- For a high degree of firmness: use 8 to 10 ounces of 36 Plus per gallon of water.
- Difficult bodies, and where there is evidence of extensive chemotherapy or decomposition: 16 to 32 ounces of 36 Plus may be used. After injection of the first gallon of diluted fluid, the embalmer should proceed as professional judgment dictates.

Special Circumstances:

- If the body displays medium to severe discoloration of the face and hands, it is best to start with a mild solution to clear lividity, then increase strength to desired firmness.
- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Attention:

- Use Tissue Guard 32 in place of 36 Plus if your prep room is attached to a septic system due to the fact that ethylene dichloride has been deemed unsafe for septic systems.

Other Considerations:

- In hard water areas: add 2 to 4 ounces per gallon of Water/Clot Guard.

TISSUE GUARD 32 (32 index, lanolin based)

- Normal cases: use 8 to 10 ounces of Tissue Guard 32 per gallon of water.
- For difficult cases: use 12 to 16 ounces in accordance with professional judgment.

Special Circumstances:

- If the body displays medium to severe discoloration of the face and hands it is best to start with a mild solution to clear lividity, then increase strength to desired firmness.
- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Other Considerations:

- In hard water areas: add 2 to 4 ounces of Water/Clot Guard.

STANDARD (32 index)

- Recommended for the most difficult cases.
- Normal cases: use 6 to 8 ounces of Standard per gallon of water.
- Difficult cases or where stronger preservation is needed: use 10 to 16 ounces per gallon of water or as professional judgment dictates.

Special Circumstances:

- If the body displays medium to severe discoloration of the face and hands, it is best to start with a mild solution to clear lividity, then increase strength to desired firmness.
- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Other Considerations:

- In hard water areas: add 2 to 4 ounces of Water/Clot Guard.

Additional Uses:

- Suitable for "hypo-injecting" areas of the body not receiving adequate distribution.

EOTONE (27 index)

- Normal cases: use 6 to 8 ounces of Eotone per gallon of water.
- For additional firmness use 10 to 16 ounces per gallon or as professional judgment dictates.

Special Circumstances:

- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Other Considerations:

- In hard water areas: add 2 to 4 ounces of Water/Clot Guard.

FLOTONE (25 index)

- Normal cases: use 8 to 10 ounces of Flotone per gallon of water.
- For additional firmness use 10 to 12 ounces per gallon or as professional judgment dictates.

Special Circumstances:

- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Other Considerations:

- In hard water areas: add 2 to 4 ounces of Water/Clot Guard.

LANOL-TEX (22 index, lanolin based)

- Ideal for dry, emaciated cases needing protection against dehydration.
- Normal cases: use 6 to 8 ounces of Lanol-Tex per gallon of water.
- For additional firmness use 8 to 10 ounces per gallon or as professional judgment dictates.

Special Circumstances:

- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Other Considerations:

- In hard water areas: add 2 to 4 ounces of Water/Clot Guard.

NATURAL TONE (20 index, Silitech)

- Normal cases: use 6 to 8 ounces of Natural Tone per gallon of water.
- Smaller cases, depending on the condition of the body, 4 to 6 ounces per gallon may be sufficient.
- For additional firmness use 8 to 10 ounces per gallon or as professional judgment dictates.

Special Circumstances:

- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Other Considerations:

- In hard water areas: add 2 to 4 ounces of Water/Clot Guard.

X-20 (20 index, Silitech)

- Shake well before using.
- Normal cases: use 6 to 8 ounces of X-20 per gallon of water. A lower concentration should be considered for emaciated cases.
- For additional firmness use 8 to 10 ounces per gallon or as professional judgment dictates.

Special Circumstances:

- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.

Other Considerations:

- In hard water areas: add 2 to 4 ounces of Water/Clot Guard.

PERFECT TONE (18 index, Silitech)

Shake well before using.

- Normal cases: use 8 to 10 ounces of Perfect Tone per gallon of water.
- Smaller cases, depending on the condition of the body, 4 to 6 ounces per gallon may be sufficient.
- For additional firmness use 10 to 12 ounces per gallon or as professional judgment dictates.

Special Circumstances:

- Use Water/Clot Guard when moderate to heavy clotting is anticipated or distribution seems to be poor.
- Free Flo or Plasma Flo may be used as a co-injection if congealed or clotted blood is anticipated.
- In hard water areas: add 2 to 4 ounces of Water/Clot Guard.

Pre-and Co-Injection Fluids

In alphabetical order

COLOR GUARD I – Jaundice (no preservative properties)

- Color Guard I does not contain preservative chemicals so will not firm the body. It is intended to be used with a low to moderate index arterial fluid
- Use 8 to 16 ounces per gallon of cool or cold water, depending on the intensity of yellow color present and color development desired.
- Add 7 to 12 ounces of arterial fluid according to professional preference. Use only with a low to moderate index arterial fluid.
- Inject using intermittent drainage so it will be well distributed into all the required areas of the body. Color development will take place over a short period of time.
- We highly recommend first trying the fluid on an area of the body that will not be shown. To test the reaction of Color Guard I on a particular body, mix 10cc of Color Guard I with 10cc of arterial fluid and inject into the hip area. A red-pinkish tone should appear after a short time. Once appropriate levels are established for that particular case, the rest of the body can be treated.

HUMECTANT

- Use 2 to 6 ounces of Humectant in each gallon of diluted arterial fluid.
- On normal bodies: you can use 1 to 4 ounces per gallon of diluted arterial fluid to enhance the tissue feel and cosmetic effect, and to retard moisture loss.

Special Circumstances:

- Cases displaying severe emaciation use intermittent drainage technique in the last half gallon to adequately distribute solution into the tissues.

LEAK GUARD

- We recommend Leak Guard be used with the last gallon or two of diluted arterial fluid.
- Depending upon the degree of leakage protection required, add 5 to 10 ounces of Leak Guard to each gallon of remaining diluted fluid. Be sure to mix thoroughly.

Special Circumstances:

- Cases displaying Edema:
 - For Low to Moderate Edema use 8-10 ounces per gallon as a co-injection in the last gallon or two of diluted arterial solution using open drainage technique.
 - For Moderate to Severe Edema may require 12-16 ounces of Leak Guard per gallon of diluted arterial solution.

Other Considerations:

- For optimal disinfection 4 to 6 ounces of Water/Clot Guard could be added with the Leak Guard. Injection is best at a low pressure and modest flow rate using a pulsator. As each case will vary according to the condition of the body, the above recommendations can be altered as professional judgment dictates.

Additional Uses:

- Leak Guard can also be used to enhance the firming action of cavity fluids and autopsy compounds. It is compatible with fluids containing less than 20% alcohols.
- Leak Guard may also be used as an effective pore closer on skin donor cases at 8-10 ounces per gallon in the last gallon of diluted arterial solution using intermittent drainage technique.

PLASMA FLO

- Use 8 ounces of Plasma Flo per half gallon of water as a pre-injection fluid.
- As a co-injection use Plasma Flo at 2 to 8 ounces per gallon of diluted arterial fluid.

Special Circumstances:

- Use 2 ounces per gallon with cases where light clotting is expected or when a mild, well-balanced arterial is being used.
- Use 4 or more ounces where heavier clotting or extensive chemotherapy is expected or observed and/or when a stronger arterial is being used.

Other Considerations:

- In hard water areas the action of Plasma Flo can be enhanced by the addition of 2 to 4 ounces of Water/Clot Guard per gallon.

PREMIUM JAUNDICE (8 index)

- Inject Premium Jaundice at 4 to 8 ounces per gallon of diluted arterial fluid.
- Use a sufficient number of gallons to completely flush the body.
- Intermittent drainage is recommended to assist the flushing process.
- Thoroughly wash the face and other exposed areas of the body with soap and water to remove the yellow pigment that has surfaced. Some embalmers prefer to use a mild phenol solution to help bleach the yellowing that may have surfaced.

Special Circumstances:

- Cases displaying mild to moderate jaundice: Color Guard I may be used to react with bilirubin to change its yellow coloration to a red or rosy tone.

Other Considerations:

- A higher index arterial fluid can be injected at the end of the flushing process if further preservation is felt to be necessary. However, the writer reminds the reader that the chemistry of higher index fluids in contact with jaundice de-colorants can result in a shift in the body color. Caution is advised.
- As an alternative, Frigid Leak Guard can be used if some additional firmness is desired.
- Frigid Rose Colortone can be added to the diluted arterial injection fluid to counter any remaining yellow color.

ROSE COLORTONE DYE

- Start with 1 capful of dye in the diluted arterial fluid.
- Add additional dye if needed.

SOLVOL (Pre-injection)

- Use 2-4 ounces per half gallon to flush arterial and capillary system to allow better distribution and penetration of arterial solution.
- The concentration will vary with age, the condition of the body and the cause of death.
- Initial injection down a leg will help to determine the proper concentration and if additional dye will be beneficial.

Special Circumstances:

- Infants: use 8 to 10 ounces of Solvol per gallon of diluted arterial fluid.

Additional Uses:

- Useful as a bleaching agent and flushing of discolorations.

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STOP

- Stop is the solution of choice for controlling the sources of tissue gas.
- For arterial embalming: add 2 to 4 ounces of Stop to each gallon of diluted high index arterial fluid, mix well, and inject at moderate pressure. Use intermittent drainage to assure thorough distribution of the fluid to all parts of the body. Use sufficient fluid to completely saturate the body with both preservative and Stop. Take particular care to saturate the area of the body from which the tissue gas has originated using the appropriate artery for injection.
- To kill vermin: apply Stop with a cotton pack directly onto the area that is infested. Cover the pack with plastic and leave it in place for five or ten minutes or until the vermin are killed. Stop can also be poured or hypo-injected directly into infested/tissue gas areas using a trocar or syringe.

Attention:

- STOP will speed the deterioration of rubber materials such as latex, butyl and neoprene as well as acrylic, PVC and styrene-type plastics. Pumps, gauges, and parts containing these materials may be damaged by STOP.
- Do not allow STOP to enter a septic system.

TISSUE AID

- For normal cases, Tissue Aid should be used at 1 to 3 ounces per gallon of diluted arterial fluid. It can be used at the beginning of the embalming process or added to the last gallon as described above.
- For emaciated cases mix at 4 to 8 ounces per gallon of diluted arterial fluid, usually to the last gallon to be injected. For best results Tissue Aid should be injected under conditions of restricted or closed drainage so that the body is adequately filled out and the proper moisture level is established.

WATER/CLOT GUARD

- Use at 2 to 4 ounces of Water/Clot Guard per gallon of diluted arterial fluids containing either formaldehyde or glutaraldehyde.
- It is best to add Water/Clot Guard first to the tank of water.
- Give Water/Clot Guard about 10 minutes for it to mix and work on the water.
- Then add the arterial fluid.

Other Considerations:

- When used with Frigid Leak Guard, add Water/Clot Guard at one-half the number of ounces of Leak Guard to activate the glutaraldehyde.

Cavity Fluids

CAVITY KING (25 index)

- Normal cases: 1 or 2 pints.
- Larger bodies: at least 2 pints are required.

Special Circumstances:

- Where decomposition is well under way, at least two pints or more are recommended.

Additional Uses:

- Cavity King can be used for treating infant cases where arterial embalming is difficult to accomplish.
- For use as an external pack for skin slip, bed sores and other regions of decomposition, saturate cotton or toweling with Cavity King and place it over the affected area. Cover the pack with plastic sheeting to improve contact and to control the fumes.

DRY GUARD (21 index)

- Normal cases: 1 or 2 pints.
- Larger bodies: may require 2 to 3 pints.

Special Circumstances:

- Bodies with extensive putrefaction may require 2 to 3 pints according to professional judgment.

Additional Uses:

- As a surface pack for skin slip, bed sores and other troubling surface problems, saturate cotton or toweling with Dry Guard and place it on the affected area. Cover with plastic to control any fumes and direct the fluid into the problem area.
- For use as a bleach or to reduce swollen areas apply as a surface pack as above.
- For deeper discolorations or swelling, hypo into the affected area according to need.

5-PURPOSE CAVITY (8 index)

- Normal cases: 2 pints.
- Larger bodies: may require 3 or more pints.

Special Circumstances:

- Bodies with extensive putrefaction may require 3 or more pints.

Additional Uses:

- For external embalming and/or bleaching, saturate cotton with 5-Purpose Cavity. Apply the cotton pack to the area to be treated and cover the pack with plastic. If possible, allow it to work overnight.

CAVITY 55 (8 index)

- Normal cases: 2 pints.
- Larger bodies: may require 3 pints.

Special Circumstances:

- For bodies where decomposition is already underway, 3 or more pints may be needed

Additional Uses:

- For use as an external pack for bed sores, etc., saturate cotton with Cavity 55 and place on the area of need. Cover the pack with plastic and allow it to work for several hours, or overnight if possible.

PREMIUM CAVITY(7 index)

- Normal cases: 2 pints.
- Larger bodies: may require 3 pints.

Special Circumstances:

- For bodies where decomposition is already underway, 3 or more pints may be needed

Other Considerations:

- Premium Cavity contains ethylene dichloride which has recently been deemed unsafe for use in septic systems. If your prep room is attached to a septic system you should substitute with CAVITY 55.

Additional Uses:

- For tissue gas cases, apply or inject the concentrated fluid directly on or into the affected area