

Infutrace™

A Formaldehyde & Phenol Vapor Reducing Agent

Details

- Infutrace is not a fixative
- It is a non-hazardous for shipping, handling, storage, and disposal
- Produces a **significant reduction of formaldehyde and phenol vapors of up to 95%**
- Infutrace is a liquid concentrate requiring dilution with DI or Filtered water prior to use
- Reacts gently with specimen fixed with a formaldehyde-based embalming fluid
- Does Not compromise fixation nor the quality of the specimen
- Provides a safe environment for personnel and the entire laboratory environment
- Is used for Human or Animal Cadavers and Smaller specimen that have been **Well Fixed** with a formaldehyde-based embalming fluid
- Smaller specimen means, a whole animal (Dog, Cat, Fetal Pig,) part of a larger one, prosections and specimens for autopsy round or on display specimens for a class.
- Is used as a Re-perfusion/ Point Injection Method, and as a Spray & Dip Application
- Is for use as a moistening agent, with a Mold Inhibitor incorporated in Infutrace™

Infutrace™ Must Be Diluted with Filtered or DI water prior to any use

- Three Diluted Infutrace™ concentrations are recommended for various applications
 1. The **#1 Concentration** is for a [Re-perfusion & Point Injection Method](#)
 - a. To prepare a Diluted Re-perfusion and/or Point Injection working solution mix 26oz. of Infutrace with 102oz. of Filtered or DI water
 - i. Approx. ratio: 1-part Infutrace mixed with 4-parts filtered or DI water.
 2. The **#2 Concentration** is for a [Spray and Dip Method](#)
 - a. To prepare a Diluted Spray and Dip working solution, mix with 14oz. of Infutrace with 114oz. of Filtered or DI water.
 - i. Approx. ratio: 1-part Infutrace mixed with 8-parts filtered or DI water
 3. The **#3 Concentration** is a [Special Spray & Dip Method for Brain](#)
 - a. To prepare a Diluted Spray and Dip working solution for Brain mix 8oz. of Infutrace with 114oz. of Filtered or DI water.
 - i. Approx. ratio: 1-part Infutrace mixed with 16-parts filtered or DI water

Special Note

Typically, 1-1 ½ Gallon of the **#1 Concentration** of Infutrace re-perfusion working solution is adequate for most human cadavers. For horses and cows, you may find you need up to 5 Gallon or so of the **#1 Concentration** of Infutrace re-perfusion working solution. For embalmed large dogs, you may only require 1-Litre of the **#1 Concentration** of Infutrace re-perfusion working solution. For cats you may find 100ml of the **#1 Concentration** of Infutrace re-perfusion working solution would be sufficient. All volumes are estimates, it depends on the size and nature of the specimen. The volume of the **#1 Concentration** of Infutrace re-perfusion working solution is always 1/4 of the estimated volume of the embalming fluid remaining in the cadaver. The dilution of Infutrace re-perfusion working solution is based on specimens being well-fixed with an embalming solution containing 2% to 4% formaldehyde. (A 2% to 4% formaldehyde is equivalent to a 5% to 10% formalin).

Human Cadaver... Re-Perfusion & Point Injection Method

1. Embalm the cadaver in your normal way, but leave the canulas in place for the fixation period of time of time (of at least 7 to 10 days). This makes the re-perfusion procedure easier to perform.
2. Use the **#1 Concentration** for a **Re-perfusion & Point Injection working solution of 26oz. of Infutrace mixed with 102oz. of DI or filtered water**
3. Re-Perfuse cadaver through the inserted canulas in a normal embalming method, using 1/4 volume of the **#1 Concentration** of Infutrace working solution to the estimated volume of embalming fluid remaining in the cadaver.
 - a. i.e. When the estimated volume of embalming fluid remaining within an average human cadaver is about 4-gallon, re-perfuse the cadaver with 1-Gallon of the **#1 Concentration** of Infutrace working solution.
 - b. When estimating the volume of embalming fluid remaining in the cadaver, disregard any embalming fluid that has leaked out during the fixation process.
4. Point Inject about **100ml** of the **#1 Concentration** of Infutrace Re-Perfusion working solution into each of the thoracic and abdominal cavities and about **10-15ml** in any obvious pooling areas
5. Liberally Spray cadaver with the **#2 Concentration** of Infutrace Spray & Dip working solution
 - a. To prepare the **#2 Concentration**, mix **14oz of Infutrace with 114oz. of filtered or DI water**
6. Wrap cadaver to keep moist and allow 8-12 hours of reaction time prior to commencing dissection
7. Liberally Spray the **#2 Concentration** as necessary during dissection and especially at the end of the class
8. Infutrace incorporates a Mold Inhibitor in the formulation so the Spray application acts as a mold inhibitor and moistening agent, as well as a spot reaction for pools of embalming fluid exposed during dissection

Human Cadaver... Point Injection & Spray Method

1. When Re-Perfusion is Not Possible or simply undesirable, start with “The Point Injection Method”
2. Point Inject about **100ml** of the **#1 Concentration** of Infutrace Re-Perfusion working solution into each of the thoracic and abdominal cavities and about **10-15ml** in any obvious pooling areas
3. Liberally Spray cadaver with the **#2 Concentration** of Infutrace Spray & Dip working solution
 - a. To prepare the **#2 Concentration** mix **14oz of Infutrace with 114oz of filtered or DI water**
4. Wrap cadaver to keep moist and allow 4 hours of reaction time prior to commencing dissection
5. Liberally Spray the **#2 Concentration** of Infutrace as necessary during dissection and especially at end of class
6. Infutrace incorporates a Mold Inhibitor in the formulation so the Spray application acts as a mold inhibitor and moistening agent, as well as a spot reaction for pools of embalming fluid exposed during dissection.

Large Cadaver... Re-Perfusion & Point Injection Method (Horse & Cow)

1. Embalm these large cadavers in your normal way, but leave the canulas in place for the fixation period of time (of at least 14 to 21 days). This makes the re-perfusion procedure easier to perform
2. Use the **#1 Concentration** of Infutrace for a **Re-Perfusion & Point Injection working solution of 26oz of Infutrace mixed with 102oz of DI or filtered water**
3. Re-Perfuse cadaver through the inserted canulas in a normal embalming method, using 1/4 volume of the **#1 Concentration** of Infutrace working solution to the estimated volume of embalming fluid remaining in the cadaver.
 - a. When the estimated volume of embalming fluid remaining within a large cadaver is about 20 Gallons, re-perfuse the cadaver with 5-Gallons of the **#1 Concentration** of Infutrace Re-Perfusion working solution
 - b. When estimating the volume of embalming fluid remaining in these large cadavers, disregard any embalming fluid that has leaked out during the fixation process
4. Point Inject about **300ml** of the **#2 Concentration** of Infutrace Re-Perfusion working solution into each of the thoracic and abdominal cavities and about **15-30ml** in any obvious pooling areas
5. Liberally Spray cadaver with the **#2 Concentration** of Infutrace Spray & Dip working solution
 - a. To prepare the **#2 Concentration** mix **14oz of Infutrace with 114oz of filtered or DI water**
6. Wrap cadaver to keep moist & allow 8 to 12 hours of reaction time prior to commencing dissection
7. Liberally Spray the **#2 Concentration** of Infutrace as necessary during dissection and especially at the end of class
8. Infutrace incorporates a Mold Inhibitor in the formulation so the Spray application acts as a mold inhibitor and moistening agent, as well as spot reaction for pools embalming fluid exposed during dissection

Large Cadaver... Point Injection & Spray Method (Horse & Cow)

1. When Re-Perfusion is Not possible or simply undesirable, start with “The Point Injection Method”
2. Point Inject about **300ml** of the **#2 Concentration** of Infutrace Re-Perfusion working solution into each of the thoracic and abdominal cavities and about **15-30ml** in any obvious pooling areas
3. Liberally Spray cadaver with the **#2 Concentration** of Infutrace Spray & Dip working solution
 - a. To prepare the **#2 Concentration** mix **14oz of Infutrace with 114oz of filtered or DI water**
4. Wrap cadaver to keep moist and allow 4 hours of reaction time prior to commencing dissection
5. Liberally Spray the **#2 Concentration** of Infutrace as necessary during dissection and especially at the end of class
6. Infutrace incorporates a Mold Inhibitor in the formulation so the Spray application acts as a mold inhibitor and moistening agent as well as a spot reaction for pools of embalming fluid exposed during dissection

Small Cadaver... Re-Perfusion & Point Injection Method (Dog & Cat)

1. Embalm the cadaver in your normal way, but leave the cannulas in place for the fixation period of time (of at least 3 to 5 days). This makes the **Re-Perfusion & Point working solution of 26oz of Infutrace mixed with 102oz of DI or filtered water**
2. Use the **#1 Concentration** of Infutrace for **Re-Perfusion & Point Injection working solution of 26oz of Infutrace mixed with 102oz of DI or filtered water**
3. Re-Perfuse cadaver through the inserted canulas in a normal embalming method using 1/4 volume of the **#1 Concentration** of Infutrace working solution to the estimated volume of embalming fluid remaining in the cadaver
 - a. i.e. When the estimated volume of embalming fluid remaining within an average small cadaver is about 1-Gallon, Re-Perfuse the cadaver with 1-Litre of the **#1 Concentration** of Infutrace Re-Perfusion working solution
 - b. When estimating the volume of embalming fluid remaining in these small cadavers, disregard any embalming fluid that has leaked out during the fixation process
4. Point Inject about **10ml** of the **#1 Concentration** of Infutrace Re-Perfusion working solution into each of the thoracic and abdominal cavities and about **5ml** in any obvious pooling areas
5. Liberally Spray cadaver with the **#2 Concentration** of Infutrace Spray & Dip working solution
 - a. To prepare a **Spray & Dip working solution mix 14oz of Infutrace with 114oz of filtered or DI water**
6. Wrap cadaver to keep moist and allow 3-4 hours of reaction time prior to commencing dissection
7. Liberally Spray the **#2 Concentration** of Infutrace as necessary during dissection and especially at the end of class
8. Infutrace incorporates a Mold Inhibitor in the formulation so the Spray application acts as a mold inhibitor and moistening agent, as well as a spot reaction for pools of embalming fluid exposed during dissection

Small Cadaver... Point Injection & Spray Method (Dog & Cat)

1. When Re-Perfusion is Not possible or simply undesirable, start with “The Point Injection Method”
2. Point Inject about **100ml** of the **#2 Concentration** of Infutrace Re-Perfusion working solution into each of the thoracic and abdominal cavities and about **10ml** in any obvious pooling areas
3. Liberally Spray cadaver with the **#2 Concentration** of Infutrace Spray & Dip working solution
 - a. To prepare the **#2 Concentration mix 14oz of Infutrace with 114oz of filtered or DI water**
4. Wrap cadaver to keep moist and allow 4 hours of reaction time prior to commencing dissection
5. Liberally Spray the **#2 Concentration** of Infutrace as necessary during dissection and especially at the end of class
6. Infutrace incorporates a Mold Inhibitor in the formulation so the Spray application acts as a mold inhibitor and moistening agent, as well as a spot reaction for pools of embalming fluid exposed during dissection

Smaller Specimen... Spray & Dip Method

Smaller Specimen may be a whole animal, part of a larger one, prosections and specimens for autopsy rounds or simply display specimens for a class

1. Prepare the **#2 Concentration** of Infutrace **Spray & Dip working solution by mixing 14oz of Infutrace with 114oz of water, using filtered or DI water**
2. Use the **#2 Concentration** of Infutrace Spray & Dip working solution for all Spray and Dip applications, except for **the Brain**
3. Liberally Spray the **#2 Concentration** of Infutrace as necessary during dissection and especially at the end of class
4. Infutrace incorporates a Mold Inhibitor in the formulation so the Spray application acts as a mold inhibitor and moistening agent, as well as a spot reaction for pools embalming fluid exposed during dissection
5. If specimens are to be dissected or displayed over several days or weeks, simply spray the specimen with the **#2 Concentration** of Infutrace Spray & Dip working solution and bag it until the next class
6. Display specimens, if they are to be kept for years, must returned to formalin within 4-weeks for long-term storage. When tissue is required for future application, simply repeat the above process

Bagged Specimen... Dip Method

1. Prepare the **#2 Concentration** of Infutrace **Spray & Dip working solution by mixing 14oz of Infutrace with 114oz of water, using filtered or DI water**
2. Fill a large enough container to accommodate the Bagged Specimen with this working solution
3. Completely immerse Bagged Specimen in this container of the **#2 Concentration** of Infutrace
4. With Bag still immersed, open bag allowing this working solution to flood the bag
5. Slowly Dip Bagged Specimen (like a tea bag) in this solution 3 to 4 times and remove from solution
6. For Subsequent dissection, follow the Spray & Dip Method listed above

The Preferred Method For Removing Formalin From Brain Tissue which was originally fixed in 20% to 37% formaldehyde solution

1. Prepare the **#3 Concentration** of Infutrace Dip working solution for **Brain** by **mixing 8oz of Infutrace with 120oz of filtered or DI water**
2. Totally immerse Brain in the **#3 Concentration** of Infutrace, then Dip Working solution and allow to stand for 45 minutes
3. Repeat step #2 in a second “fresh” batch of the **#3 Concentration** of Infutrace Dip Working solution
4. Repeat step #2 in a third “fresh” batch of the **#3 Concentration** of Infutrace Dip Working solution
5. Use a “fresh” batch of the **#3 Concentration** of Infutrace Dip Working solution ie., spray, dip, soak, or short-term storage of up to 4 weeks
6. For short term storage, make sure the specimen is totally immersed in the **#3 Concentration** of Infutrace Dip Working solution and remain immersed until removed for study or dissection
7. If specimen is to be kept for years, they must be returned to formalin with 4-weeks
8. For long term storage, thoroughly rinse specimen with distilled or filtered water and then totally immerse specimen in container of formalin
9. When specimen is ready for additional study or dissection, repeat Steps#1 through #7 above