# Infutrace<sup>TM</sup> is a formaldehyde & phenol vapor reducing agent

### > <u>Is not a fixative.</u>

- ➤ Is non hazardous for shipping, handling, storage and disposal.
- Produces a significant <u>reduction</u> of formaldehyde and phenol vapors up to 95%.
- ➤ 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.
- ➤ Is very safe for personnel use and the entire laboratory environment.
- ➤ Is for use on Human or Animal Cadavers and Smaller specimen that have been Well Fixed with a formaldehyde-based embalming fluid.
- > Smaller specimen means, a whole animal (ie, Dog, Cat, Fetal Pig) part of a larger one, prosections and specimens for autopsy rounds 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<sup>TM</sup>.

## Infutrace<sup>TM</sup> Must Be Diluted with Filtered or DI water prior to any use.

- Three Diluted Infutrace<sup>TM</sup> concentrations are recommended for various applications;
  - 1. The # 1 Concentration is for a Re-perfusion & Point Injection Method
    - To prepare a Diluted Re-perfusion and/or Point Injection working solution mix 26oz. of **Infutrace**<sup>TM</sup> with 102oz. of Filtered or DI water.
      - approx. ratio: 1-part Infutrace<sup>TM</sup> mixed with 4-parts filtered or DI water.)
  - 2. The # 2 Concentration is for a Spray & Dip Method.
    - To prepare a Diluted Spray and Dip working solution mix 14oz. of **Infutrace**<sup>TM</sup> with 114oz. of Filtered or DI water.
      - o (approx.ratio: 1-part Infutrace<sup>TM</sup> mixed with 8-parts filtered or DI water.)
  - 3. The #3 Concentration is a Special Spray & Dip Method for Brain.
    - To prepare a Diluted Spray and Dip working solution for **Brain** mix 8oz. of **Infutrace**<sup>TM</sup> with 114oz. of Filtered or DI water.
      - $\verb| o (approx.ratio: 1-part Infutrace^{TM} mixed with 16-parts filtered or DI water.)| \\$

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## 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 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<sup>TM</sup> 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<sup>TM</sup> working solution –to- the estimated volume of embalming fluid remaining in the cadaver.
  - i.e. When the estimated volume of embalming fluid remaining within an average human cadaver is about 4-gallons, re-perfuse the cadaver with **1 gallon** of the # **1 Concentration** of Infutrace<sup>TM</sup> working solution.
  - 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 100-ml of the #1 Concentration of Infutrace<sup>TM</sup> 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<sup>TM</sup> Spray & Dip working solution.
  - (to prepare the # 2 Concentration mix 14-oz. of Infutrace<sup>TM</sup> with 114-oz. of filtered or DI water.)
- 6. Wrap cadaver to keep moist and <u>allow 8 to 12 hours</u> of reaction time prior to commencing dissection.
- 7. Liberally Spray the # 2 concentration as necessary during dissection and especially at the end of class.
- 8. Infutrace<sup>TM</sup> 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 100-ml 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<sup>TM</sup> Spray & Dip working solution.
  - (to prepare the # 2 Concentration mix 14-oz. of Infutrace<sup>TM</sup> with 114-oz. of filtered or DI water.)
- 4. Wrap cadaver to keep moist and <u>allow 4 hours</u> of reaction time prior to commencing dissection.
- 5. Liberally Spray the #2 concentration of Infutrace<sup>TM</sup> as necessary during dissection and especially at the end of class. Infutrace<sup>TM</sup> 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.

#### Special Note;

Typically, 1 - 1 ½ gallons of the # 1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution is adequate for most human cadavers. For horses and cows you may find you need up to 5 gallons or so of the # 1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution. For embalmed large dogs, you may only require 1-Litre of the # 1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution. For cats you may find 100mls of the # 1 Concentration of Infutrace<sup>TM</sup> 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 TM re-perfusion working solution is always 1/4 of the estimated volume of the embalming fluid remaining within the cadaver.

The dilution of Infutrace<sup>TM</sup> 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)

## Large Cadaver...Re-Perfusion & Point Injection Method (ie; 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<sup>TM</sup> for a Re-perfusion & Point Injection working solution of 26oz. of Infutrace<sup>TM</sup> 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<sup>TM</sup> working solution —to- the estimated volume of embalming fluid remaining in the cadaver.
  - 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<sup>TM</sup> Re-perfusion working solution.
  - 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 300-ml 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<sup>TM</sup> Spray & Dip working solution.

  a. (to prepare the # 2 Concentration mix 14-oz. of Infutrace<sup>TM</sup> with 114-oz. 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<sup>TM</sup> as necessary during dissection and especially at the end of class. Infutrace<sup>TM</sup> 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... Point Injection & Spray Method (ie; Horse & Cow)

- 1. When Re-Perfusion is Not possible or simply undesirable, start with "The Point Injection Method".
- 2. Point Inject about 300-ml 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<sup>TM</sup> Spray & Dip working solution.

  a. (to prepare the # 2 Concentration mix 14-oz. of Infutrace<sup>TM</sup> with 114-oz. of filtered or DI water.)
- 4. Wrap cadaver to keep moist and <u>allow 4 hours</u> of reaction time prior to commencing dissection.
- 5. Liberally Spray the #2 concentration of Infutrace<sup>TM</sup> as necessary during dissection and especially at the end of class. Infutrace<sup>TM</sup> 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.

#### Special Note:

Typically, 1 - 1 ½ gallons of the #1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution is adequate for most human cadavers. For horses and cows you may find you need up to 5 gallons or so of the #1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution. For embalmed large dogs, you may only require 1-Litre of the #1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution. For cats you may find 100mls of the #1 Concentration of Infutrace<sup>TM</sup> 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 TM re-perfusion working solution is always 1/4 of the estimated volume of the embalming fluid remaining within the cadaver.

The dilution of Infutrace<sup>TM</sup> 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)

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

- 1. Embalm the cadaver in your normal way, but leave the canulas in place for the fixation period of time (of at least 3 to 5 days). This makes the re-perfusion procedure easier to perform.
- 2. Use the # 1 Concentration of Infutrace<sup>™</sup> for a Re-perfusion & Point Injection working solution of 26oz. of Infutrace<sup>™</sup> 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<sup>TM</sup> working solution –to- the estimated volume of embalming fluid remaining in the cadaver.
  - 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.
  - 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 10-ml 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.
  - (to prepare a Spray & Dip working solution mix 14-oz. of Infutrace<sup>TM</sup> with 114-oz. of filtered/DI water.)
- 6. Wrap cadaver to keep moist and allow 3 to 4 hours of reaction time prior to commencing dissection.
- 7. Liberally Spray the # 2 concentration of Infutrace<sup>TM</sup> as necessary during dissection and especially at the end of class. Infutrace<sup>TM</sup> 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 (ie;Dog & Cat)

- 1. When Re-Perfusion is Not possible or simply undesirable, start with "The Point Injection Method".
- 2. Point Inject about 100-ml 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<sup>TM</sup> Spray & Dip working solution.

  a. (to prepare the # 2 Concentration mix 14-oz. of Infutrace<sup>TM</sup> with 114-oz. 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<sup>TM</sup> as necessary during dissection and especially at the end of class. Infutrace<sup>TM</sup> 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.

#### Special Note;

Typically, 1 - 1 ½ gallons of the # 1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution is adequate for most human cadavers. For horses and cows you may find you need up to 5 gallons or so of the # 1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution. For embalmed large dogs, you may only require 1-Litre of the # 1 Concentration of Infutrace<sup>TM</sup> re-perfusion working solution. For cats you may find 100mls of the # 1 Concentration of Infutrace<sup>TM</sup> 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 TM re-perfusion working solution is always 1/4 of the estimated volume of the embalming fluid remaining within the cadaver.

The dilution of Infutrace<sup>TM</sup> 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)

## 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<sup>TM</sup> Spray & Dip working solution by mixing 14oz. of **Infutrace** TM 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 Brain.
- 3. Liberally Spray the # 2 concentration of Infutrace<sup>TM</sup> as necessary during dissection and especially at the end of class. Infutrace<sup>TM</sup> 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.
- 4. If specimens are to be dissected or displayed over several days or weeks, simply spray the specimen with the # 2 concentration of Infutrace<sup>TM</sup> Spray & Dip working solution and bag it until the next class.
- 5. Display specimens, if they are to be kept for years, must be 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<sup>TM</sup> Spray & Dip working solution by mixing 14oz. of **Infutrace** TM 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<sup>TM</sup>.
- 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<sup>TM</sup> Dip working solution for Brain by mixing 8 oz. of **Infutrace** TM with 120 oz. of filtered or DI water.
- 2. Totally immerse Brain in the # 3 Concentration of Infutrace™ Dip Working solution and allow to stand for 45minutes.
- 3. Repeat step # 2 in a second <u>"fresh"</u> batch of the # 3 Concentration of Infutrace<sup>TM</sup> Dip Working solution
- 4. Repeat step # 2 in a third "fresh" batch of the # 3 Concentration of Infutrace<sup>TM</sup> Dip Working solution
- 5. Use a "<u>fresh</u>" batch of the **# 3 Concentration** of Infutrace<sup>TM</sup> Dip Working solution ie., spray, dip, soak or short term storage of up to four (4) weeks.
- 6. For short term storage make sure the specimen are <u>totally immersed</u> in the # 3 Concentration of Infutrace<sup>TM</sup> Dip Working solution and remain immersed until removed for study or dissection.
- 7. If specimen are to be kept for years, they must be returned to formalin within 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 are ready for additional study or dissection, repeat Steps #1 through # 7 above.