



## **MASTERTECH BULLETIN**

*(Revised 04/28/11)*

# CLEARIFY™

## BIODEGRADABLE NONTOXIC ODORLESS CLEARING AGENT

### CLEARIFY™, THE PRODUCT AND ITS PURPOSE:

Eliminating Xylene from the laboratory has been a challenge for quite some time. **CLEARIFY™** is a nontoxic, odorless, biodegradable clearing agent that looks like water, smells like water, but works like Xylene. **CLEARIFY™ is so safe it meets Federal requirements for direct and indirect food applications (C.F.R.-TITLE 21, Part 172.882).** **CLEARIFY™** is a nonflammable liquid and can be used in all tissue processors with excellent results. **CLEARIFY™** also works well as a clearing agent before coverslipping. **CLEARIFY™** is excellent for deparaffinizing tissue slides before staining, using the same procedure as Xylene. Tissue sections cleared using **CLEARIFY™** are microscopically equivalent to sections cleared in Xylene, with comparable stain quality. **CLEARIFY™** is a nonregulated, noncarcinogenic, nondermatologic and noncorrosive reagent. **CLEARIFY™** improves microtomy characteristics, making it easier to produce high quality histology slides. **CLEARIFY™** is a catalytically synthesized isoparaffinic hydrocarbon with high interfacial tension and good demulsibility. Chemically inert and virtually odorless, **CLEARIFY™** is a superior low-hazard replacement for Xylene. **CLEARIFY™** is miscible with histology embedding mediums, compatible with most mounting mediums, and has a refractive index similar to that of glass.

### CLEARIFY™, INSTRUCTIONS FOR USE:

Using **CLEARIFY™** will contribute to a healthier laboratory environment for all. As with any Xylene Substitute, **CLEARIFY™** requires some adjustments to routine procedures. Rotate and change the last tissue processor alcohol often to insure no water carryover which may result in incomplete clearing. Two changes of **CLEARIFY™** at one hour each are needed to insure complete clearing. When using **CLEARIFY™** do not use Methanol or Alcohols denatured with Methanol. For best results use Reagent Alcohol Formula SDA 3C (No Methanol); American Master\*Tech Reagent Alcohol is a SDA 3C formulation. Do not use graded alcohols in your tissue processor or staining procedures when using **CLEARIFY™**. We recommend using Xylene to flush out paraffin lines in tissue processors, as most paraffins contain complex plasticizers that only Xylene can completely remove.

To deparaffinize, remove slides from OVEN and place into **CLEARIFY™** while the paraffin is still molten. Deparaffinize slides through two changes of **CLEARIFY™** for 10 minutes in each change with thorough agitation.

When dehydrating slides before clearing and coverslipping, use 4 changes of Absolute Alcohol! Rotate and change the last alcohol in your stain setup regularly; more often in humid environments! This will minimize water carryover which may result in cloudiness or bubbles. Clear slides through 3 changes of **CLEARIFY™** before coverslipping; rotate and change the last station often. In the first two changes, agitate slides thoroughly and let stand for 2 minutes; in the third change, agitate slides thoroughly and let stand for 5 minutes.

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Many mounting mediums are compatible with **CLEARIFY™**. To test a mounting medium, immerse a blank slide in **CLEARIFY™** and coverslip. If a "haze" develops, use another mounting medium. AMERICAN MASTER\*TECH **ClearMount™**, **CoverSafe™**, and **MicroMount™ Mounting Mediums** are compatible with **CLEARIFY™** and virtually all other clearing agents. All three mounting mediums are usually dry to the touch in only 5 minutes! **CLEARIFY™** can be recycled.

#### CLEARIFY™, STABILITY:

Compared with conventional solvents, the purity and structural stability of **CLEARIFY™** greatly reduces oxidation breakdown during long periods of storage. **CLEARIFY™** shelf life is 2 years.

#### CLEARIFY™, PRECAUTIONS:

**CLEARIFY™** is considered nontoxic, nonflammable, noncarcinogenic, noncorrosive, nondermatologic and nonpolluting. As with all clearing agents, the safe use of this product includes the use of eye protection, proper lab wear and good ventilation. Although **CLEARIFY™** has an auto ignition temperature of 640° F, it can combust under certain conditions, so always store this product away from direct heat, sparks, or flame.

#### CLEARIFY™, DISPOSAL:

**CLEARIFY™** chemical classification name is: Naphtha Isoparaffinic Hydrocarbon. There are no E.P.A., O.S.H.A., F.D.A. or D.O.T. restrictions on this product when used as directed. In most areas **CLEARIFY™** can be disposed via the local sewer system with running water. Consult local water authorities for applicable regulations

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