



MASTERTECH BULLETIN

(Revised 03/08/18)

ULTRUM II™ CONCENTRATE

A FORMALDEHYDE-FREE TISSUE FIXATIVE

ULTRUM II™, THE PRODUCT AND ITS PURPOSE:

ULTRUM II™ is a laboratory reagent designed to replace 10% Formalin. **ULTRUM II™** is a transparent aqueous liquid and does not contain Formaldehyde or any known carcinogens. **ULTRUM II™** is biocidal, fungicidal, and virucidal, yet it degrades when diluted with water. **ULTRUM II™** is virtually odorless, eliminating the unpleasant tears and burning throat sensation associated with Formalin. **ULTRUM II™** is nonalcoholic, nonflammable and is equivalent to 10% Formalin in fixation rate. Tissue fixed in **ULTRUM II™** and stained with most histological stains exhibit less cellular distortion than Formalin fixatives. With **ULTRUM II™**, the usual "muddiness" associated with 10% Formalin is replaced with crisp, well-defined nuclei. The principal active ingredient in **ULTRUM II™** is listed in the Cosmetic Ingredient Dictionary published by the Cosmetic, Toiletry, and Fragrance Association. This ingredient is used in cosmetics, shampoo, soaps, and other household goods. It is also registered with the United States Environmental Protection Agency (#10352-39).

ULTRUM II™ CONCENTRATE, INSTRUCTIONS FOR DILUTION:

Agitate **ULTRUM II™ CONCENTRATE** vigorously before use. Add 4 gallons (15 Liters) of water to a 5 gallon container, then add 1 gallon of **ULTRUM II™ CONCENTRATE** and mix for 10 minutes until completely blended! If you are fixing large specimens or when firmer tissue is desired, 1 gallon of Reagent Alcohol can be substituted for 1 gallon of water. (Do not incorporate more than one gallon of alcohol when diluting.) If large specimens are stored in **ULTRUM II™**, Reagent Alcohol substitution is required; the tissue must be opened or bisected and completely submerged to insure penetration. If this procedure is not followed, mold may form on exposed tissue and unpenetrated tissue will not be fixed. **ULTRUM II™** is not a gaseous (aromatic) fixative like Formaldehyde, so it can only kill microorganisms if the tissue is fully submerged and completely penetrated! Use only Isopropyl Alcohol or Reagent Alcohol (Denatured Ethyl Alcohol) in your tissue processor when using **ULTRUM II™**. If you are using a Vacuum Infiltration Tissue Processor, we recommended that you daily wipe out the retort with 0.1% Hydrochloric Acid solution followed by two hot water rinses. In addition, twice each month flush the processor lines using 0.1% Hydrochloric Acid solution followed by two hot water flushes.

ULTRUM II™, PRECAUTIONS:

As with any tissue fixative, we recommend wearing appropriate laboratory safety equipment when handling **ULTRUM II™**. Eye protection, gloves, and apron or lab coat are essential. Always work with **ULTRUM II™** in a well ventilated area.

ULTRUM II™, DISPOSAL:

Consult your local wastewater authority to determine applicable disposal procedures in your area. The results of E.P.A. Organic Analysis, Method 8240, performed on **ULTRUM II™** are on the opposite side of this bulletin.

ULTRUM II™, EXPIRATION:

ULTRUM II™ has a 12 month shelf life; product color will darken over time, but stability and performance are not affected!

ULTRUM II™, LABELING:

Label specimen containers of **ULTRUM II™** as: **ULTRUM II™ TISSUE FIXATIVE / FOR LABORATORY USE ONLY**. **ULTRUM II™** container labels (LBULT), 1" x 3" / 500 per roll, are available from American MasterTech Scientific, Inc.

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ENVIRONMENTAL

ANALYTICAL CHEMISTS

November 6, 1992

LAB No: STK 204873-1

*American Histology Reagent Company
P.O. Box 7344
Stockton, CA 95267

RE: Organic Analysis
Matrix: Liquid

Sampling Site:
Sample Description: Ultrum II
Sampled by : Rudy Gutierrez
Container : Amber VOA TFE-Cap
Preservatives :

Sampled : October 27, 1992
Received : October 27, 1992
Extracted : November 3, 1992
Analyzed : November 3, 1992
QA/QC ID# : 921103 8240-304A

EPA METHOD 8240 **ULTRUM II™**

CONSTITUENT	SAMPLE DLR ug/kg	SAMPLE RESULTS ug/kg	LAB DLR ug/kg	BLANK RESULTS ug/kg
Acetone	10.0	11.2	10.0	ND
Benzene	5.0	ND	5.0	ND
Bromodichloromethane	5.0	ND	5.0	ND
Bromoform	5.0	ND	5.0	ND
Bromomethane	10.0	ND	10.0	ND
Carbon Disulfide	5.0	ND	5.0	ND
Carbon Tetrachloride	5.0	ND	5.0	ND
Chlorobenzene	5.0	ND	5.0	ND
Chloroethane	10.0	ND	10.0	ND
Chloroform	5.0	ND	5.0	ND
Chloromethane	10.0	ND	10.0	ND
Dibromochloromethane	5.0	ND	5.0	ND
1,2-Dichlorobenzene	5.0	ND	5.0	ND
1,3-Dichlorobenzene	5.0	ND	5.0	ND
1,4-Dichlorobenzene	5.0	ND	5.0	ND
1,1-Dichloroethane	5.0	ND	5.0	ND
1,2-Dichloroethane	5.0	ND	5.0	ND
1,1-Dichloroethylene	5.0	ND	5.0	ND
trans-1,2-Dichloroethylene	5.0	ND	5.0	ND
1,2-Dichloropropane	5.0	ND	5.0	ND
cis-1,3-Dichloropropene	5.0	ND	5.0	ND
trans-1,3-Dichloropropene	5.0	ND	5.0	ND
Ethanol	10,000	ND	10,000	ND
Ethyl Benzene	5.0	ND	5.0	ND
2-Hexanone	5.0	ND	5.0	ND
Methylene Chloride	5.0	ND	5.0	ND
2-Butanone (MEK)	10.0	ND	10.0	ND
4-Methyl-2-pentanone (MIBK)	5.0	ND	5.0	ND
Styrene	5.0	ND	5.0	ND
1,1,2,2-Tetrachloroethane	5.0	ND	5.0	ND
Tetrachloroethylene	5.0	ND	5.0	ND
Toluene	5.0	ND	5.0	ND
1,1,1-Trichloroethane	5.0	ND	5.0	ND
1,1,2-Trichloroethane	5.0	ND	5.0	ND
Trichlorethylene	5.0	ND	5.0	ND
Trichlorofluoromethane	5.0	ND	5.0	ND
Vinyl Acetate	100.0	ND	100.0	ND
Vinyl Chloride	10.0	ND	10.0	ND
Xylenes	5.0	ND	5.0	ND