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Thermo Scientific Shandon Xylene Substitute
Instructions for Use

For in vitro diagnostic use.
For the preparation of pathology specimens.

Thermo Scientific™ Shandon™ Xylene Substitute is specifically designed to be used for tissue processing and staining of histological and cytological specimens. The product is a clear, colorless reagent blend of isoparaffinic hydrocarbons that have the same evaporation rate as xylene and is highly quality controlled. Gas chromatography techniques are performed on each batch of Xylene Substitute to assure chemical consistency and to identify any impurity that may affect tissue processing and/or staining. It is also a good lipid (fat) extractor and will not cause tissue brittleness during tissue processing.

Precautions should be taken when handling Xylene Substitute. It is less irritating and non-sensitizing to the skin than xylene and d-limonene based clearants (citrus-based products with an "orange aroma"). However, protective gloves should be worn and work should be performed in a ventilated area. Xylene Substitute can be used with both open and closed tissue processors. It is also compatible with all manual staining procedures, special stains and automatic stainers.

Xylene Substitute is not miscible with anhydrous methyl alcohol and can be used with many, but not all, mounting medium products (see list below). Xylene Substitute will not tolerate water. When it becomes contaminated, water droplets will form on the bottom. When an excess of alcohol is carried over into Xylene Substitute, the water present in the alcohol will cause it to become cloudy. Xylene Substitute can be recycled with solvent recyclers.

Xylene Substitute is a flammable product and must be stored in a flammable fire cabinet.

Instructions For Use – Tissue Processing

Xylene Substitute has shown best results on closed tissue processors when heat is not used during the normal clearing process. Vacuum has been viewed as an asset during all phases of tissue processing, including clearing. A typical tissue processing schedule would include two stations and the time in each Xylene Substitute station should be 1 hour for a normal, multiple tissue type and thickness processing run. Xylene Substitute can also be used in the cleaning cycle of a closed tissue processor.

The laboratory should develop a product rotation and change out schedule that adheres to the policies of their department.

The following tissue processing schedule is recommended for the average hospital surgical load.

Protocols

Station	Solution	Time
1	10% Neutral Buffered Formalin	holding
2	10% Neutral Buffered Formalin	1 hour
3	Pen-Fix or 80% Alcohol	40 minutes
4	95% Alcohol	40 minutes
5	95% Alcohol	40 minutes
6	100% Alcohol	40 minutes
7	100% Alcohol	40 minutes
8	100% Alcohol	40 minutes
9	Xylene Substitute	1 hour
10	Xylene Substitute	1 hour
11	Paraffin	1 hour
12	Paraffin	1 hour

Note: This procedure may not fit every situation. Modifications may be necessary.

When small biopsy or thin tissue specimens (less than 2 mm in thickness) are processed separately, the following tissue processing schedule is recommended. Tissues are assumed to be fixed. If not, stations 1 and 2 should utilize 10% Neutral Buffered Formalin for a minimum of 30 minutes each.

Station	Solution	Time
1	10% Neutral Buffered Formalin	(30 minutes)
2	10% Neutral Buffered Formalin	(30 minutes)
3	Pen-Fix or 80% Alcohol	10 minutes
4	95% Alcohol	10 minutes
5	95% Alcohol	10 minutes
6	100% Alcohol	10 minutes
7	100% Alcohol	10 minutes
8	100% Alcohol	10 minutes
9	Xylene Substitute	15 minutes
10	Xylene Substitute	15 minutes
11	Paraffin	20 minutes
12	Paraffin	20 minutes

Note: This procedure may not fit every situation. Modifications may be necessary.

Staining

It is recommended that three stations of Xylene Substitute for 3 minutes each be used for deparaffinization to ensure all of the paraffin is removed from the tissue section.

After staining and dehydration is completed, slides should be cleared in three stations of Xylene Substitute for 1 minute each before coverslipping. This will assure complete clearing, which results in maximum slide clarity and readies the slide for coverslipping.

The laboratory should develop a product rotation and change out schedule that adheres to the policies of their department.

The following tissue staining schedule is recommended for the average hospital surgical load.

Station	Solution	Time
1	Xylene Substitute	3 minutes
2	Xylene Substitute	3 minutes
3	Xylene Substitute	3 minutes
4	100% Alcohol	1 minute
5	100% Alcohol	1 minute
6	100% Alcohol	1 minute
7	95% Alcohol	1 minute
8	Rinse in running tap water	Briefly
9	Deionized or distilled water	Rinse
10	Hematoxylin	Chosen Time
11	Running tap water	Rinse off excess stain
12	Acid Rinse	Chosen Time
13	Rinse in running tap water	30 seconds (agitate)
14	Bluing Reagent	1 minute
15	Rinse in running tap water	1 minute
16	95% Alcohol	Rinse
17	Eosin-Y	Chosen Time
18	100% Alcohol	1 minute
19	100% Alcohol	1 minute
20	100% Alcohol	1 minute
21	Xylene Substitute	1 minute
22	Xylene Substitute	1 minute
23	Xylene Substitute	1 minute

Coverslip with a compatible mounting medium (see list below)

Note: This procedure may not fit every situation. Modifications may be necessary.

Compatibility of Mounting Medium for Xylene Substitute

- Thermo Scientific Richard-Allan Scientific Mounting Medium (4111)
- Thermo Scientific Shandon Xylene Substitute Mountant

Warnings and Precautions

See Safety Data Sheets for warnings and precautions, as well as EUH code definitions.
See container label for warnings and precautions.

Order Information

Product	Size	Qty.	REF
Xylene Substitute	1 gal. (3.79 L)	Ea.	9990505
Xylene Substitute	1 gal. (3.79 L)	4/cs.	6764506
Xylene Substitute	5 gal. (18.9 L)	Ea.	9990507
Xylene Substitute	55 gal. (208 L)	Ea.	9990509
Xylene Substitute	5 Liter bottle	Ea.	6764515

Anatomical Pathology

15 C (59 F) – 30 C (86 F)

238344 R10/15

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