

Thermo Scientific Richard-Allan Scientific Signature Series Clear-Rite 3 Instructions for Use

Thermo Scientific™ Richard-Allan Scientific Clear-Rite™ 3 is a specifically designed xylene substitute that is 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 Clear-Rite 3 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 Clear-Rite 3. It has a low odor and lower toxicity (300 ppm TLV) than xylene. It is also 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. Clear-Rite 3 can be used with both open and closed tissue processors. It is also compatible with all manual staining procedures, special stains, and automatic stainers.

Clear-Rite 3 is not miscible with anhydrous methyl alcohol and can be used with many, but not all, mounting medium products (see list below). Clear-Rite 3 will not tolerate water. When it becomes contaminated, water droplets will form on the bottom. When an excess of alcohol is carried over into Clear-Rite 3, the water present in the alcohol will cause Clear-Rite 3 to become cloudy.

Clear-Rite 3 is a flammable product and must be stored in a flammable fire cabinet.

Tissue Processing Instructions For Use

Clear-Rite 3 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 Clear-Rite 3 station should be 1 hour for a normal, multiple tissue type and thickness processing run. Clear-Rite 3 can also be used in the clearing 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.

Protocols

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

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	Clear-Rite 3	1 hour
10	Clear-Rite 3	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	Clear-Rite 3	15 minutes
10	Clear-Rite 3	15 minutes
11	Paraffin	20 minutes
12	Paraffin	20 minutes

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

Staining Instructions For Use

It is recommended that three stations of Clear-Rite 3 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 Clear-Rite 3 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	Clear-Rite 3	3 minutes
2	Clear-Rite 3	3 minutes
3	Clear-Rite 3	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	Clear-Rite 3	1 minute
22	Clear-Rite 3	1 minute
23	Clear-Rite 3	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 Clear-Rite 3

Thermo Scientific Richard-Allan Mounting Medium (4111)
Fisher Scientific Permout
Thermo Scientific Shandon Xylene Substitute Mountant
Thermo Scientific Cytoseal XYL

Warnings and Precautions

See Material Safety Data Sheets for warnings and precautions, as well as R & S code definitions.

See container labels for warnings and precautions.

Order Information

Product	Size	Qty.	REF
Clear-Rite 3	1 gal. (3.79L) bottle	4/cs.	6901
Clear-Rite 3	5 gal. (18.9L) Metal pail	Ea.	6955
Clear-Rite 3	55 ga. (208L) Drum	Ea.	6855
Mounting Medium	1 pt. (0.47L)	2/cs.	4111
Mounting Medium	4 oz. (118mL)	6/cs.	4112
Xylene Substitute Mountant	60mL (approx. 2 oz.)	Ea.	1900231
Xylene Substitute Mountant	120mL (approx. 4 oz.)	Ea.	1900233
Xylene Substitute Mountant	500mL (approx. 17 oz.)	2/cs.	1999122
Cytoseal XYL	4 oz. (118mL)	12/cs.	8312-4

