



# Instructions For Use

## KT 025-IFU

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## Oil Red O Stain Kit (For Fat)

### Description and Principle

Oil Red O Stain Kit (For Fat) is intended for use in the histological visualization of fat cells and neutral fat. This kit may be used **ONLY** on frozen tissue sections, fresh smears, or touch preps as xylenes and alcohols will dissolve fat deposits.

Fat staining occurs by absorption of oil red O into lipid substances. This is a physical method of staining that relies on greater solubility of oil red O in the lipid substance than in the dye solvent.

### Expected Results

Fat Cells:	Red
Neutral Fat:	Red
Nuclei:	Blue

### Kit Contents

	Volume	Storage
1. Propylene Glycol	500 ml	15-30°C
2. Oil Red O Solution	125 ml	15-30°C
3. Hematoxylin, Mayer's (Lillie's Mod.)	125 ml	15-30°C

### Suggested Controls (not provided)

Any frozen section containing fat.

### Uses/Limitations

Not to be taken internally.  
For In-Vitro Diagnostic use only.  
Histological applications.  
Do not use past expiration date.  
Use caution when handling reagents.  
Non-Sterile

### Storage

Store kit and all components at room temperature (15-30°C).

### Safety and Precautions

Please see current Safety Data Sheets (SDS) for this product and components GHS classification, pictograms, and full hazard/precautionary statements. If there is any serious incident that has occurred in relation to the device, please contact the manufacturer: Diagnostic BioSystems Technical Support at (925) 484-3350, extension 2 or [techsupport@dbiosys.com](mailto:techsupport@dbiosys.com). If required, please report to the Competent Authority of the Member State in which the user and/or patient is established.

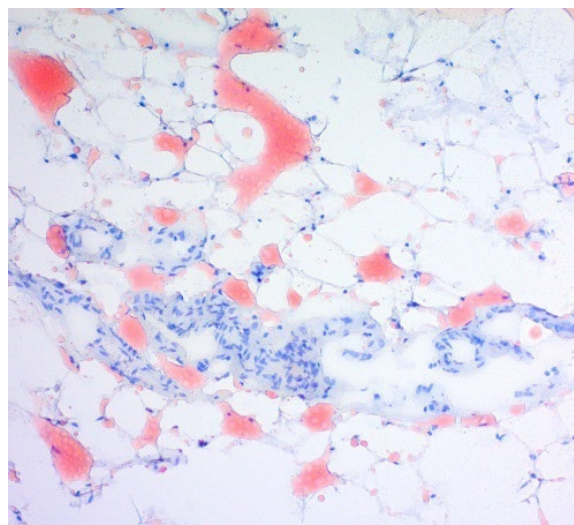
### Procedure (Standard):

**Note:** Heat Oil Red O Solution to 60°C prior to beginning.

1. Prepare fresh or frozen tissue section as usual.
2. Place slide in room temperature Propylene Glycol for 5 minutes.
3. Incubate slide in heated (60°C) Oil Red O Solution for 6-10 minutes or overnight at room temperature.

**Note:** Prepare mixture of 85% Propylene Glycol in distilled water.

4. Differentiate tissue section in 85% Propylene Glycol for 1 minute.



Fat deposits in frozen Human Adipose tissue demonstrated with Oil Red O Stain Kit

5. Rinse slide in 2 changes of distilled water.
6. Stain tissue section with Hematoxylin, Mayer's (Lillie's Modification) for 1-2 minutes.
7. Rinse slide thoroughly in tap water
8. Rinse slide in 2 changes of distilled water.
9. Coverslip using an aqueous mounting medium.

### Procedure (Dropper):

**Note:** Heat Oil Red O Solution to 60° prior to beginning.

**Note:** This microwave procedure is meant to stain one slide at a time using steam from a warmed staining jar to heat and keep the slide hydrated during staining.

1. Prepare fresh or frozen tissue section as usual.
  2. Apply 5-8 drops of room temperature Propylene Glycol for 5 minutes.
  3. Fill a staining jar approximately 80% full with DI water. Place staining jar in microwave and heat until hot but not boiling.
  4. Blot excess Propylene Glycol from slide.
  5. Carefully place slide across the top of the un-capped staining jar and apply 5-8 drops of Oil Red O Solution and heat in microwave for 10 seconds. Leave jar with slide in the microwave for 6-10 minutes for staining.
- Note:** Prepare mixture of 85% Propylene Glycol in distilled water in graduated mixing vial.



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6. Differentiate tissue section in 85% Propylene Glycol for 1 minute.
7. Rinse slide in 2 changes of distilled water.
8. Stain tissue section with 5-8 drops of Hematoxylin, Mayer's (Lillie's Modification) for 1-2 minutes.
9. Rinse slide thoroughly in tap water.
10. Rinse slide in 2 changes of distilled water.
11. Coverslip using an aqueous mounting medium.

### **References**


1. Hopkins, P.M. et al. Oil red O stain of alveolar macrophages is an effective screening test for gastroesophageal reflux disease in lung transplant recipients. The Journal of Heart and Lung Transplantation. 2010 August; 29(8): pages 859-864.
2. Clark, G., et al. Staining Procedures; 4th Edition, 1981.
3. Sheehan, DC., Hrapchak, BB. Theory and Practice of Histotechnology; 1980, page 225.



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