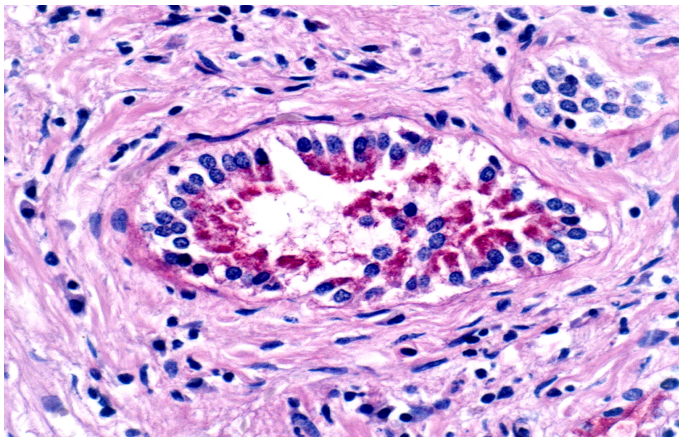
Diastase for Glycogen Digestion

Description:

Diastase is used to determine if glycogen is present in a histology tissue section. Glycogen is a starch usually found in the liver, that, when treated with an enzyme (diastase) is de-polymerized and converted into a water-soluble sugar that rinses off the tissues during rinse steps. The Schiff's reaction is a specific histochemical response to glycogen, staining it magenta. The recommended procedure for glycogen confirmation requires the preparation of two tissue slides and two positive tissue controls. One untreated slide is stained using the standard PAS procedure; the other slide is treated with a diastase solution followed by the PAS procedure. The presence of glycogen is confirmed if the untreated slide is PAS positive and the diastase treated slide is negative.

Uses/Limitations:

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



Control Tissue: Liver

Results:

PAS Positive Material:	Magenta
Nuclei:	Blue

Product:

Item #	Contents	Volume	Storage
SSC-AAS250	Diastase, 1% (Alpha-Amylase Solution)	250 ml	2-8° C

Note: Apply Diastase to slide(s) and incubate for 10-30 minutes at room temperature. Rinse in 2 changes of distilled water. (see suggested protocol below)

Precautions:

Avoid contact with skin and eyes.
Harmful if swallowed.
Follow all Federal, State, and local regulations regarding disposal.

Procedure:

1. Deparaffinize two identical sections if necessary and hydrate to distilled water.
2. If sections are Zenker-fixed, remove mercuric chloride crystals using iodine and clear with sodium thiosulfate. Rinse in running tap water.
3. Apply Alpha-Amylase Solution (1%) to one slide and incubate for 10-30 minutes at room temperature.
4. Rinse in 2 changes of distilled water.

Note: The remainder of this procedure is performed on both the "digested" and "undigested" slides.

5. Apply Periodic Acid Solution.
6. Rinse slide in 4 changes of distilled water.
7. Apply Schiff's Solution to tissue section and incubate.
8. Rinse slide in warm running tap water for 2 minutes.
9. Rinse slide in distilled water.
10. Apply Counterstain.
11. Rinse in running tap water for 2 minutes followed by 2 changes of distilled water.
12. Apply Bluing Reagent if required
13. Dehydrate through graded alcohols.
14. Clear, and mount in synthetic resin.

References:

1. Culling CFA, Allison RT, Barr WT.: Cellular Pathology Technique, 4th Edition. Butterworths, Pages 216-220, 1985.
2. Sheenan, D.C., Hrapchak, B.B. Theory and Practice of Histotechnology, 2nd Edition. CV Mosby, Columbus, OH. Pages 164-167, 1980.