

# AG- SCHIFF'S REAGENT (IFU)

## PRINCIPLE:

AG-Schiff's reagent is a clear, colorless reagent intended for staining of carbohydrates, glycogen, basement membranes, and fungus. The product is ready to use and does not have to be reconstituted. Schiff's reagent is commonly used in histological staining techniques, such as the Periodic Acid-Schiff (PAS) stain, to detect the presence of polysaccharides, mucins, and other macromolecules in tissue sections. The Schiff's reagent reacts with the aldehydes produced by the oxidation of these macromolecules, resulting in a pink to magenta color. The staining intensity can vary depending on the concentration and type of macromolecules present in the tissue section.

## PACKAGE CONTENTS:

Description	Catalogue Number	Quantity
Schiff's Reagent	AG/Reagent/SCH/22/01	200 mL

## STORAGE & STABILITY:

- It is strongly recommended to store the stain tightly capped under refrigeration (2-8°C) for extended stability.
- Once opened, use within 3 months.
- In some cases, small amounts of white precipitate may form in the reagent if stored improperly, which can be dissolved by gently warming and stirring the reagent without change in performance. However, larger amounts of white precipitate can lead to a weak Schiff stain reaction.
- Any discoloration of the reagent indicates contamination, and it should be discarded.

## TYPES OF SPECIMENS:

Tissue sections and fungal specimens.

## DIRECTIONS/PROCEDURE:

1. Deparaffinize and hydrate sections to deionized water.
2. Place sections in Periodic Acid Solution for 5 minutes at room temperature.
3. Rinse sections in several changes of deionized water.
4. Stain sections in Schiff Reagent for 15 minutes to achieve desired contrast.
5. Rinse sections in lukewarm running tap water for 10 minutes.
6. If desired, stain sections with Hematoxylin for 1 minute to achieve better contrast.
7. Rinse sections in deionized water for 30 seconds.
8. Dehydrate sections in two changes of anhydrous alcohol for 1 minute each.
9. Clear sections in three changes of clearing reagent for 1 minute each and mount.

## INTERPRETATION OF THE RESULTS:

Periodic acid oxidizes various tissue moieties to aldehydes. Schiff Reagent bonds to the induced tissue-aldehyde in its leuco (colorless) form. Water rinsing removes the acid, restoring the Schiff Reagent to its rose- colored form. Hence, Carbohydrates, Glycogen, Basement Membranes, Fungi stain Magenta or rose colour and nuclei stain blue against a light purple background.

## LIMITATION:


- Schiff's reagent is a useful staining reagent in histology, but it has its limitations and should be used carefully and in conjunction with other staining methods as needed to obtain the most accurate results.
- Schiff's reagent can sometimes produce non-specific staining in tissue sections, if the reagent is not fresh or if the tissue sections have not been properly prepared or fixed.
- If there are other substances present in the tissue sections that can react with the reagent, such as formalin or other aldehydes, it can produce false-positive results
- May not be sensitive enough to detect low levels of carbohydrates in tissue sections.
- The staining needs to be observed promptly and the slides need to be stored properly to prevent fading or loss of the staining.
- Schiff's reagent can react with a variety of aldehydes, which can limit its specificity for detecting specific carbohydrates or other macromolecules in tissue sections.

## WARNING & PRECAUTIONS:

- For *In-vitro* Diagnostic and professional use only.
- Schiff's reagent contains acid, which is corrosive and can cause severe burns. Always handle Schiff's reagent with caution and wear appropriate personal protective equipment, including gloves and a lab coat.
- Use a fume hood or other appropriate ventilation when working with Schiff's reagent to avoid inhaling harmful fumes.
- Directions should be read and followed carefully.
- Do not use beyond the stated expiration dates.
- Safety precautions should be taken in handling, processing and discarding all clinical specimens.
- Dispose of all material in accordance with local regulations.

## SYMBOLS:

	Date of manufacture		Use-by-date		Do not use if package is damaged		Manufacturer
	Batch Code		Refer to the instructions		ISO		GMP

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