

SOP  
#1

Subject **Gomori's Trichrome Blue Collagen**

Sheet **1** of **2**

| Rev 2       | Effective Date | Author  |
|-------------|----------------|---------|
| 1: 10/23/17 | 10/23/17       | Fimbres |
| 2: 9/13/18  | <b>9/13/18</b> |         |

## 1. PURPOSE

The purpose of a Gomori's trichrome stain is to study the diseases of connective tissue and muscle associated with fibrotic and dystrophic changes. We expect results of blue collagen, red cytoplasm and muscle fibers and blue-to-black nuclei.

## 2. SCOPE

This format applied to all SOP's developed within the TACMASR laboratory

## 3. REFERENCE DOCUMENTS

None

## 4. RESPONSIBILITIES

This SOP can be carried out by someone who has seen it done before and has knowledge on the results of the tissue colors.

## 5. MATERIALS and EQUIPMENT

Bouin's solution (Sigma Aldrich ref# HT10132)

Weigert's Hematoxylin parts A & B (Newcomer Supply ref#1409B)

Gomori's trichrome blue collagen (ThermoFisher Scientific ref#88030)

Or Gomori's trichrome green collagen (Fisher: ES9000)

Oven

Running distilled water

Running tap water

70% ethanol

95% ethanol

2x 100% ethanol

3x xylene

Coverslips

Mounting media

Gloves

## 6. SAFETY AND CAUTIONARY NOTES

Attached

## 7. PROCEDURE

**7.1** Bake slides for 15 minutes at 60-65 °C

**7.2** Deparaffinize slides and hydrate to distilled water

- 7.3** Place slides in Bouin's for 1 minute at 60°C
  - 7.3.1 Bouin's solution at 60C.
- 7.4** Wash in distilled water until yellow is removed from tissue
- 7.5** Place slides in *fresh* 1:1 part A:part B Weigert's Hematoxylin for 5 minutes at room temperature.
  - 7.5.1 It is essential that Weigert's hematoxylin be fresh given that the alcoholic part evaporates quickly.
  - 7.5.2 Make **ONLY** enough for the slides to be stained.
- 7.6** Rinse in tap water for 30 seconds
- 7.7** Rinse in distilled water for 1 minute or until water is running clear
- 7.8** Place slides in Gomori's trichrome for 10 minutes at room temperature
- 7.9** Quickly rinse slides in distilled water
  - 7.9.1 Do not over rinse as the blue fades off the tissue easily – no more than a 30 second rinse.
- 7.10** Dehydrate slides in increasing grades of ethanol (70%, 95%, 100%, 100%)
- 7.11** Clear slides with three changes of xylene
- 7.12** Mount and coverslip

## **8. Results**

Blue/green collagen  
Red to maroon cytoplasm and muscle fibers  
Blue to black nuclei