

K-694, GOLD CHLORIDE METHOD FOR NERVE ENDINGS

Fixation: None

Staining:

1. Place fresh pieces of tissue, 2-3 mm thick, in **25% Formic Acid** (K-694-1) for 10-15 minutes. Remove excess acid by rinsing quickly in distilled water.
2. Place in **1% Gold Chloride** (K-694-2) for 20-30 minutes. Rinse in distilled water.
3. Place in **25% Formic Acid** (K-694-1) in the dark for 24 hours. Rinse in distilled water.

Finish with one of the following three options:

4. Tease the tissue (particularly muscle) in **Glycerine**(K-694-3). Using a binocular dissecting microscope, isolate the fibers bearing motor end plates. Whole mounts of the portions desired are then made in **Glycerine** (K-694-3) or **Glycerin Jelly** (M-12)
 - 4a. Treat the tissue in **Sodium Thiosulfate, 5%** (K-694-4) for 15-20 minutes, wash thoroughly in running water, and place in artificial gastric juice* for 1-2 hours @ 37°C. Wash in several changes of water and drain on a clean cloth. Transfer the parts desired to a slide and mount with one or two drops of concentrated acacia solution. Press the cover glass down upon the tissue to flatten and bring the nerves into view.

*Artificial Gastric Juice is prepared by dissolving 0.1 gm **Pepsin powder** (K-694-5) in 100ml of **0.3% Hydrochloric Acid** (K-694-6)
 - 4b. Embed, section and mount in the usual manner.

Staining Results:

Nerve fibers and endings	Black
Other tissues	Purple to red

References:

Fischer, E., Arch. Mikr. Anat., 12:364-390, 1875

Ranvier, L., Quart. J. Micr. Sc., 20:456-458, 1880

Garven, H.S.D., Brain, 48:380-441, 1925

Combs, J.D., Stain Techn., 11: 147-148, 1936

Clark, G. (ed.), Staining Procedures, 3rd. edition, Williams & Wilkins, Baltimore, p 102, c. 1973