

Investigation 11.C: Examining Neural Tissue

Question: How does the structure of different neurons relate to their functions?

Safety Precautions

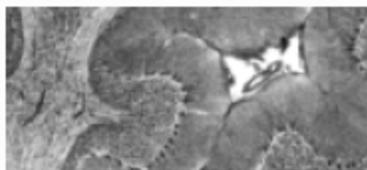
Handle the microscope slides with care, so they do not break and cut you.

Materials

- microscope
- prepared neural slides similar to, but not limited to, the ones shown below

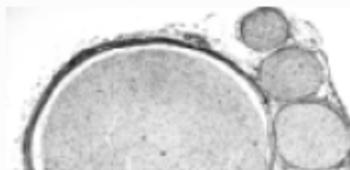
Procedure

Observe each slide provided by your teacher, as well as the micrographs below, and identify any key neural structures.



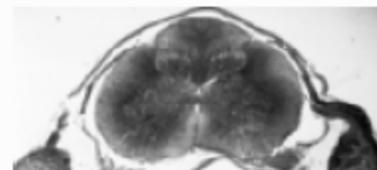
Magnification: 7 ×

1 White and grey matter



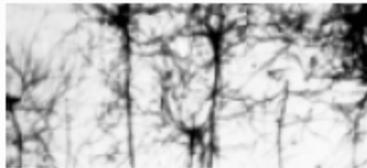
Magnification: 6.125 ×

2 Cross-section of nerve



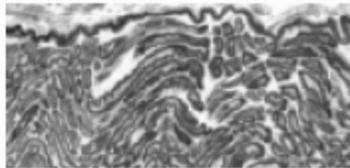
Magnification: 0.5 ×

3 Cross-section of spinal cord



Magnification: 39 ×

4 Unmyelinated neurons



Magnification: 228 ×

5 Myelinated axons



Magnification: 28 ×

6 Neuromuscular junction

Analysis

1. Slide and micrograph 1 show a cross-section of the brain. Sketch your observations, and label the white and grey matter. Describe the structural differences between the two types of neural tissue.

