NISSL SUBSTANCE - CRESYL ECHT VIOLET STAIN

PURPOSE: To demonstrate Nissl substance in tissue sections. Nissl substance is lost after cell injury and if the axon degenerates, the myelin covering also breaks down.

PRINCIPLE: Neurons contain Nissl substance, which is primarily composed of rough endoplasmic reticulum, with the amount, form, and distribution varying in different types of neurons. Because of the RNA content, Nissl substance is very basophilic and will be very sharply stained with basic aniline dyes. By varying the pH and the degree of differentiation, both Nissl substance and nuclei or only Nissl substance may be demonstrated.

CONTROL: Normal spinal cord.

FIXATIVE: 10% formalin

TECHNIQUE: Cut paraffin sections at 6 microns. Allow to dry overnight at 37°C.

EQUIPMENT: Coplin jars, rinse all glassware in DI water.

REAGENTS:

0.5% Cresyl Echt Violet:

Cresyl Echt Violet Acetate	0.5 gm
Distilled water	100.0 ml

Mix well, filter. For best results allow to ripen 48 hours. Stable for 1 year.

SAFETY: Wear gloves, goggles and lab coar. Avoid contact and inhalation.

PROCEDURE:

1. Deparaffinize and hydrate to distilled water.
2. Cresyl violet, two minutes.
3. Wash in distilled water.
4. Dehydrate, clear in xylene, coverslip.

RESULTS:

Nissl substance dark blue to purple

NOTE: If differentiation is needed use 70% alcohol.

REFERENCES:

Carson F, Histotechnology: A Self-Instructional Text, 1990, pp 170-171, ASCP, Ill

Prepared:_____By: _____

Approved:_____By:_____

PROCEDURE CARD

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0.5% CRESYL ECHT VIOLET:

Cresyl Echt Violet Acetate 1.0 gm
Distilled water 200.0 ml

Mix well, filter. For best results allow to ripen 48 hours. Stable.

DATE:_____

TECH:_____

EXPIRATION:_____