



# Instructions For Use

## LBC-IFU

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## Luxol Fast Blue Stain Kit

### Description and Principle

The Luxol Fast Blue Stain Kit is designed for staining myelin/myelinated axons and Nissl substance on formalin fixed, paraffin-embedded tissue. This product is used for identifying the basic neuronal structure in brain or spinal cord sections.

Luxol fast blue is an alcohol soluble copper phthalocyanine dye that binds to lipoproteins found in the myelin sheath of the central nervous system. Tissue is initially overstained by luxol fast blue and dye is removed from gray-matter by differentiating solutions lithium carbonate and 70% alcohol. Cresyl echt violet is used to counterstain nuclei and nissl substance.

### Expected Results

Myelinated Fibers:	Blue
Nissl Substance:	Violet
Nerve Cells:	Violet

### Kit Contents

1. Cresyl Echt Violet Solution
2. Luxol Fast Blue Solution
3. Lithium Carbonate Solution (0.05%)
4. Alcohol, Reagent (70%)

### Storage

2-8° C
18-25° C
18-25° C
18-25° C

### Suggested Controls (not provided)

Cerebral Cortex, Spinal Cord

### Uses/Limitations

For In-Vitro Diagnostic use only.

Do not use if reagents become cloudy or precipitate

Do not use past expiration date.

Use caution when handling reagents.

Non-Sterile

Intended for FFPE sections cut at 5-10µm.

This procedure has not been optimized for frozen sections.

Frozen sections may require protocol modification.

### Storage

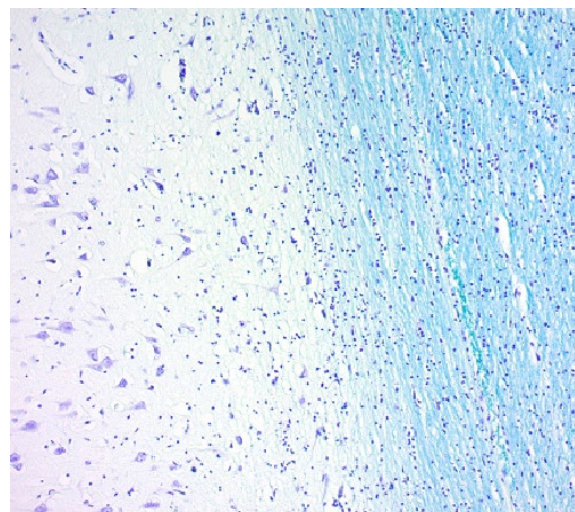
Mixed storage conditions. Store according to individual label instructions.

### Safety and Precautions

Please see current Safety Data Sheets (SDS) for this product and components GHS classification, pictograms, and full hazard/precautionary statements.

### Procedure

1. Deparaffinize sections if necessary and hydrate to distilled water.
2. Pour Luxol Fast Blue Solution into a staining jar and Incubate slide for 24 hours at room temperature or 2 hours at 60°C. Solution is alcoholic and will readily evaporate at smaller volumes.
3. Rinse thoroughly in distilled water.
4. Differentiate section by dipping in Lithium Carbonate Solution (0.05%) several times (up to 20 seconds).
5. If needed, continue differentiation by repeatedly dipping in Alcohol, Reagent (70%) until gray-matter is colorless and white-matter remains blue.
6. Rinse slide in 2 changes of distilled water.



White-matter and gray-matter of Human Brain stained with Luxol Fast Blue Stain Kit

7. Incubate slide in Cresyl Echt Violet (0.1%) for 2-5 minutes.
8. Rinse quickly in 1 change of distilled water.
9. Dehydrate quickly in 3 changes of absolute alcohol.
10. Clear as desired and mount in synthetic resin.

### References

1. Nishi M, Kimura T, Igeta M, Furuta M, Suenaga K, Matsumura T, et al. (2020) Differences in splicing defects between the grey and white matter in myotonic dystrophy type 1 patients. PLoS ONE 15(5): e0224912. <https://doi.org/10.1371/journal.pone.0224912>
2. Sheenan, D.C., Hrapchak, B.B. Theory and Practice of Histotechnology, 2nd Edition. Battelle Press, Columbus, OH. Page 262-264. 1980
3. Kluver, H., Barrera, E.A. A Method for the combined staining of cells and fibers in the nervous system. Journal of Neuropathology and Experimental Neurology, 1953, 12: pages 400-403.



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