

Legacy Laboratory Services

PROTEIN ELECTROPHORESIS WITH REFLEX IMMUNOFIXATION

April 2011

**Reflex to
Immunofixation
from serum or
urine Protein
Electrophoresis
for monoclonal
or suspicious
patterns.**

Protein Electrophoresis (PELP) with Reflex to Immunofixation Electrophoresis (IEP) is currently available as an order option

An IEP will automatically be performed, if clinically indicated, when a serum or urine Protein Electrophoresis with Reflex is ordered. Clinical indications include serum or urine protein patterns with monoclonal or suspicious patterns. Patterns that are normal, polyclonal, or lacking monoclonal patterns, will not be tested by IEP. Protein Electrophoresis without reflex to Immunofixation remains an order choice.

Serum and urine PELP are often used as a screening procedure for the detection of various pathophysiological states, such as monoclonal gammopathies, dysproteinemias, inflammation, and protein loss. Abnormal protein patterns can be further tested using protein immunofixation. The primary use of IEP is for the detection and characterization of monoclonal gammopathies. IEP is a more sensitive technique than serum or urine PELP for the identification of small M-proteins found in patients with amyloidosis, early or treated myeloma and macroglobulinemia, solitary plasmacytoma, and extramedullary.

For additional information, contact:

Danelle Beaudoin, PhD
Clinical Chemist
Legacy Laboratory Services
503-413-5024



Pat Hills, MT (ASCP), NRCC
Medical Technologist
Legacy Laboratory Services
503-413-5008

Collection Guidelines

Test Name	Serum Protein Electrophoresis with Reflex PELP	Urine Protein Electrophoresis with Reflex U PELP RR (random) U PELP TR (timed)
Collect	Serum, one 5.0 mL gold (SST) or 7.0 mL red top tube	No preservative. Preferred: Urine, 24-hour collection in a sterile urine container, refrigerate during collection. also acceptable: Random urine, first morning collection, urine collected in a sterile container
Handling	Allow serum to clot completely at room temperature (minimum: 30 minutes). Centrifuge and separate serum from cells within 4 hours of collection.	Keep sample refrigerated after collection.
Preferred Volume	1.0 mL serum	100.0 mL urine
Minimum Volume	0.5 mL serum	20.0 mL urine
Transport	Refrigerated (2-8°C)	Refrigerated (2-8°C)
Rejection Criteria	Hemolyzed or plasma specimens.	N/A
Stability	AFTER SEPARATION FROM CELLS: Ambient (20-25°C): 6 hours; Refrigerated (2-8°C): 7 days; Frozen (at or below -20°C): 1 month	Ambient (20-25°C): 2 hours; Refrigerated (2-8°C): 7 days; Frozen (at or below -20°C): 1 month
Performed	Monday - Friday	Monday - Friday
Turnaround	2-5 days	3-6 days
Method	Electrophoresis, Immunofixation, and Nephelometry	Electrophoresis and Immunofixation
Reference Values	Interpretation provided with report.	Interpretation provided with report.

References:

- 1.) Killingsworth LM and Warren BM. Immunofixation for the Identification of Monoclonal Gammopathies. Helena Laboratories. 1986.
- 2.) Borek J. Electrophoresis and Immunofixation: The Proteins of Serum, Urine, and Cerebrospinal Fluid. Sebia Electrophoresis. January 2004.
- 3.) Attaelmannan M and Levinson SS. Understanding and Identifying Monoclonal Gammopathies. Clin Chem. 46: 1230-1238, 2000.

For additional information, contact:

Danelle Beaudoin, PhD
Clinical Chemist
Legacy Laboratory Services
503-413-5024

Pat Hills, MT (ASCP), NRCC
Medical Technologist
Legacy Laboratory Services
503-413-5008