BACKGROUND:
Hemophilia A is an X-linked inherited bleeding disorder caused by mutations in the F8 gene that encodes for coagulation factor VIII. The degree of plasma factor VIII deficiency correlates with both the clinical severity of disease and genetic findings. Severe hemophilia A is characterized by plasma factor VIII levels of under 1 IU/dl. Approximately 50% of severe hemophilia A cases are attributable to gene inversions in F8 introns 1 and 22. For severe hemophilia A patients, the presence or absence of F8 inversions is confirmed prior to DNA sequence analysis. For families in which the factor VIII (F8) gene inversion is present, detection of this mutation can be used for carrier testing and prenatal diagnosis for hemophilia A.

REASONS FOR REFERRAL:
- Diagnosis of Affected Individuals
- Female Carrier Detection
- Prenatal Diagnosis

METHOD:
DNA based factor VIII gene analysis is carried out using PCR assays designed to detect the recombination events in intron 22 and intron 1 of the Factor VIII (F8) gene.

LIMITATIONS:
Rare inversion mutations may not be detected by these assays. Factor VIII (F8) gene mutations other than inversions are not detected by this assay. It is recommended that an affected family member be tested for the inversion mutation prior to prenatal or carrier testing.

SPECIMEN REQUIREMENTS:
5 ml EDTA (lavender top) whole blood, 2 ml minimum, shipped at room temperature. A sample from an affected family member is highly recommended. Please inquire about specific requirements for the analysis of prenatal samples by calling 1-800-245-3117, ext. 6250.
SHIPPING REQUIREMENTS:
Place the specimen and the completed test requisition in plastic bags, seal and insert in a Styrofoam container. Seal the container and place in a sturdy cardboard box and tape securely. Ship the package in compliance with your overnight carrier guidelines. Notify the laboratory prior to shipping by calling 800-245-3117, ext. 6250. Address package to:

Client Services/Molecular Diagnostics Laboratory
BloodCenter of Wisconsin
638 N. 18th Street
Milwaukee, WI 53233
800-245-3117, ext. 6250

TURNAROUND TIME: 5-7 days

CPT CODES:
FULL INVERSION ANALYSIS: 81403

TARGETED INVERSION ANALYSIS (for known pedigrees)
Intron 22: 81479

Intron 1: 81479

REFERENCES:

