Arylsulphatase

Description	Arylsulphatase A and arylsulphatase B are measured in the investigation of suspected lysosomal storage diseases.
Indication	Arylsulphatase A: screening for suspected metachromatic leukodystrophy as part of lysosomal enzyme screen (does not include screening for mucopolysaccharidosis). Arylsulphatase B: confirmation of suspected mucopolysaccharidosis type VI following positive urine glycosaminoglycan analysis.
Additional Info	Arylsulphatase A (sulphatidase) deficiency causes metachromatic leukodystrophy, a sphingolipidosis, which can presents at any age with spasticity, neuropathy and psychomotor regression (loss of ability to walk). Arylsulphatase B (N-acetylgalactosamine-4-sulphatase) deficiency causes mucopolysaccharidosis type VI (Maroteaux-Lamy), which presents from the age of 2 upwards with skeletal deformities. The screening test for mucopolysaccharidosis is urine glycosaminoglycans.
Concurrent Tests	Metachromatic leukodystrophy: urine sulphatides Mucopolysaccharidosis type VI: urine glycosaminoglycans
Dietary Requirements	Arylsulphatase A: N/A Arylsulphatase B: N/A
Interpretation	Arylsulphatase A: Decreased in metachromatic leukodystrophy, multiple sulphatase deficiency and sulphatide activator (saposin) deficiency. Must exclude pseudo-deficiency (decreased amount of enzyme protein). Arylsulphatase B: Decreased in mucopolysaccharidosis type VI (Maroteaux-Lamy).
Collection Conditions	Arylsulphatase A: Avoid sending to laboratory on Friday as must reach SAS referral laboratory within 72 hours. All relevant clinical information should be provided with the sample. Arylsulphatase B: Check with laboratory
Frequency of testing	Repeated measurement inappropriate.