TEST: VITAMIN B12

PRINCIPLE:
Reduced levels of vitamin B12 may indicate the presence of vitamin dependent anemia. Elevated levels of vitamin B12 have been associated with pregnancy, the use of oral contraceptives and multivitamins and in myeloproliferative diseases, such as chronic granulocytic leukemia and myelomonocytic leukemia. An elevated level of vitamin B12 is not known to cause clinical problems. Measurement of vitamin B12 is intended to identify and monitor vitamin B12 deficiency. This can arise from the following; defect in the secretion of Intrinsic Factor, resulting in inadequate absorption from food (pernicious anemia); gastrectomy and malabsorption due to surgical resection; and a variety of bacterial or inflammatory diseases affecting the small intestine.

SPECIMEN REQUIREMENTS:
2ml collected in a serum separator tube (gel barrier). Separate serum from cells ASAP or within 2 hours of collection by centrifugation. Stability after separation from cells: Ambient: 8 Hours; Refrigerated: 24 Hours; Frozen: 1 year (avoid repeated freeze/thaw cycles).

REJECTION CRITERIA: Plasma or other body fluids. Gross hemolysis

METHOD:
Enhanced Chemiluminescence.

REFERENCES:
1. Ardeman S, Chanarin I. Assay of gastric intrinsic factor in the diagnosis of Addisonian pernicious anemia. *British J. Haematology II*, 305-314; 1965.
2. Chanarin I. (ed) *The Megaloblastic Anaemias*. ed. 3. Oxford: Blackwell Scientific Publications; 1990.
3. Chanarin I. (ed) *The Megaloblastic Anaemias*. ed. 2. Oxford: Blackwell Scientific Publications; 1979.
4. Williams JW et al. *Hematology*. ed. 3. Singapore: McGraw-Hill Book Company; 1986.

Normal range: 180–914 pg/ml

Turnaround time: 7 business days