

## **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 serum collected in a red top tube with no additive or in a serum separator tube (gel barrier). Store in the refrigerator at 2°-8° for up to 7 days. For long term storage, freeze at -20° C or below. Avoid thaw freeze cycles.

**METHOD:** Enhanced Chemiluminiscence

### **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:** 239-931 pg/ml

**Turnaround time:** 1 day