

PERNICIOUS ANEMIA PANEL, SERUM (CLIA, EIA, IFA)		
Vitamin B12	pg/mL	211.00-911.00
Gastrin	pg/mL	13.00-115.00
Intrinsic Factor Antibody	Units	<20.00
Parietal Cell Antibody	Titre	

Interpretation

RESULTS FOR INTRINSIC FACTOR ANTIBODY IN UNITS	REMARKS
<20.00	Negative
20.10-24.90	Equivocal
>=25.00	Positive

Comment

Vitamin B12 deficiency can be caused by many factors & a group of tests is often required to establish the correct diagnosis. Once Cobalamin deficiency has been established clinical improvement may require different dosages or routes of vitamin B12 replacement, depending on the underlying cause. Patients with Pernicious anemia (PA) particularly require either massive doses of oral vitamin B12 or parenteral replacement therapy as these patients suffer from gastric mucosal atrophy, most likely caused by a destructive autoimmune process. This results in diminished or absent gastric acid, pepsin and intrinsic factor (IF) production. Gastric acid and pepsin are required for liberation of cobalamin from binding proteins, while IF binds the free vitamin B12, carries it to receptors on the ileal mucosa, and facilitates its absorption. Most PA patients have autoantibodies against gastric parietal cells or intrinsic factor, with the latter being very specific but only present in approximately 50% of cases. By contrast, parietal cell antibodies are found in approximately 90% of PA patients, but are also found in a significant proportion of patients with other autoimmune diseases, and in approximately 2.5% (4th decade of life) to approximately 10% (8th decade of life) of healthy individuals. Serum gastrin is usually markedly increased in pernicious anemia.