TEST: **T4, FREE**

**PRINCIPLE:**
The free fraction of the circulating thyroxine (T4) is considered to exert the main influence on metabolic control. Consequently, the FT4 concentration is believed to be the most direct indicator of an individual's thyroid status. FT4 concentrations are generally depressed in hypothyroidism and raised in hyperthyroidism. Measurement of FT4 thus provides an aid to the differential diagnosis of thyroid disease.

FT4 concentrations are independent of the concentration of thyroid hormone binding proteins and may therefore be measured in patients with elevated or reduced binding protein concentrations without the need for additional tests of binding capacity.

**SPECIMEN REQUIREMENTS:**
2 ml serum collected in a red top tube with no additive or in a serum separator tube (gel barrier). Serum should be separated from the clot as soon as possible to avoid hemolysis. Store/transport sample at room temperature (15-30°C) for no longer than 8 hours or at 2-8°C for up 48 hours. If testing is further delayed, sera should be frozen at -20°C or lower. Avoid repeat freeze-thaw cycles.

**METHOD:**
Enhanced Chemiluminescence.

**REFERENCES:**

**Normal Range:** 0.61–1.12 ng/dl

**Turnaround Time:** 3 days