Serum Progesterone

Type of Hormone: **Steroid**
Extraction procedure required

Purpose of Test:
To determine serum concentration of progesterone in order to obtain information about reproductive function. Reasons to perform a progesterone test vary with the species and include:

- checking for pregnancy
- checking for adequate level of progesterone to maintain pregnancy
- determining if ovulation occurred
- aid in diagnosis of reproductive disorders (ie retained corpus luteum)

Description of test and procedures:
The test is a radioimmunoassay performed with in-house reagents. The radioimmunoassay technique is based on the competitive binding of the serum progesterone and a radiolabeled progesterone preparation. They compete for binding to an antibody specific for progesterone. The antibody-bound radiolabeled progesterone is separated and the quantity is determined by counting in a gamma spectrometer. Results for the unknown are read from a curve prepared by plotting results for a set of known standards. Sera with pre-determined concentrations are included in every extraction procedure and assayed for quality control purposes.

Sample Needed and Procedures for Submittal:
Submit at least 1mL of serum on a cold pack.
It may be possible to perform this analysis with less serum, but laboratory approval is required.

Schedule For Running Test:
Assay preparation begins Thursday morning and results are reported the following Monday afternoon.

Interpretation of Results:
Please refer to Reference Values. Out of the norm results should be interpreted by a veterinary clinician or researcher familiar with reproductive function in the species being tested. Progesterone level can not be used to determine pregnancy in the dog or cat since an elevated level will be present in both pregnant and pseudopregnant animals. In the llama, elevated progesterone at day 20 indicates pregnancy. In the horse, elevated progesterone in a sample collected during the period of the next expected estrus (20 days after last estrus) indicates pregnancy. For a random sample from a mare, the more appropriate test for pregnancy is the Mare Pregnancy Test (MPT) based on the PMSG level. The level of progesterone necessary to maintain pregnancy in the mare is 4.0 ng/ml.

Note:
This assay does not detect synthetic hormones such as Regumate and MAP.