

OVULATION TIMING

*The Key to...
Maximizing Conception
and
Predicting Whelping Date*

WITNESS® LH

WITNESS® LH, a canine luteinizing hormone assay, gives your veterinarian a diagnostic tool to identify the LH surge itself and thus precisely predict the fertile period. This test should be used for routine breeding situations and is especially recommended when there are factors present that could adversely affect conception rates. These include: chilled/extended semen breedings; frozen semen breedings; bitches with a history of infertility; breedings with stud dogs with poor semen quality; or when using stud dogs with limited breeding availability.

This test requires a serum sample and is repeated every day after the bitch's vaginal cytology shows 50 to 60 percent cornification. The LH surge will be detected in most bitches within 6 days. It is very important to test every day; if a day is missed, continue to test, but supplement the testing with Ovucheck® Premate in the event the LH surge occurred on the day not tested.

OVUCHECK® Premate

For timing natural breedings or fresh artificial inseminations, your veterinarian can use OVUCHECK® Premate, a canine progesterone assay.

The test detects the rise in progesterone which occurs following the LH surge. Before the LH surge, progesterone levels are baseline. Following the LH surge, progesterone begins to rise and then will continue to increase as the cycle progresses. OVUCHECK® Premate detects these changes in progesterone, thereby estimating the fertile period with greater accuracy than observation and vaginal smears alone.

An additional use of the test is for measurement of progesterone levels throughout pregnancy to determine if the bitch is maintaining a normal cycle.

Reproduction Diagnostic Kits

WITNESS® LH	96-0270
WITNESS® RELAXIN	96-0303
OVUCHECK® Premate	96-0335
D-TEC® CB (10)	96-0372
D-TEC® CB (25)	96-0370

**Available at www.buyWITNESS.com*

The Synbiotics Canine Reproduction Referral Network

To contact a Reproduction Veterinarian or Synbiotics Freeze Center, call Synbiotics at 1-800-228-4305 or visit www.synbiotics.com.

12200 NW Ambassador Drive, Suite 101
Kansas City, Missouri, USA 64163
Tel. +1 800-228-4305
Fax +1 816-464-3521

2 rue Alexander Fleming, Cedex 07
Lyon, France, 69007
Tel. +33 4 72 76 11 11
Fax +33 4 72 76 11 10

www.synbiotics.com

SYNBIOTICS 



REPRO1003

SYNBIOTICS 

Synbiotics offers in-clinic reproduction diagnostic tests for accurate timing of ovulation and prediction of whelping date.

Timing the Fertile Period

The bitch's estrous cycle is a complex event and is dependent on the interaction of multiple hormones. Luteinizing hormone (LH) and progesterone figure prominently in the determination of ovulation. Normally, LH is present in the bitch's blood in very small quantities. Just prior to ovulation there is a significant increase in serum LH values. LH can return to baseline levels within a 24-hour period.

It is this surge of LH that triggers ovulation and thus determines the fertile period of the bitch. All events subsequent to the LH surge are consistent between bitches, regardless of breed and age. Therefore, LH is the central event of the estrous cycle, and determination of the pre-ovulatory LH surge is the most accurate diagnostic tool for timing breedings.

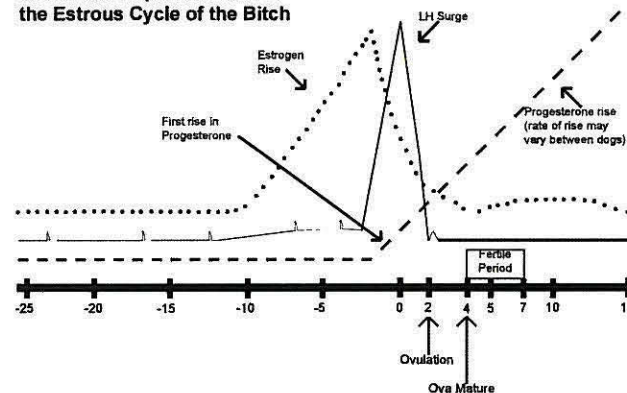
The LH surge may occur anywhere from 3 to 28 days after the first observable signs of heat, although the average is 8 to 12 days. Ovulation occurs 2 days after the LH surge. The eggs then take an additional 2 to 3 days to mature to a stage that will support fertilization and will then live for an additional 48 to 72 hours. Thus, the fertile period of the bitch falls between days 4 and 7 after the LH surge with the most fertile time being on days 5 and 6 after the LH surge. (The first day of the LH surge is counted as day 0).

Progesterone, another important reproduction hormone in the bitch, is present in low levels before the LH surge and then begins to rise around the time of the LH surge. Ovulation timing can also be performed by detecting this rise in progesterone, although it is not as precise as measuring LH.

For most natural matings or artificial inseminations with fresh semen, breeding should begin 2 to 3 days after the LH surge, and continue every 2 to 3 days until the end of the fertile period. When using chilled or frozen semen, or a stud dog with compromised semen quality, breedings should occur on days 5 and/or 6 after the LH surge.

Synbiotics offers both LH and progesterone tests which your veterinarian may run in-clinic to determine your bitch's fertile period. Contact your veterinarian to discuss which tests are appropriate for your breeding situation.

Schematic Representation of the Estrous Cycle of the Bitch



Adapted from: Concannon, P. (1983). Reproductive physiology and endocrine patterns of the bitch. Pp. 886-901. In: Current Veterinary Therapy, Small Animal Practice, Vol. III. © May 1994 International Canine Genetics

Predicting Whelping Date

Gestation length is also determined by the date of the LH surge.¹ In the bitch, gestation is 65 days (plus or minus one day) from the LH surge. This will be true regardless of which days the bitch is bred. Therefore, the most accurate way to predict whelping date is to know the date of the LH surge, identified directly with LH testing. Whelping date may be estimated with progesterone testing, or by gauging the first day of diestrus through vaginal cytology. This information is invaluable when planning an elective C-section, or when deciding if intervention in the whelping process is necessary.

¹ Cohen et al., Accuracy of canine parturition date prediction from LH peak, Clinical Theriogenology, Vol. 1, No. 1 August 2009, page 247

