

Tosoh Bioscience

AIA® 360

Il top per la gestione di bassi volumi
di campioni per dosaggi immunologici



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Affidabilità

- Identificazione attiva di campioni e reagenti
- Basato sul comprovato concetto AIA-PACK per prestazioni analitiche eccellenti
- Procedure di lavaggio potenziate

Semplicità d'uso

- Avvio in meno di 10 minuti
- Nessuna manutenzione quotidiana
- Nessuna necessità di programmare il test
È sufficiente inserire i campioni e gli AIA-PACK e premere START

Flessibilità

- Può gestire carichi di lavoro di qualsiasi dimensione ottimizzando i consumi di reagente
- Fino a 25 campioni di pazienti a test AIA-PACK in un solo ciclo
- Possibilità di caricare nel sistema provette primarie e coppette per test
- Possibilità di carico continuo di reagenti
- Le funzioni combinate rendono AIA360 lo strumento ideale per l'utilizzo normale o in casi d'emergenza

AIA-PACK: un concetto esclusivo

- I reagenti liofilizzati consentono una lunga durata dell'AIA-PACK
- Il principio AIA-PACK consente di trattare la maggior parte dei rifiuti come rifiuti solidi, con un significativo risparmio sui costi di smaltimento con significativa riduzione dei volumi
- Stabilità della calibrazione per 90 giorni
- Per tutti gli analiti è necessario un tempo di incubazione di 10 minuti, offrendo i primi risultati dopo soli 15 minuti
- Nessun rischio di contaminazione tra i campioni e reagenti

Menu test AIA-PACK

(Contenuto della confezione a partire da 20 test)

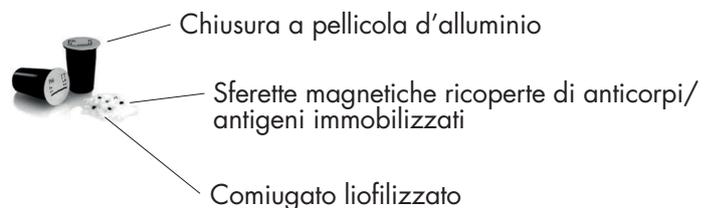
- T4
- FT4
- CORTISOLO
- PROGESTERONE
- TROPONINA I 3° generazione
- D-dimero

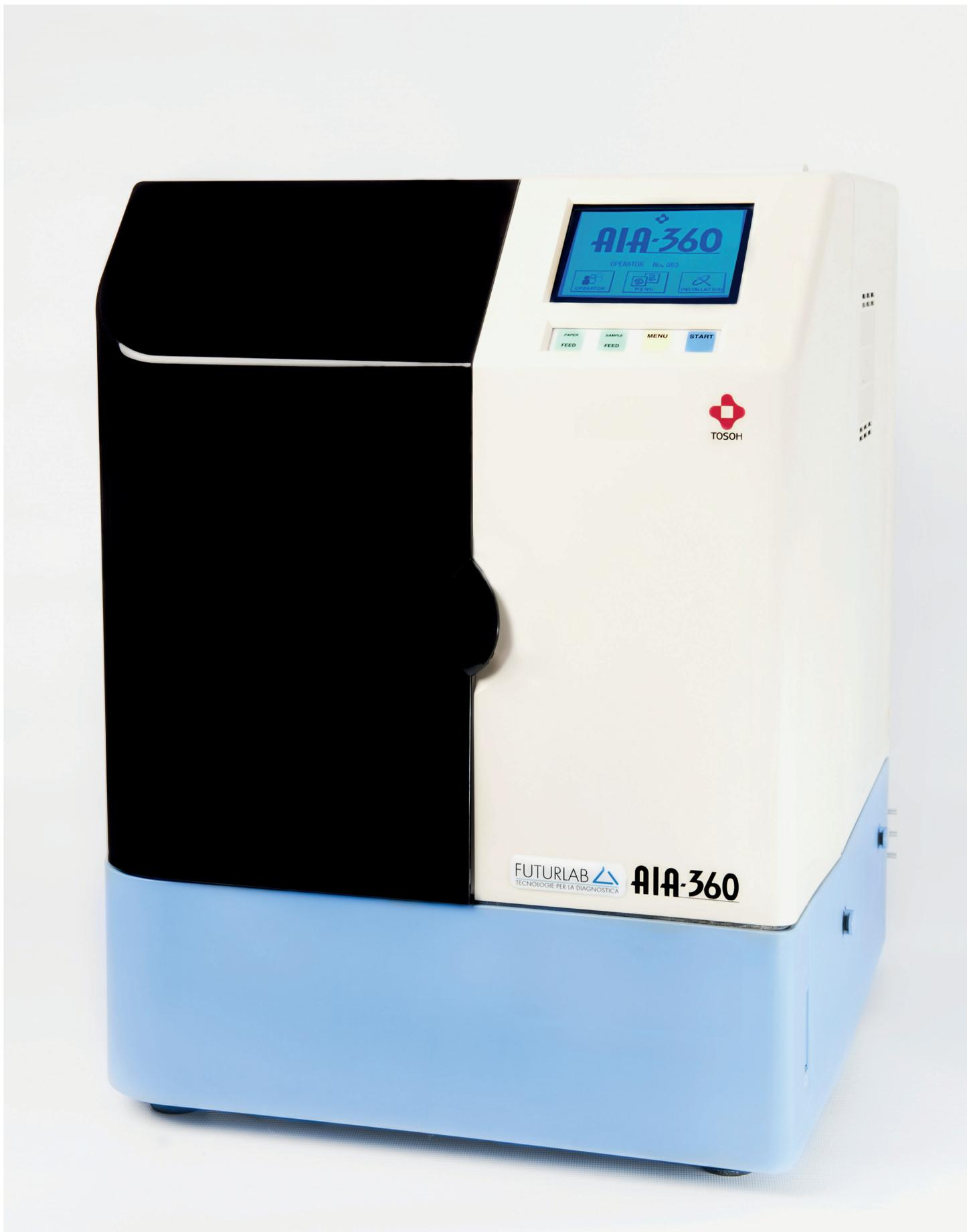


L'intero dosaggio (incubazione, lavaggio e rilevamento) è eseguito nell'AIA PACK.

1 AIA-PACK = 1 test

La coppetta per test "all-in-one" pronta all'uso





Dimensioni

Larghezza 40 cm

Profondità 40 cm

Altezza 52 cm

Peso 29 kg

Lavori scientifici eseguiti con AIA360

MEASUREMENT OF SERUM PROGESTERONE IN MARES: A METHOD COMPARISON STUDY

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INTRODUCTION
Serum progesterone (P4) concentration in the mare can be used to determine the phase of the estrous cycle and adds useful information in the establishment and maintenance of early pregnancy (1-4). The aim of this study was to arrange a comparison using several methods/techniques to assess P4 values in mares, including fluorescence enzyme immuno assay (FEIA) (2 different assays), chemiluminescence (2 different assays), and liquid chromatography tandem mass spectrometry (LC/MS).

MATERIALS & METHODS
Forty serum samples from mares in different estrous cycle or pregnancy stage were collected and stored at -20°C until their testing. All samples were assayed with the FEIA marketed by Tosoh Bioscience (TB), Beigama-Lupas (AIA 360). Two types of investigations were arranged:

- Recovery study including low, medium and high values for equine P4 (1)
- Comparison study arranging a set of 15 samples including low, medium and high values of P4 using the regression analysis, r^2 , the methods/techniques chosen were: Chemiluminescence by DPC Immulite (Siemens Medical) at two different commercial labs (Chem-1 and Chem-2), MEIA by AxSYM (Abbott Diagnostic), and ultra performance liquid chromatography tandem mass spectrometry (LC/MS) (Water) (5).



RESULTS

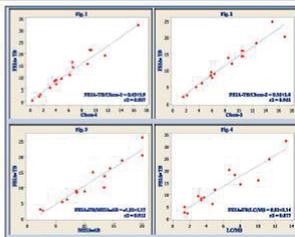
The recovery study is reported in the table (6). In figures 1-4 are reported the comparisons carried out.

| Horse P4 | Rec. low (2,71 ng/mL) | Rec. medium (10,25 ng/mL) | Rec. high (20,44 ng/mL) | Mean recovery | Proportional error |
|--------------|-----------------------|---------------------------|-------------------------|---------------|--------------------|
| Low value | 138% | 122% | 128% | 129% | -28 |
| Medium value | 128% | 133% | 131% | 130% | -30 |
| High value | 81% | 85% | 122% | 83% | 7 |

Recovery study for FEIA-TB showed results over 100% especially when testing low and medium equine P4 values. FEIA-TB had a very good agreement with the two chemiluminescence assays ($r^2 > 0.95$), while the comparison with a similar technique (MEIA-A3) showed a lower r^2 (0.91). The lowest r^2 (0.87) was found between the FEIA-TB and LC/MS values. In all comparisons arranged, values obtained from FEIA-TB were located slightly higher than those obtained from the other methods/techniques.

CONCLUSION

The P4 measurement using FEIA-TB showed good agreement when compared with different methods/techniques. It should be pointed out that the FEIA-TB gave results consistently slightly higher than other methods/techniques compared so test-specific reference range should be arranged for its clinical use in equine reproduction.



Selected References

- (1) Allen WR - *Reprod Dom Anim*, 36:121-131, 2001;
- (2) Elmoro RG, Kloppe LH, Vinner DD, Meyers PJ - *Vet Med*, 83:294-297, 1988;
- (3) Nagy Z, Huszincz G, Reisinger J et al - *Theriogenology*, 61:203-214, 2004;
- (4) Squires EL, Wentworth BC, Clutter CF - *Jour Anim Sci*, 209:759-767, 1976;
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- (6) <http://www.westgard.com/lesson27.htm> - Interference and recovery experiments - accessed Sept. 2011

Serum Cardiac Troponin Measurement by Fluorescence Enzyme Immuno Assay. A Comparison Study and its Application in Canine Practice

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Introduction
Measurement of serum Cardiac Troponin (cTnI) concentration in dogs to assess myocardial damage or injury and as prognostic indicator of future cardiovascular disease has been used. Currently, various cTnI assays are available producing different results and, consequently, using different clinical cut-off values. Therefore, cTnI values obtained from different assays cannot be interchanged nor can clinical cut-offs.

Materials and Methods

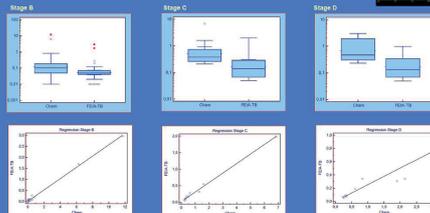
Forty-seven serum samples collected from healthy dogs (assessed by physical exam and complete blood count, biochemistry) and analyzed to set the Reference Range (RR) of cTnI FEIA-TB (Fluorescence Enzyme Immuno Assay; Tosoh Bioscience). These samples were also tested with cTnI Chem (Chemiluminescence Immunoassay; Nenyone) samples collected from MVD (Mitral Valve Disease) affected dogs and staged according to Cardio Vascular Disease, ACVIM Consensus Statement (stage A not studied; B, C, D, E) and D (H) were tested both with cTnI FEIA-TB and cTnI Chem. Statistical analysis was arranged for data collected (RR, correlation, r and regression P , Spearman, rho for dogs in different CVD-stages).

Results

RR for cTnI FEIA-TB were set at 0.0-0.09 ng/mL. In comparison, RR for cTnI Chem were 0.05-0.24 ng/mL.

| | dogs | FEIA-TB > RR | Chem > RR | r | r ² | rho |
|---------|------|--------------|-----------|------|----------------|------|
| healthy | 47 | 0 | 0 | - | - | - |
| B | 61 | 12 | 13 | 0.98 | 0.99 | 0.72 |
| C | 19 | 14 | 16 | 0.98 | 0.98 | 0.97 |
| D | 11 | 9 | 10 | 0.86 | 0.80 | 0.93 |

Comparison of cTnI Chem vs cTnI FEIA-TB values in dogs affected by different CVD stages



Conclusion

RR of cTnI with FEIA-TB in healthy dogs are low in comparison with those reported for cTnI Chem but they match very nicely to identify dogs with myocardial damage. Indeed, it is of value the good agreement when the comparison is carried out in CVD-stages of MVD-dogs as FEIA-TB correctly identify myocardial damage.

References

- are available at: gavazza@vet.unipi.it

ACCURATE DETERMINATION OF SERUM PROGESTERONE USING A FLUORESCENCE ENZYME IMMUNOASSAY IN THE BITCH

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