Evaluation of the TurboReader veterinary instrument for the detection of SAA in equine serum

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Introduction

The measurement of Serum Amyloid A (SAA) concentration in 20 equine (horse) patient serum samples was performed with TurboReader, a veterinary point-of-care instrument. All serum samples were analyzed with a Konelab PRIME 30 Clinical Chemistry Analyzer (Eiken human SAA assay) as reference method. Measurements were performed at two locations (Animal hospital veterinary central laboratory-reference method & EURIS laboratory-TurboReader).

Results

Correlation with reference method:

The observed correlation (see graph) with the reference method was: R^2 =0.9618. The slope of the correlation curve was 0.4205. The y axis intercepts of the correlation curve was -19.673.

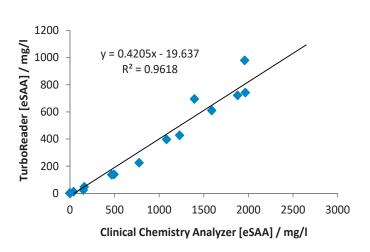
False positive results:

No false positive results (see graph) were obtained for samples (n=7) below the method's clinical cutoff limit.

Conclusions

The TurboReader correlated well with the reference method. No false positive results were obtained with the TurboReader, suggesting strong diagnostic confidence in SAA measurements within the clinically healthy range. False positive results could lead to the misuse of antibiotics in horses.

Regarding slope correlation, the reference method is calibrated with a human SAA calibrator, whereas the TurboReader is calibrated with a equine SAA calibrator. Thus, the TurboReader is a species specific method. The observed slope correlation between the TurboReader and the reference method was expected due to differences in calibration material.



European Institute of Science (EURIS) AB Scheelevägen 27, 4th floor. SE-223 63 Lund, Sweden Tel: +46 46 286 22 30 www.euris.org info@euris.org

