# Evaluation of correlation between Vcheck and company 'I' laboratories for feline NT-proBNP

**Key Words:** Bionote, Vcheck, Feline NT-proBNP, Occult heart disease

## Introduction

N-terminal pro-B type natriuretic peptide (NT-proBNP) is cleaved from BNP which is produced by the muscle cells of the heart and increases with excessive stretching of the cells. NT-proBNP concentration reflects the degree of cardiac activation secondary to stimulus, such as stretching, allowing this marker to be used to assess the magnitude of cardiac muscle stretching.
NT-proBNP is a valuable biomarker for differentiating cardiac and respiratory causes of dyspnea and can be used for screening occult heart disease in asymptomatic cats.

## Purpose

The objective of this study was to conduct a comparison of Feline NT-proBNP concentrations between the Vcheck and the ELISA method used in 'I' laboratories, in order to ensure that there are no significant differences between the results.

## Materials and Methods

A total of 37 feline serum samples were analyzed with Vcheck V200 according to the manufacturer's instructions and also analyzed with an ELISA method by a laboratory for comparison.

**Reference method**
- Device: an ELISA method by 'I' laboratories
- Reagent: Cardiopet proBNP

**Method to validate**
- Device: Vcheck V200
- Reagent: Feline NT-proBNP

## Results

The test results for the correlation of feline NT-proBNP between Bionote Vcheck and an ELISA method at a laboratory are shown in Figure 1.

## Conclusion

This study indicates that Vcheck Feline NT-proBNP has a high correlation with an ELISA method used in company 'I' laboratories (Feline NT-proBNP; $R^2$=0.9645).
Based on these results, the Vcheck Feline NT-proBNP provides accurate and reliable test results in serum samples from cats, as compared to an ELISA reference method.

# Comparative evaluation of Feline NT-proBNP (N=37)

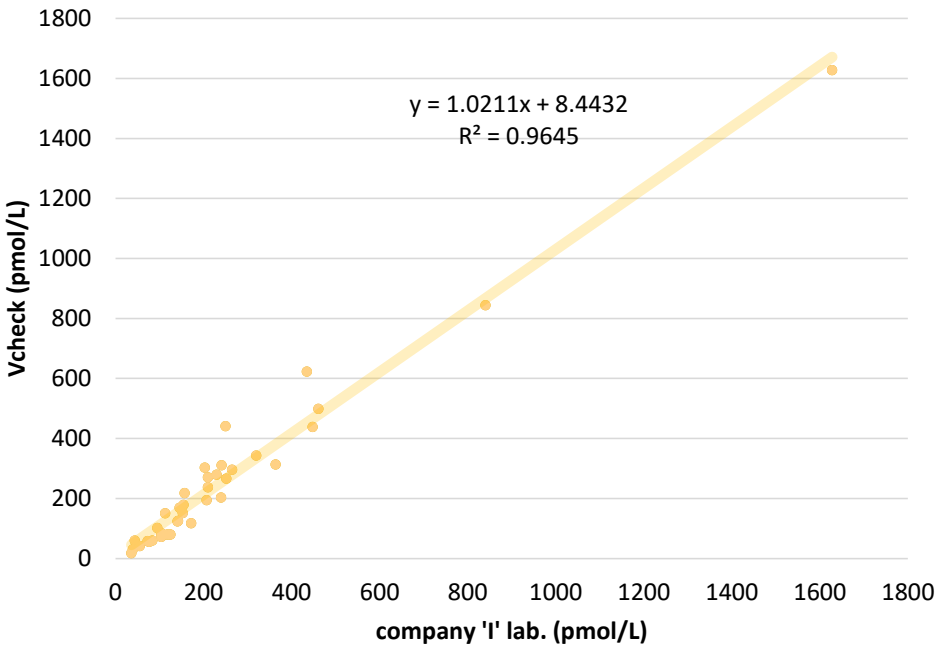


**Figure 1.** Correlation between the results of Vcheck Feline NT-proBNP and an ELISA method from 'I' laboratories in feline serum samples (N=37)


**Reference**

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2. Connolly DJ, Soares Magalhaes RJ, Fuentes VL, et al. Assessment of the diagnostic accuracy of circulating natriuretic peptide concentrations to distinguish between cats with cardiac and non-cardiac causes of respiratory distress. J Vet Cardiol 2009;11(Suppl 1):S41–S50


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