The Rationale for Utilizing Uncentrifuged Urine for Urinalysis

Introduction

Urinalysis is a fundamental diagnostic procedure in veterinary medicine, providing insights into an animal's health through the examination of the urine's physical, chemical, and microscopic components. Traditionally, this process involves the centrifugation of urine samples to concentrate solid particles for examination under the microscope.

A recent trend in human and veterinary practice has begun to question this conventional approach, advocating for the use of uncentrifuged urine instead.

What are the reasons of using **uncentrifuged** urine for the analysis with the **vet fluidlab 1**?

Advantages of Using Uncentrifuged Urine

Using uncentrifuged urine in urinalysis offers several advantages over centrifugation. Firstly, it avoids the potential loss of erythrocytes and leukocytes that may occur during centrifugation, ensuring more accurate quantification without the risk of significant relative losses, which can range from 20 to 80%. By bypassing centrifugation, these errors are mitigated, thereby preserving the analytical sensitivity and enhancing result accuracy. [1]

Moreover, utilizing uncentrifuged urine eliminates discrepancies between expected and actual concentrations seen after centrifugation, particularly notable in the case of smaller particles. This discrepancy reduction ensures a closer alignment between theoretical and practical concentrations, enhancing overall precision in analysis.[2]

Furthermore, the adoption of uncentrifuged urine streamlines the operator dependent sample preparation process, reducing the hands-on time required compared to centrifugation. This not only increases efficiency but also minimizes labor-intensive steps, optimizing workflow in clinical settings.

Recommendation

In the field of human medicine, the benefits of using uncentrifuged urine for analysis have become increasingly evident. Recent updates in the European urinalysis guidelines lean towards recommending the utilization of uncentrifuged urine for diagnostic purposes:

"*A quantitative result for urine particles is more reliably obtained by direct counting of uncentrifuged specimens in a chamber than after centrifugation.*" [3]

With its **vet fluidlab 1**, anvajo has its finger on the pulse of the times and offers the possibility of uncentrifuged urinalysis.

[1] Delanghe, J., & Speeckaert, M. (2014). Preanalytical requirements of urinalysis. Biochemia Medica, 89-104.

[2] Ichiyanagi, Y. (2014). Field Volume of Urine Sediment Test - Comparison of Theoretical Volume with Practical Volume -. Sysmex Journal International Vol.24 No.1.

[3] Kouri, T., Hofmann, W., Rosanna, F., Oyaert, M., Schubert, S., Berg Gertsen, J., . . . Pestel-Caron, M. (2023). The EFLM European Urinalysis Guideline Update 2023. Haikaranportti 4 B 22, FIN-02620 Espoo, FINLAND.178.