

One tube for comprehensive urine diagnostics:

New stabilizer for urine specimens enables extensive application opportunities in modern urine diagnostics

Reliable results can only be achieved in urine diagnostics, if correct preanalytical conditions are ensured. Urine collection, specimen transport and further storage are critical influential factors for sample quality and can affect the results. Most important is the stabilization of urine, if the specimen cannot be analysed within two hours⁽¹⁾. A particular problem is exponential bacterial growth, since certain bacteria divide every 20 minutes. This can lead to an overgrowth of pathogenic bacteria, making detection difficult.

Furthermore, the lysis of cells is accelerated in native urine at room temperature, altering the concentration of various analytes constantly.



This problem is essential for longer transportation and processing times. It has been shown, that on average 15% of urine samples intended for urine culture are contaminated⁽²⁾.

Some additives that may have been used up to now for stabilization have proven not to be optimal, as often the additive does not dissolve quickly or fully.

To provide a practical and satisfactory solution for urine diagnostics, Greiner Bio-One has developed the new **VACUETTE®** Urine CCM Tube. The evacuated tube contains a stabilizer in powder form, which keeps the urine sample stable for up to 48 hours at 20 – 25°C. During this time period, the urine specimen can be stored or transported without refrigeration.

The analytical performance evaluation of the **VACUETTE®** Urine CCM Tube showed that quick tests, such as the standard urine test strips, can be applied with a few exceptions– leucocytes, erythrocytes and bacteria are sufficiently stable. Instrument and visual microscopic analysis of the typical formed elements in urine sediment also showed stability for up to 48 hours. All mandatory and facultative uropathogenic bacteria can be stabilized and reliably detected in the **VACUETTE®** Urine CCM Tube for up to 48 hours. ^(3, 4, 5).

A particular advantage is the high solubility of the stabilizer in powder form. By inverting the tube several times, the urine mixes completely with the stabilizer additive, ensuring quick stabilization of the urine sample.

The **VACUETTE®** Urine CCM tube can be used for various areas of application. The tube can be used for urine screening (strip test, sediment, clinical chemistry) and/or for microbiology, since sample stability is guaranteed for up to 48 hours. The extensive application in urine diagnostics makes daily routine work easier and more efficient: one urine sample for a broad range of determinations. This is not only an advantage for medical staff but also for the patient. Repeat sample collection for replicate tests is not necessary.

The universal application has a positive effect, where applicable, from the logistical point of view, since it is not necessary to store two or more different types of tubes with stabilizers, where applicable.

The **VACUETTE®** Urine CCM tube with safety cap is user-friendly as it is especially easy to open. This allows for a hygienic operating method, with no risk of splashes or aerosols, as can occur with standard rubber stoppers from competitors. The **VACUETTE®** Urine CCM tube is made from highly transparent PET plastic and is virtually unbreakable.

After extensive clinical studies, the tube is now about to be launched. The market launch is planned for April this year.

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Greiner Bio-One International AG

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