Biosigma®

Fast-Read Rev. 2021_01

Made in Italy

Fast Read 102®

Disposable slide for cell counting

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ISO 13485

ISO 14001

UNI ISO 45001:2018

FOR THE STANDARDIZATION OF MICROSCOPIC URINALYSIS

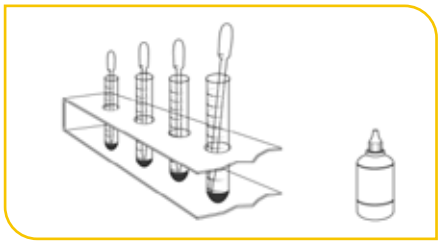
FAST READ 102® system improves the standardization of microscopic urinalysis and provides precision and reproducibility such as to guarantee constant readings which will not be influenced by variations of techniques among different operators.

FAST READ 102® is made of a slide, protected by an optically transparent film, with 10 independent chambers containing a standard volume of 7 µL. After dispensing the sample on the slide application area by means of a capillary mechanism, the sediment is homogeneously distributed in the reading chamber. Each chamber is fitted with its own system for the collection of excess urine to prevent any possible contamination.

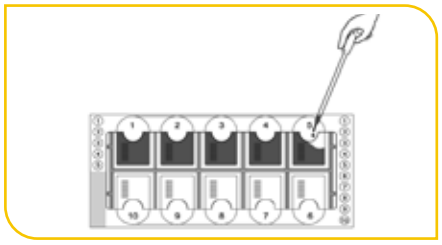
Furthermore FAST READ 102® slide allows easy identification of the sample by using the numbers printed on the sides.

MATERIALS: The device BVS100 is manufactured in METHACRYLATE: rigid, transparent, resistant to atmospherics agents, it replace the glass in every its application in which it reach high temperature (lower than 90-100 °C).

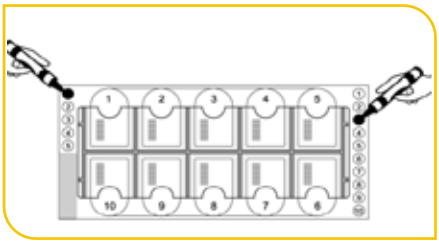
CE This product fulfils the requirements of Directive 98/79/EC on in vitro diagnostic medical devices



After completing the preparation of the urinary sediment by normal centrifugation, insert a pipette into the test tube and dispense one drop of STAIN.



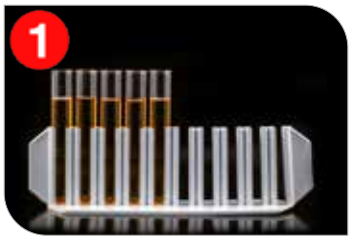
Use the pipette to mix the urinary sediment by repeatedly pressing the bulb; then dispense a drop of sample onto the appropriate area of the slide.

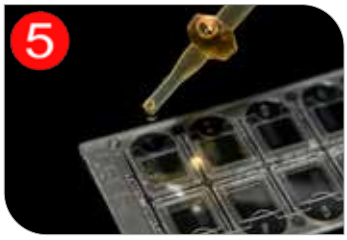


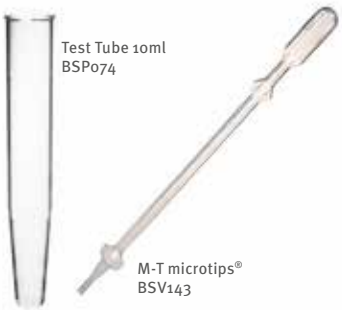
HOW TO USE THE NUMBERING SYSTEM
Example: For the identification of samples from number 131 to 140 mark number 1 on the left side and number 3 on the right side of the slide.

M-T system

M-T microtips® is a Biosigma's registered trade marks







It's very important matter during urine sedimentation count, that operators always use the same sample preparation method in order to have tests' repeatibility.
Furthermore, with traditional urine reading system actually in use in many laboratories, sedimentation compaction creates a superimposition of epithelial cells.
That cause difficulties in verifying the presence amount of different cells components.
With Biosigma M-T System it is possible to overcome this inconveniences in a few standardisation steps during sample preparation.

1. Fill BSP074 tests tubes with 10ml of urine and then centrifuge.
2. Insert tribulb M-T Microtips® BSV143 making sure to trap the tubes.
3. Overturn the rack to come out the excess urine.
4. You get 1 ml of sediment, resuspended, is ready to be analysed on Fast Read 102® Slides.
5. Deposit a drop in the Fast Read 102® cell.

CALCULATION METHOD FOR CELLS / µL IN URINARY SEDIMENT

FAST READ 102® is a disposable plastic device composed of 10 counting chambers. With each device you can analyze 10 samples.
Each room contains a GRID composed of 10 SQUARES, each of which is divided into 16 smaller squares (called SECTORS). One of the advantages of employing FAST-READ is the ease in determining the cells per µL in the specimen.

1. Perform the count on a centrifuged fresh urine sample, after having decanted.
2. Gently resuspend the sediment.
3. Using a pipette, introduce the sample into the well and examine under the microscope the area of the grid
4. Count the number of cellular elements within N squares

$$\text{Cell. / µl} = \frac{(\Sigma \text{ cells counted in square N}) \times \text{concentration factor} \times 10}{N}$$

Concentration factor = Volume of sediment / Volume centrifuged urine
10: conversion from 0,1µl to 1µl

For uncentrifuged urine, don't to multiply the number of cells counted for the concentration factor.

METHOD OF CELL COUNTS FOR DILUTED SAMPLES (CELLS / ML)

After filling the counting chamber with the sample, proceed to the counting of cells distributed in N squares.
Considering that the grid consists of 10 squares, each square has a dimension of 1 x 1 mm, a depth of 0.1 mm and a volume of 0.1 µl, the formula for determining the concentration of cells (cells / ml) is:

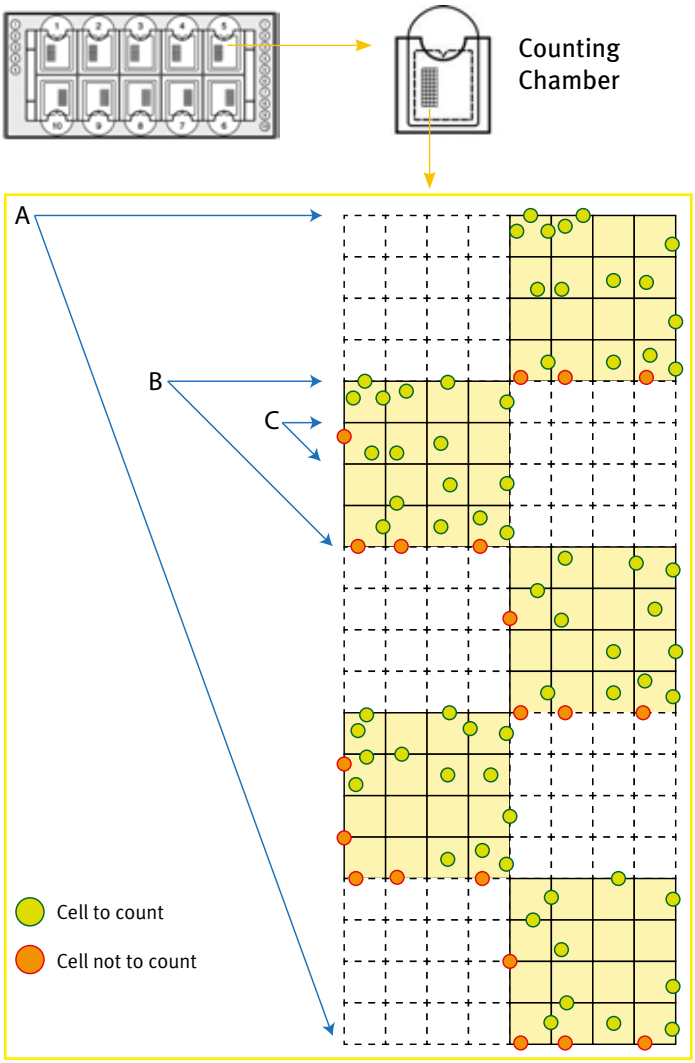
$$\text{Cells / ml} = \frac{(\Sigma \text{ cells counted in square N}) \times \text{dilution factor} \times 10^4}{N}$$

10^4 = conversion 0,1 µl in 1 ml

Attention to the cells on the edges, you should only count those on either side, to avoid the risk of over or under.

In the example shown we perform the cell count of a sample diluted 100 times:
N = 5 (number of squares considered for counting)
Σ cells counted in 5 square = 67
Dilution factor = 10^2

[Cells / ml] = $(67/5) \times 10^2 \times 10^4 = 13.4 \times 10^6$



A: GRID

Dimensions	2 mm x 5 mm
Depth	0,1 mm
Volume	1 µl
Each grid includes	10 squares
Cell volume	7 µl

B: SQUARE

Dimensions	1 mm x 1 mm
Depth	0,1 mm
Volume	0,1 µl
Each square includes	16 sector

C: SECTOR

Dimensions	0,25 mm x 0,25 mm
Depth	0,1 mm
Volume of sector	0,00625 µl

Publication in scientific journal.

Validation of analytical methods in GMP:
the disposable Fast Read 102® device, an alternative practicalapproach for cell counting.

Gunetti M, Castiglia S, Rustichelli D, Mareschi K, Sanavio F, Muraro M, Signorino E, Castello L, Ferrero I, Fagioli F.

J.Transl Med. 2012 May 31;10:112

www.Translational-medicine.com/content/10/1/112

KIT FAST-READ® How to Order

1 kit = 1.000 determinations

REF.	Fast-Read® 102 (BVS100)	M-T Microtips® (BSV143)	Pasteur Pipettes in PE (BSV140)	Test Tube 10 ml in PS (BSP074)	White Cap aside (BSO026)	Test Tube 10 ml in PS labelled with white cap (BSP112)	Stain urinary sediment (BSV135)
BVS100	○						
BVS101	○		○				
BVS102	○		○				○
BVS190		○		○			
BVS171	○	○					
BVS1715	○	○		○			
BVS1719	○	○		○	○		
BVS1717	○	○		○			○
BVS1720	○	○		○	○		○
BVS1721	○	○				○	○

Urinalysis controls validate performance for consistency and accuracy

KOVA® Urinalysis Controls Validate Performance for Consistency and Accuracy

For quality control, use KOVA controls to validate the performance of urine chemistry test strips and readers and to help focus microscopic sediment analysis.
KOVA Liqua-Trol™ is a ready-to-use bi-level liquid control for use with all major brands of urine chemistry dipsticks.

KOVA® Liqua-Trol™

Ready-to-use liquid control.
External quality control of physical, chemical and microscopic examination of urine specimens. Available with or without microscopic.
Two levels of controls to monitor complete decision range for urine strip chemistries.
Value assignments available on all major systems for visual and instrument analysis.
Stability: 30 days at room temperature and up to 27 months shelf life for the full labeled dating when stored in a refrigerator (2-8°C).

Individual and Combination Packs

CAT. NO.	Description	Bottle (ml)	Sale unit
87112E	KOVA Liqua-Trol Level I (Abnormal) and Level II (Normal w/ hCG); bi-level 3x15mL	15	6
87122E	KOVA Liqua-Trol Level II (Normal) with hCG and microscopics	120	2
87176E	KOVA Liqua-Trol Level I (Abnormal) with microscopics	120	2
87123E	KOVA Liqua-Trol Level II (Normal) with hCG and microscopics	120	4
87177E	KOVA Liqua-Trol Level I (Abnormal) with microscopics	120	4