BF

BODY FLUID APPLICATION

Know more.
Decide with confidence.
Act faster.

sysmex | Together for a better healthcare journey

Meeting various diagnostic demands: total nucleated and white blood cell counts, with WBC differentiation into mono- and polymorphonuclear cells

- ✔ Simple, fast and standardised body fluid measurement at any time
- ✔ Excellent result reproducibility in the clinically relevant range
- ✔ Suitable for cerebrospinal, serous and synovial fluids as well as CAPD

Casualty and emergency admission: Fast results at any time

Using the Body Fluid mode for CSF samples can rapidly provide the white blood cell count (WBC-BF) plus their differentiation into polymorphonuclear (PMN) and mononuclear cells (MN) in clinically relevant measurement ranges.

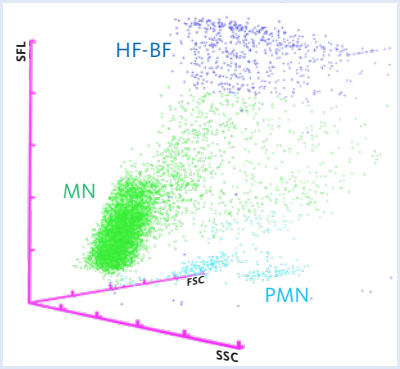
Nephrology: A dialysis patient with abdominal pain

Analysing a peritoneal dialysate in the Body Fluid application can, with the aid of the eosinophil determination* (EO-BF*), support clinicians in differentiating peritonitis and an allergic reaction.

Your benefits in daily routine

- The increased counting volume – threefold compared to a counting chamber – ensures excellent reproducibility of the results, independent of the operator.
- Automated measurement of different body fluids around the clock (24/7) – without pre-treatment of the samples.
- A reduced number of time-consuming manual chamber counts.
- Publications support that the information on the absence of highly fluorescent body fluid cells* (HF-BF*; includes macrophages, mesothelial cells, or tumour cells) could help physicians in excluding malignant conditions in samples of serous fluids.
- A wide range of validation rules specific to different body fluids (available optionally with *Extended* IPU) offers an even higher degree of standardisation and greater security, even on weekends and during night shifts.

* Research parameter

Diagnostic parameters with optional licences	■ WBC-BF, TC-BF (total nucleated cell count), MN%, MN#, PMN%, PMN#, RBC-BF ■ The white blood cell count (WBC-BF) is of important diagnostic significance, particularly in CSF samples, whereas the total nucleated cell count (TC-BF) mainly plays a role in other fluids, such as pleural fluid. Both parameters are available after every measurement.
Research parameters	■ White blood cell differentiation: lymphocytes (LY-BF%, #), monocytes (MO-BF%, #), neutrophils (NEUT-BF%, #), eosinophils (EO-BF%, #) ■ Highly fluorescent cells (e. g. macrophages, mesothelial cells or tumour cells): HF-BF%, # (high-fluorescence body fluid cell count) ■ Additional count value for red blood cells with increased sensitivity (RBC-BF2)
Technology of WBC detection	

Fluorescence flow cytometry	The lysis reagent initially perforates the cell membranes while leaving the cells largely intact. The fluorescence marker then labels the intracellular nucleic acids (mainly RNA), whereby the intensity of the resulting fluorescence signal is directly proportional to the nucleic acid content. Due to the elevated RNA content, immature cells or cells which are not blood cells and are also much larger, for example mesothelial cells, appear with a strongly enhanced fluorescence signal. As a result, they are detected within the scope of the BF analysis and can even be counted. In the scattergram, the cells are differentiated according to their fluorescence signal, their size and their internal structure. RBC and non-cellular particles do not appear in the scattergram, because they lack nucleic acids and are therefore not labelled by the reagent. This reduces the possible interference factors and enables a specific and sensitive measurement, such as is necessary with low cell concentrations.
Adaptive cluster analysis system (ACAS)	The flexible gating algorithm takes the biological variance into consideration when evaluating the measured signals. Therefore, the results are assessed individually, independently of the ethnic origin or other characteristics of the patient.
Further specifications	
Aspiration volume (BF mode)	88 µL
Analysis volume for the white blood cell count	Approx. 10 µL – this corresponds to approximately a threefold counting volume compared to the manual reference method using e. g. a Fuchs-Rosenthal counting chamber with a volume of 3.2 µL.
Analysis time	90 seconds

For references to independent publications, please visit **www.sysmex-europe.com/academy/library/publications** or contact your local Sysmex representative.

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