ESfEQA Guideline for Method Key Selection

Program: Urine Sediment (USEDL, USEDM)

Version: 03.2025

Analyte	77 ELEKTRONIKA Urised devices ANALYTICON Urilyzer Cell MENARINI Sedimax devices Siemens Atellica UAS 60	BECKMAN COULTER Iris microcopy modules: Iris iQ200 Series	BECKMAN COULTER Iris: chemistry modules: Iris iChem Iris iChem VELOCITY	DIRUI FUS-3000	Microscope (Leica) Microscope (Olympus) Microscope (ZEISS) Microscope (no brand specified)	ROCHE Cobas u 411	ROCHE Cobas u 701	ROCHE Cobas 6500 (combination of cobas u 701 (automated microscopy) and cobas u 601 (dry chemistry))	SIEMENS ATELLICA UAS-800	SIEMENS ATELLICA 1500 (combination of Attelica AUS-800 (automated microscopy) and Clinitke Novus module (dry chemistry))	SYSMEX UC-3500	SYSMEX UD-10	SYSMEX UF500i SYSMEX UF-5000/4000/1500 SYSMEX UF-1000i	SYSMEX UN Series (UN series reflects combined system of different modules for urinalyis)	SYSMEX UX-2000
BAC qualitative cut-off: <3 particles/HPF or <10 particles/µL	Microscopy Automated	Microscopy Automated	Dry Chemistry (no bacterial count, but NIT determination with test strip)	Microscopy Automated	Microscopy Manually	Dry Chemistry (no bacterial count, but NIT determination with test strip)	Microscopy Automated	- cobas u 701 module: Microscopy Automated - cobas u 601 module: Dry Chemistry (no bacterial count, but NIT determination with test strip)	- Microscopy Automated or - Dry Chemistry (no bacterial count, but NIT determination with test strip)	- Microscopy Automated or - Dry Chemistry (no bacterial count, but NIT determination with test strip)	Dry Chemistry (no bacterial count, but NIT determination with test strip)	Microscopy Automated	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry for NIT determination with test strip
BAC qualitatively cut-off: <30 particles/HPF or <100 particles/µL	Microscopy Automated	Microscopy Automated	Dry Chemistry (no bacterial count, but NIT determination with test strip)	Microscopy Automated	Microscopy Manually	Dry Chemistry (no bacterial count, but NIT determination with test strip)	Microscopy Automated	- cobas u 701 module: Microscopy Automated - cobas u 601 module: Dry Chemistry (no bacterial count, but NIT determination with test strip)	- Microscopy Automated or - Dry Chemistry (no bacterial count, but NIT determination with test strip)	- Microscopy Automated or - Dry Chemistry (no bacterial count, but NIT determination with test strip)	Dry Chemistry (no bacterial count, but NIT determination with test strip)	Microscopy Automated	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry for NIT determination with test strip
BAC semi-quantitative particles/HPF	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated (if applicable)	Microscopy Manually	not applicable	Microscopy Automated	- cobas u 701 module: Microscopy Automated - cobas u 601 module: Dry Chemistry	if applicable: - Microscopy Automated or - Dry Chemistry (no bacterial count, but NIT determination with test strip)	if applicable: - Microscopy Automated or - Dry Chemistry (no bacterial count, but NIT determination with test strip)	not applicable	not applicable	not applicable	please refer to specific Sysmex urinalysis module (UF-; UX-….)	not applicable
BAC semi-quantitative particles/µL	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated	Microscopy Manually	not applicable	Microscopy Automated	- cobas u 701 module: Microscopy Automated - cobas u 601 module: Dry Chemistry	if applicable: - Microscopy Automated or - Dry Chemistry (no bacterial count, but NIT determination with test strip)	if applicable: - Microscopy Automated or - Dry Chemistry (no bacterial count, but NIT determination with test strip)	not applicable	Microscopy Automated (if applicable)	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry for NIT determination with test strip
BAC quantitative [unit]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [p/µL or p/HPF]	not applicable	Microscopy Automated [particles/µL]	Microscopy Manually [p/µL or p/HPF]	not applicable	Microscopy Automated [particles/HPF or particles/µL]	not applicable	Microscopy Automated (if applicable)	Microscopy Automated (if applicable)	not applicable	Microscopy Automated [p/µL, if applicable)	Fluorescent Dye Flow Cytometry [particles/µL]	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry for NIT determination with test strip
CAS qualitatively cut-off: 1 particle/LPF or 0,1 particle/µL	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated	Microscopy Manually	not applicable	Microscopy Automated	Microscopy Automated	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	Fluorescent Dye Flow Cytometry
CAS semi-quantitatively particles/LPF	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated (if applicable)	Microscopy Manually	not applicable	Microscopy Automated (if applicable)	Microscopy Automated	Microscopy Automated	Microscopy Automated (if applicable)	not applicable	not applicable	not applicable	please refer to specific Sysmex urinalysis module (UF-; UX-….)	not applicable
CAS semi-quantitatively particles/µL	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated	Microscopy Manually	not applicable	Microscopy Automated (if applicable)	Microscopy Automated	Microscopy Automated	Microscopy Automated (if applicable)	not applicable	Microscopy Automated (if applicable)	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	Fluorescent Dye Flow Cytometry
CAS quantitatively [unit]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [p/µL or p/HPF]	not applicable	Microscopy Automated [particles/µL]	Microscopy Manually [p/µL or p/HPF]	not applicable	Microscopy Automated (if applicable)	not applicable	Microscopy Automated (if applicable)	Microscopy Automated (if applicable)	not applicable	Microscopy Automated [p/µL, if applicable)	Fluorescent Dye Flow Cytometry [particles/µL]	please refer to specific Sysmex urinalysis module (UF-; UX-….)	Fluorescent Dye Flow Cytometry (if applicable)
CRY qualitatively cut-off: 2 particles/HPF or 6 particles/µL	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated	Microscopy Manually	not applicable	Microscopy Automated (if applicable)	Microscopy Automated	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	Fluorescent Dye Flow Cytometry
CRY semi-quantitatively particles/HPF	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated (if applicable)	Microscopy Manually	not applicable	Microscopy Automated (if applicable)	Microscopy Automated (if applicable)	Microscopy Automated	Microscopy Automated (if applicable)	not applicable	not applicable	not applicable	please refer to specific Sysmex urinalysis module (UF-; UX-….)	Fluorescent Dye Flow Cytometry (if applicable)
CRY semi-quantitatively particles/µL	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated	Microscopy Manually	not applicable	Microscopy Automated (if applicable)	Microscopy Automated (if applicable)	Microscopy Automated	Microscopy Automated (if applicable)	not applicable	Microscopy Automated (if applicable)	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	Fluorescent Dye Flow Cytometry (if applicable)
CRY quantitatively [unit]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [p/µL or p/HPF]	not applicable	Microscopy Automated [particles/µL]	Microscopy Manually [p/µL or p/HPF]	not applicable	Microscopy Automated (if applicable)	Microscopy Automated (if applicable)	Microscopy Automated (if applicable)	Microscopy Automated (if applicable)	not applicable	Microscopy Automated [p/µL, if applicable)	Fluorescent Dye Flow Cytometry [particles/µL]	please refer to specific Sysmex urinalysis module (UF-; UX-….)	Fluorescent Dye Flow Cytometry [particles/µL] (if applicable)
RBC qualitatively cut-off: 3 particles/HPF or 10 particles/µL	Microscopy Automated	Microscopy Automated	Dry Chemistry	Microscopy Automated	Microscopy Manually	Dry Chemistry	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)	Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)	Microscopy Automated	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry (no RBC count, but BLD determination with test strip)
RBC semi-quantitatively particles/HPF	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated (if applicable)	Microscopy Manually	not applicable	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)	not applicable	not applicable	not applicable	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry (if applicable) or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip) (if applicable)
RBC semi-quantitatively particles/µL	Microscopy Automated	Microscopy Automated	Dry Chemistry	Microscopy Automated	Microscopy Manually	Dry Chemistry	Microscopy Automated	- Microscopy Automated (if applicable) or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)	Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)	Microscopy Automated (if applicable)	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip)
RBC quantitatively [unit]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [p/µL or p/HPF]	not applicable	Microscopy Automated [particles/µL]	Microscopy Manually [p/µL or p/HPF]	not applicable	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [particles/HPF or particles/µL]	Dry Chemistry [particles/µL] (not recomended for diagnostic use)	Microscopy Automated [p/µL, if applicable)	Fluorescent Dye Flow Cytometry [particles/µL]	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry (no RBC count, but BLD-Hb determination with test strip) (particles/µL)
WBC qualitatively cut-off: 5 particles/HPF or 15 particles/µL	Microscopy Automated	Microscopy Automated	Dry Chemistry	Microscopy Automated	Microscopy Manually	Dry Chemistry	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)	Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)	Microscopy Automated	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)
WBC semi-quantitatively particles/HPF	Microscopy Automated	Microscopy Automated	not applicable	Microscopy Automated (if applicable)	Microscopy Manually	not applicable	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)	not applicable	not applicable	not applicable	please refer to specific Sysmex urinalysis module (UF-; UX-….)	Fluorescent Dye Flow Cytometry (if applicable)
WBC semi-quantitatively particles/µL	Microscopy Automated	Microscopy Automated	Dry Chemistry	Microscopy Automated	Microscopy Manually	Dry Chemistry	Microscopy Automated	- Microscopy Automated (if applicable) or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)	Microscopy Automated	- Microscopy Automated or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)	Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)	Microscopy Automated (if applicable)	Fluorescent Dye Flow Cytometry	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip)
WBC quantitatively [unit]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [p/µL or p/HPF]	not applicable	Microscopy Automated [particles/µL]	Microscopy Manually [p/µL or p/HPF]	not applicable	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [particles/HPF or particles/µL]	Microscopy Automated [particles/HPF or particles/µL]	Dry Chemistry [particles/µL] (not recomended for diagnostic use)	Microscopy Automated [p/µL, if applicable)	Fluorescent Dye Flow Cytometry [particles/µL]	please refer to specific Sysmex urinalysis module (UF-; UX-….)	- Fluorescent Dye Flow Cytometry or - Dry Chemistry (no WBC count, but LEU-Esterase determination with test strip) (particles/µL)

The proposed Method Keys as indicated in the table above were derived from the available information of the instrument manufacturers.