

SUPPLEMENTAL MATERIAL

Preliminary study in which cut-offs for the correlation study between sediMAX and bacterial urine cultures were established.

In brief, the preliminary study consisted in a correlation study between 106 urine sediment results and their corresponding bacterial counts. Urine samples were treated as indicated in the text of the article and a sample was considered as being positive for screening if the particle count for bacteria exceeded 25 elements/HPF (110 elements/ μL). Sensitivity was calculated to be 68.4% and FNR as 31.6% according to Clinical and Laboratory Standards Institute (CLSI) EP 12-A (9). Evaluation of the bacterial counts found in those urine sediments with a false negative result induced us to lower the count to 10 elements/HPF (44.4 elements/ μL). Indeed, at this value, these same sediments would have been considered as true positives, thereby reducing the FNR to 9.7%.

Table 3. Performance of sediMAX in comparison to other automated analyzers

	sediMAX (1)	sediMAX (2)	UF 1000i (Perietti et al)	UF 100 (Gessoni et al)	iQ 200 (Accordini et al)
Sensitivity (%)	98.3	98.3	98.2	95.0	86.2
Specificity (%)	59.0	75.2	62.1	95.0	65.1
NPV (%)	99.4	99.4	98.7	98.0	91.6
PPV (%)	35.0	47.0	53.7	86.0	51.6
False Negative (%)	0.3	0.3	0.6	1.2	4.2
False Negative Rate (%)	1.7	1.7	1.8	5.0	13.8
Diagnostic Accuracy (%)	66.1	78.4	73.3	95.0	71.4

(1) Before reclassification of 126 samples with debris

(2) After reclassification of 126 samples with debris