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MercyOne.org

## Memo

**To: Dunes Medical Laboratory Clients**

**From: Dr. Bauman, Director of Laboratory Services**

**Date: November 6, 2023**

**Subject: Urinalysis Standardization**

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**Effective November 14, 2023**, MercyOne Siouxland Medical Center Laboratory will be changing the urinalysis instrumentation. With this implementation you may see different types of results to match the capabilities of the new analyzer. New results are listed in Appendix A.

The criteria for a urinalysis to reflex to a microscopic exam are as follows: presence of protein, red blood cells (RBC), leukocyte esterase, positive nitrite, or any clarity other than clear. Minimum microscopic examinations will require WBC, RBC, squamous epithelial cells, and bacteria.

Finally, there are newly defined microscopic criteria that trigger a urine culture. Cultures will now be reflexed if the following criteria are met:

Microscopic WBC >5 and ANY of the following:

- Nitrite positive
- Leukocyte esterase positive at trace or greater
- Microscopic bacteria positive at any grade
- Nitrite positive and/or leukocyte esterase positive

Critical Results will include:

	Status+ (Dunes Lab)	DxU (Hospital lab)
Ketone (mg/dL)	On 0- to 5-day old patients if the values are: 15, 40, 80, ≥160	On 0 to 5-day old patients if the values are: 10, 20, 40, 60, 80, 100, 150, OVER
RBC casts	0-2 or greater will be called to the provider	0-2 or greater will be called to the provider
WBC casts	0-2 or greater will be called to the provider	0-2 or greater will be called to the provider
Cystine crystals	Rare or greater will be called to the provider	Rare or greater will be called to the provider

There is no change to the sample type or the ordering process, please refer to the Directory of Services.  
<https://jdos.nicholsinstitute.com/dos/MercyOneSiouxlandlabTestMenu/>

Please feel free to contact Rhonda Oedekoven MLS(ASCP)<sup>CM</sup> at 712-233-5243 with any questions you may have regarding this announcement.

Mitchel Bauman, MD, Medical Director

11-13-23

Date



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## Urinalysis Appendix A

Urinalysis result	Status+ (Dunes Lab)	DxU (Hospital lab)
Glucose (mg/dL)	Negative, 100, 250, 500, $\geq 1000$	Normal, 30, 50, 70, 100, 150, 200, 300, 500, 1000, Over
Protein (mg/dL)	Negative, Trace, 30, 100, $\geq 300$	Negative, 10, 20, 30, 50, 70, 100, 200, 300, 600, Over
Bilirubin (mg/dL)	Negative, Small, Moderate, large	Negative, 0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0, Over
Urobilinogen (mg/dL)	0.2, 1.0, 2.0, 4.0, $\geq 8.0$	Normal, 2.0, 3.0, 4.0, 6.0, 8.0, 12.0, Over
pH	5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, $\geq 9$	5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0
Blood	Negative, Trace-Lysed, Trace-Intact, Small, Moderate, Large	Negative, Trace, 1+, 2+, 3+
Ketone (mg/dL)	Negative, Trace, 15, 40, 80, $\geq 160$	Negative, Trace, 10, 20, 40, 60, 80, 100, 150, Over
Nitrite	Negative, Positive	Negative, 1+, 2+
Leukocyte Esterase	Negative, Trace, Small, Moderate, Large	Negative, 25, 75, 250, 500 (Leu/uL)
Clarity	Clear, Slightly Cloudy, Cloudy, Turbid, Other	Clear, Turbid, Extra Turbid
Color	Colorless, Straw, Light Yellow, Yellow, Dark Yellow, Amber, Light Orange, Orange, Dark Orange, Light Brown, Brown, Dark Brown, Light Red, Red, Dark red, Pink, Light Green, Green, Dark Green, Light Violet, Violet, Dark Violet, Light Blue, Blue, Dark Blue, Other, Grossly Bloody	Colorless, Straw, Light Yellow, Yellow, Dark Yellow, Amber, Light Orange, Orange, Dark Orange, Light Brown, Brown, Dark Brown, Light Red, Red, Dark red, Light Green, Green, Dark Green, Light Violet, Violet, Dark Violet, Light Blue, Blue, Dark Blue, Other, Grossly Bloody
Specific Gravity	$\leq 1.005$ , 1.000-1.035, $\geq 1.035$	1.000-1.050
<b>Microscopic Results:</b>	<b>Old Ranges (Dunes &amp; Hospital)</b>	<b>New Ranges (Dunes &amp; Hospital)</b>
WBC	0, 1-5, 6-20, 20-40, 40-60, $>60$	Absent, 0-5, 6-10, 11-20, 21-50, $>50$
RBC	0, 1-3, 4-20, 20-40, 40-60, $>60$	Absent, 0-2, 3-5, 6-10, 11-20, 21-50, $>50$
WBC Clumps	N/A	Absent, 0-4, 5-11, 11-20, 21-30, $>30$
Squamous Epithelial cells	0, 1-5, 6-20, 20-40, 40-60, $>60$	Absent, 0-5, 6-10, 11-20, 21-30, $>30$
Transitional and Renal Epithelial Cells	N/A	Absent, 0-2, 3-5, 6-10, 11-20, $>20$
Granular, Hyaline, WBC, RBC, Waxy, Epithelial, Broad, and Cellular Casts	0, 0-1, 1-3, 4-20, 20-40, 40-60, $>60$	Absent, 0-2, 3-5, 6-10, 11-20, $>20$
Calcium Oxalate, Triple Phosphate, Uric Acid, Calcium Phosphate, Calcium Carbonate, Leucine, Cystine, Amorphous and Tyrosine Crystals	0, 1-3, 4-20, 20-40, 40-60, $>60$	Absent, Rare, Occasional, Few, Moderate, Many
RBC Clumps	N/A	Absent, Rare, Occasional, Few, Moderate, Many
Bacteria	1+, 2+, 3+, 4+	Absent, Few, Moderate, Many
Yeast (Budding and/or Hyphae)	1+, 2+, 3+, 4+	Absent, Rare, Occasional, Few, Moderate, Many
Trichomonas, Sperm, and Mucus	1+, 2+, 3+, 4+	Absent or Present