Note: This is a repeat of Exercise 3. Students are expected to review Exercise 3, as well as the corresponding information in the course textbook and classroom notes.

Urinalysis Reporting Standardization Guide (CRg 7/1/09)

Use & Purpose:

Use this form to guide as you evaluate urine in the MLAB laboratory. When at clinical rotations, be sure to consult with your mentor on that facilities reporting criteria / style. The purpose of this guide is to standardize the way urinalysis results are to be reported in our labs.

Urine Colors:

Use only the following terms: colorless, light yellow, yellow, dark yellow, amber, orange, red, brown, black, blue, or green. Consult with your lab instructor if you encounter an unusual color.

Appearance / Clarity :

Note: clarity is different from color. Clarity is an evaluation of how light passes through the urine sample. It provides an indication of the amount (and possibly the type) of sediment you should expect to see under the microscope.

Use the following terms to describe appearance / clarity: clear, slightly hazy, hazy, slightly cloudy, cloudy, turbid (a thick obvious sediment that settles to the bottom of the cup upon standing). 'Bloody' is also sometimes uses as a clarity term.

Microscopic Elements:

Use the following table as you quantitatify the urine sample's sediment.

Directions:
1. Locate the element in the far left column.
2. Note whether the element is counted / quantitated using low power (10X / LPF) or high power (40X / HPF).
   Casts require special consideration; they are counted using 10X, but you may have to go to 40X to identify them.
3. Use the block of information under the "Enumerated As" to report the urine sediment.

Example 1: Evaluating WBCs - using high power / 40X; looking at 5-10 distinct high power fields, you see 7 in one field, 5 in another, 9 in the third, etc. - you would report: 6-10 WBC /HPF.

Example 2: A red colored sample with positive blood having more than 200 RBC / HPF would be reported as "TNTC" (too numerous to count). A quick way of determining whether there are more than 200 RBC/field is to mentally divide the visual field into quarters - count only what is in one representative quarter - if it is at least 50, there are more than 200 cells.

Example 3: A refrigerated urine sample has developed so many amorphous urate crystals that everything else in the microscopic fields is hidden. The appropriate report: PKD amorphous urates (PKD meaning 'packed')
Comment about Example 3: The problem of not being able to read the presence of other elements due to the amorphous urates could have been avoided IF the sample had been tested when it was fresh. Refrigeration temperature often resulted in the precipitation of the crystalline salts. By the way, these are considered normal.

Example 4: A random sample from a female patient is NOT collected using the 'clean catch' method. The LPF microscopic field has @ 15 squamous epithelial cells in each field. Report '11-20" / LPF. Notes about Example 4: 1. Many labs would reject this sample as the squamous epithelial cells indicate vaginal contamination and the evaluation of bacteria would also be compromised. 2. Lab protocol

Element	Counted on		Enumerated As								
	LPF	HPF									
Casts*	✔		Rare	Occ	0-2	3-5	6-10	11-20	21-50	51-100	TNTC
WBC		✔	Rare	Occ	0-2	3-5	6-10	11-20	21-50	51-100	TNTC
RBC		✔	Rare	Occ	0-2	3-5	6-10	11-20	21-50	51-100	TNTC
Squamous Epithelial Cells	✔		Rare	Occ	0-2	3-5	6-10	11-20	21-50	51-100	TNTC
other Epithelial Cells		✔	Rare	Occ	0-2	3-5	6-10	11-20	21-50	51-100	TNTC
** Crystals**		✔	Trace	1+	2+	3+	4+	Pkd			
Bacteria		✔	Trace	1+	2+	3+	4+	Pkd			
Yeast		✔	Trace	1+	2+	3+	4+	Pkd			
Mucous	✔		Trace	1+	2+	3+	4+	Pkd			
Amorphous		✔	Trace	1+	2+	3+	4+	Pkd			
Sperm		✔	Rare	1+	2+	3+					
Trichomonas		✔	Rare	1+	2+	3+					
WBC clumps		✔	Rare	1+	2+	3+					
Epithelial cell clumps		✔	Rare	1+	2+	3+					

** Note: When reporting urine Crystals you *must* identify the type of crystal in addition to its enumeration.
See textbook or other reference materials for descriptions of acid, alkaline, and pathological crystals.

Note: Different laboratories may use different criteria when reporting urine sediment. We have chosen to use this system to standardize reporting in our labs. When at a clinical site, you *must* adopt and use the reporting system of that site.

Urine Microscopic Report Sheet

/20 points

Name_____ Date_____

Students have the option of using their own urine specimen as their unknown # 5

Instructions: Use the Urine Standardization Criteria page to quantitate the urine sediments and determine proper reporting style.

For example: if you find an average of 4 RBCs in each of 10 or more HPF (high power fields), report it as 3-5 RBCs /hpf.

Items reported under casts, crystals or other must be identified as well as quantitated. *For example: 1+ mucous threads, 0-2 hyaline casts / lpf, 2+ CaOx, rare Trichomonas seen.*

Microscopic	1	2	3	4	5 - your spec.
Name & ID #					
Mucous (LP)					
Casts (LP)					
Epithelial cells (HP)					
RBC (HP)					
WBC (HP)					
Crystals (HP)					
Bacteria (HP)					
Other					