COLLEGE of AMERICAN PATHOLOGISTS
Laboratory Quality Solutions

FOR LABORATORY USE ONLY
Results due date:

Refer to the online result form on cap.org for the most current due date. For replacement materials, contact the CAP immediately.

CM-A 2022

Urinalysis and Clinical Microscopy Survey

Kit Instructions

MATERIALS FOR THIS MAILING

CMP	CM-01 — CM-03 (liquid specimens) CMP-04 — CMP-09 (photographs) WC-01 — WC-08 (photographs)	CMMP	CMMP-20 — CMMP-26 (photographs) USP-01 — USP-03 (photographs)
CMP1	CMP1-01 — CMP1-03 (liquid specimens) CMP-04 — CMP-09 (photographs) WC-01 — WC-08 (wild card challenge photographs)	OCB GOCB DSC	OCB-01 — OCB-03 GOCB-01 — GOCB-03 DSC-01 and DSC-02

IMPORTANT

This section lists all possible orderable programs for this mailing. Your laboratory will only receive the programs it ordered.

STORAGE AND STABILITY INSTRUCTIONS

1. Store all specimens upright and tightly capped.
2. Do not freeze specimens.

CMP and CMP1

1. Specimens are shipped with a cold pack. Upon receipt of the kit, follow the instructions below.
2. Store specimens at 2 - 8°C.
3. **Refrigerator temperature allows for the best specimen stability; however, specimens are stable at room temperature for up to 5 days after the ship date.**

OCB

1. Specimens are intentionally shipped ambient. Upon receipt of the kit, follow the instructions below.
2. Store specimens at room temperature (refrigeration will not compromise the specimen).
3. Test and record your results immediately upon opening.

GOCB

1. Store specimens at room temperature (refrigeration will not compromise the specimen).
2. Use immediately upon opening.

ANAB ACCREDITED ISO/IEC 17043 PROFICIENCY TESTING PROVIDER

Important: See the Biohazard Warning at the end of these instructions.
Customer Contact Center 800-323-4040 or 847-832-7000 (Country code: 001) option 1

DSC

1. Specimens are shipped frozen with a cold pack.
2. Store specimens at 2 - 8°C, for 5 days.
3. Use within 3 days of opening.

NEW FOR THIS MAILING

Beginning with this mailing:

- you **must** access your result form and submit results online.
  1. Go to cap.org. Click **View, enter, or submit PT results** and log in.
  2. On the Result Form Data Entry page, choose your kit. Click **Enter Data** in the Data column.

  You may download and print the result form, if needed.
- you can find your kit number in the CAP*TRAK*er email, on your kit label, or on the online result form.
- a copy of the attestation page has been added to the end of these instructions for your convenience to sign and retain for inspection purposes.
- a **Tests in this Program** section has been added to these instructions.
- The photograph challenges reporting have been updated:

  (1) **Body fluid photographs:** Do not leave any reporting areas blank. Select Code 339 "object type not evaluated, would refer" for any image the laboratory does not report.

  (2) **Vaginal wet prep (Vaginal, unstained):** Laboratories should report the presence and absence of all the cellular elements outlined on the result form regardless of laboratory patient result reporting. Do not leave any reporting areas blank.

If you need help, refer to the For Assistance section of these instructions.

REPORTING CODE CHANGES

The following manufacturers have deleted or updated codes for this mailing:

None

CRITICAL REPORTING INFORMATION

1. For any testing that you do not routinely perform in your laboratory, leave all reporting areas for that test blank unless otherwise noted. If your exact result is not listed on the result form, select the option that best fits your answer (eg, for ketone, if a result of > 80 is obtained, select the option for 80 - 100, and not > 150).
2. **Failure to specify or selection of an inappropriate instrument, method, or manufacturer may result in comparison with the wrong peer group and unacceptable performance.** To accommodate various reporting styles, multiple reporting sections have been added for the protein, glucose, ketones, bilirubin, blood/hemoglobin, and leukocyte esterase analytes. **Choose ONLY 1 reporting method to enter your results.** Report results as you would a patient result.
3. **CMP1 users:** When selecting your instrument, please select from the boxed in area for "CMP1 participants only" found on the Urinalysis and Specific Gravity Instrument Master List.

TESTS IN THIS PROGRAM

Urinalysis and Clinical Microscopy						
Analyte	Program Code					
	CMP	CMP1	CMMP	OCB	GOCB	DSC
Bilirubin	▮	▮				
Blood or hemoglobin	▮	▮				

Urinalysis and Clinical Microscopy						
Analyte	**Program Code**					
	CMP	**CMP1**	**CMMP**	**OCB**	**GOCB**	**DSC**
Body fluid photographs	■	■				
Dipstick confirmatory: bilirubin and protein						■
Fern test (vaginal) photograph			■			
Gastric occult blood					■	
Gastric pH					■	
Glucose	■	■				
hCG urine, qualitative	■	■				
Ketones	■	■				
KOH preparation (skin) photograph			■			
Leukocyte esterase	■	■				
Nasal smear photograph			■			
Nitrite	■	■				
Occult blood				■		
Osmolality	■	■				
pH	■	■				
Pinworm preparation photograph			■			
Protein, qualitative	■	■				
Reducing substances	■	■				
Specific gravity	■	■				
Spermatozoa photograph			■			
Stool for leukocytes photograph			■			
Urine sediment photographs	■	■	■			
Urobilinogen	■	■				
Vaginal wet preparation photographs (for clue cells, epithelial cells, trichomonas, or yeast)			■			

DETAILED TESTING INSTRUCTIONS

HANDLING INSTRUCTIONS

1. **CMP and CMP1 specimens:**
   - Urinalysis specimens require no reconstitution.
   - Allow the specimens to come to room temperature for 20 minutes before mixing.
   - Mix well before beginning tests.
   - **Perform only those tests that are ordinarily performed in your laboratory.**
2. **DSC specimens:**
   - Before sampling, allow the specimens to reach room temperature and invert the vial several times to ensure homogeneity. After each use, promptly replace the stopper and return to 2 - 8°C storage.
   - For proficiency testing purposes, assume that screening results for bilirubin and protein are positive and proceed with confirmatory testing.
3. **CMP, CMP1, and DSC specimens:**
   - **DSC bilirubin specimens:**
     - The volume of both the specimen and DI water added to the test pad square/disk is critical to the results. Test the DSC bilirubin specimens using 2 drops of DI water. Adding too much water could dilute the specimen resulting in a negative result interpretation. Adding more than the required 4 micro drops of specimen could lead to over-saturation which could impede wicking of the DI water from the disk onto the sample and lead to misinterpretation of results.
     - Results with Ictotest Reagent Tablets are negative if no blue or purple color develops on the mat within 60 seconds. If a blue or purple color develops on the mat or under the tablet within 60 seconds, the result is positive.
   - The analyte used in urine proficiency specimens for bilirubin and urobilinogen testing may give slightly atypical (eg, pink or green) color development by some methods when examined visually. If this occurs, the specimen should be graded based upon the intensity of the color.
4. **OCB specimens:**
   - Test and record results immediately upon opening. Follow your manufacturer's package insert when testing.
5. **GOCB specimens:**
   - Roll the vial between the palms of the hands 6 times in an upright position.
   - Gently invert the vial 6 times.
   - Analyze specimens as directed in the product instructions of your test kit.
6. **Photograph challenges:**
   - For any testing you do not routinely perform in your lab, leave all reporting areas for that test blank. **An exception applies to laboratories that report vaginal wet mounts; they must report the presence and absence of all the cellular elements outlined on the result form regardless of laboratory patient result reporting.**
   - Report results using the photographs and not the online images, as the color will be more consistent between laboratories.
   - Refer to the current *Hematology and Clinical Microscopy Glossary* **and** master list before selecting the appropriate cell identification code.
   - The review of **photographs** must be performed by a single individual who may seek the assistance of a supervisor, lead tech, or pathologist if that is the laboratory's standard procedure for patient slide review. After submission and receipt of proficiency testing results, group review of the images provides an excellent continuing education opportunity.
7. **Wildcard challenges:**
   - **WC-01 — WC-08 Urine Wildcard Cell Identification:** Identify the annotated cells using the codes listed on the result form only.

REPORTING YOUR RESULTS

GENERAL REPORTING INSTRUCTIONS

1. Verify the accuracy of all reporting codes by reviewing the online result form.
2. **Exception Codes:** If you must report an analytical problem for a test or individual analyte, **leave the result area for that section blank** and select one of the following bubbles on the result form within that section. The exception code bubble that you select will apply **only** to the result area(s) left blank. If your laboratory does not perform testing, do not use an exception code. Documentation on the use of these codes is the responsibility of the laboratory and should be kept internally.
   - **11 Unable to analyze**
     Use code 11 to indicate **your laboratory** was unable to analyze the specimens (eg, instrument not functioning, reagents not available). You do not need to call the CAP to use this code.
   - **22 Result is outside the method/instrument reportable range**
     Use code 22 if you obtain a high or low result outside the reportable range of your method or instrument. Do not use this code if there is an option to select **greater than** or **less than**. You do not need to call the CAP to use this code.
   - **33 Specimen unsatisfactory**
     You **must** contact the CAP to use this code.

   For graded analytes, if you select an exception code bubble **and** enter data on the result form, the data will be graded.
3. Corrections can be made to the result form at any time **prior** to the due date.
4. An option for greater than values is provided in certain sections of the result form. Select the option, if appropriate, and enter your highest detectable limit in the boxes provided or refer to the use of exception codes.
5. Quantitative results for this program can be directly transmitted to e-LAB Solutions Suite. To learn more, visit cap.org and search for direct transmission.
6. For reporting Urinalysis and Specific Gravity method and instrument codes, refer to list below for examples:

If you use:	Then for method use:	Then for instrument use:
Refractometer	2533 Refractometer	2044 Visual
Siemens Reagent Strip on Siemens Clinitek 500	2936 Siemens Reagent Strip	2292 Siemens Clinitek 500
Siemens Reagent Strip and read visually	2936 Siemens Reagent Strip	2044 Visual
Roche Chemstrip on Roche Chemstrip 101	2937 Roche Chemstrip	3241 Roche Chemstrip 101
Roche Chemstrip and read visually	2937 Roche Chemstrip	2044 Visual

7. **Bayer Acetest users:** Results should be read at 30 seconds as instructed for urine specimens in the Bayer package insert. Positive results may change if incubated longer due to the use of surrogate material for the Ketone analyte.
8. **Protein, Method 1:** For all results 3+ or greater, report ≥ 3+.
   Protein, Method 2: For all results 300 or greater, report ≥ 300.
9. **Reducing Substances:** If your laboratory performs reducing substances, you **must** perform all 3 challenges, otherwise leave blank if your laboratory does not perform this test. The 3/4% option is not an appropriate response for the Bayer Clinitest or Germaine Aim Tabs, 2-drop method.
10. **Urobilinogen Method 2:** Report using the range that best fits your instrument result.
11. **Analyticon CombiScan/Urilyzer series users: For pH,** results should be reported in whole numbers from 5.0 to 9.0 with the exceptions of 6.5 and 7.5.
12. **IRIS iChemVelocity and iChem 100 users:**
    - **Leukocyte Esterase and Urobilinogen:** You may use Positive to report results if that is your laboratory policy, otherwise select 1 of the other reporting bubbles.
    - **pH for either iChem 100 instruments or 800-7212 strips users:** Results should be reported in whole numbers from 5.0 - 9.0.

13. **Roche users:**
    - **Chemstrip, Specific Gravity (Visual):** For increased accuracy, add 0.005 to the reading if the pH is ≥ 7.0. (If the strip is read on an instrument, the correction is applied automatically.)
    - **pH:**
        - pH Visual: Results should be reported in whole numbers; 0.5 increments are not allowed.
        - Cassette and all other pH Instrumentation: Results should be reported in whole numbers from 5.0 to 9.0, with the exception of 6.5.
    - **Glucose:**
        - Roche Glucose Visual Method only: Results may be reported as 500 mg/dL.
        - All Other Roche Glucose Methods: 500 mg/dL is not an appropriate response. Analyzers are not able to discern results of 500 vs. 1000 mg/dL.
    - **Ketones:** All Roche Urinalysis instruments should not report 80 - 100 mg/dL. Analyzers are not able to discern ketones between 60 and 150 mg/dL.
14. **Roche Urisys 1100 users:**
    - **Blood/Hemoglobin: Do not convert your results.**
    - **Protein Method 2:** 75 mg/dL is not an appropriate response and will be penalized if used.
15. **Siemens users:**
    - **Multistix, Specific Gravity (Visual):** According to the Siemens package insert, for increased accuracy add 0.005 to the visual specific gravity reading when the urine pH is equal to or greater than 6.5. Report the corrected specific gravity on your result form. (Results from strips read by Clinitek are automatically corrected.)
16. When reporting a high qualitative value **do not** choose a response greater than your method allows.
17. **CMP, CMP1, and/or DSC participants:**
    - When testing proficiency testing specimens, the result for each analyte should be evaluated independently and not in relation to other test results.
    - Production of stable proficiency testing specimens may require the use of surrogate material that behaves differently than the authentic analyte. Therefore, for purposes of proficiency testing, **do not** perform confirmatory tests for positive dipstick results on the CM specimens even though your laboratory protocol requires them for patient specimens. Report only the results for your initial dipstick testing on these challenges. Confirmatory testing results for bilirubin and/or protein should be reported using the DSC specimens only.
18. **DSC participants:** For Confirmatory Protein, use reporting methods 1, 2, or 3, according to how you report results in your laboratory. You only need to report in **1** of the areas.
19. **GOCB participants:** The method option is no longer pre-filled in the qualitative Gastric pH section of the result form. You must select **Beckman Coulter Gastroccult** when entering your results.
20. To display the online images, select the **View Image(s)** link on the result form data entry page.

CONVERSION TABLE (PROTEIN, GLUCOSE, AND KETONES)

Protein Method 2 reporting options in SI units	
Conventional (mg/dL)	SI (g/L)
Negative	Negative
10 - 20	0.1 - 0.2
30 - 70	0.3 - 0.7
75 - Roche users only	0.75 - Roche users only
100 - 200	1.0 - 2.0
≥ 300	≥ 3.0 or > 6.0 or ≥ 1000

Glucose Method 2 reporting options in SI units	
Conventional (mg/dL)	SI (mmol/L)
Negative (Norm)	Negative (Norm)
30 - 100	1.6 - 6.0
150 - 300	8.3 - 27.9
500	28
> 500 or ≥ 1000 or ≥ 2000	> 28 or ≥ 55 or ≥ 111
CMP Ketones Method 3 reporting options in SI units	
Conventional (mg/dL)	SI (mmol/L)
Negative	Negative
5 -10	0.5 - 1.0
15 - 30	1.5 - 3.0
40 - 60	3.9 - 6.0
80 - 100	7.8 - 10.0
≥ 150	≥ 15.0
CMP1 Ketones Method 3 reporting options in SI units	
Conventional (mg/dL)	SI (mmol/L)
Negative	Negative
5 - 15	0.5 - 1.9
20 - 50	2.0 - 5.9
60 - 100	6.0 - 10.0
≥ 150	≥ 15.0

BODY FLUID AND VAGINAL WET PREP IMAGE(S)

1. Participants should remember that the most specific identification possible is the appropriate response. For example, in the body fluid images, if a macrophage containing red cell is indicated by the arrow “macrophage with phagocytized erythrocytes or erythrophage” is the appropriate answer, not “macrophage.”
2. For the Body Fluid images, review the **CSF and Body Fluids Master List** and select the 3-digit code on the result form. For the Vaginal wet prep image, select a reporting bubble on the result form. (Consult the current *Hematology and Clinical Microscopy Glossary* for brief descriptions or definitions.)
3. For further description of the Hematology Blood Cell Identification Master List choices, refer to the Blood Cell Identification section of the current *Hematology and Clinical Microscopy Glossary,* which can be accessed at cap.org.
   a. Under the Member Resouces tab, click on **Councils and Committees.**
   b. Click on **Hematology and Clinical Microscopy Committee.**
   c. Click on **Hematology and Clinical Microscopy Topic Center.**
   d. Click on **2022 Hematology and Clinical Microscopy Glossary.**

URINE SEDIMENT IMAGES

1. Participants should remember that the most specific identification possible is the appropriate response. For example, when 2 or more images appear for a particular CMP challenge, make your identification based on all images.
2. Arrows are placed on USP images that contain more than one cell type. Participants should make their selection based on the cell indicated by the arrow. If only one image appears on the USP challenge, no arrows will be present.

3. Review the **Urine Sediment Master List** and record the 3-digit code on the result form. (Consult the current *Hematology and Clinical Microscopy Glossary* for brief descriptions or definitions.)
4. For further description of the Hematology Blood Cell Identification Master List choices, refer to the Blood Cell Identification section of the current *Hematology and Clinical Microscopy Glossary,* which can be accessed at cap.org.
    a. Under the Member Resouces tab, click on **Councils and Committees.**
    b. Click on **Hematology and Clinical Microscopy Committee.**
    c. Click on **Hematology and Clinical Microscopy Topic Center.**
    d. Click on **2022 Hematology and Clinical Microscopy Glossary.**
5. Participants who purchase CMP, CMP1, *and* CMMP will receive two different sets of urine sediment photographs. You may report one or both sets of urine sediment photopage results.

SUBMITTING RESULTS

1. Results **must** be received no later than midnight, Central Time by the due date on the result form.
2. In order to enter results on cap.org, laboratory staff must first create a personal Web account, affiliate themselves with a laboratory, obtain approval from their site administrator, and then log in.
3. Your laboratory must be enrolled/registered to enter results online via e-LAB Solutions Suite. If you are not enrolled/registered or if you have any questions related to your access to e-LAB Solutions Suite, contact the CAP.

REGULATORY INFORMATION

Per CLIA, as published by the United States Federal Register

- Proficiency Testing (PT) specimens must be tested with the laboratory's regular workload, using routine methods, and testing the PT specimens the same number of times it routinely tests patient specimens.
- If referral for testing is routinely performed for patient specimens, the practice cannot be followed for PT specimens. Referral is considered to be movement of the specimen from a laboratory with a CLIA identification number to another laboratory that has a different CLIA identification number.
- Laboratories must ensure that personnel do not share results or refer PT specimens for any reflex or testing outside their CLIA identification number.

DISCLAIMER

PT specimens, their progeny, unmodified derivatives, or modifications thereof may not be transferred or incorporated into a program intended for sale. PT specimens, their progeny, unmodified derivatives, or modifications thereof, reagents, and disposable equipment used in PT, when disposed of, should be autoclaved or incinerated and disposed of as hazardous waste. Disposal must follow local regulations, if more stringent than regulations enforced by the US Centers for Disease Control and Prevention and US Food and Drug Administration.

BIOHAZARD WARNING

All program specimens should be treated as if potentially infectious and should be handled as if they are capable of transmitting disease.

Program specimens are prepared from blood or other source material obtained from human donors or animals.

When working with program specimens, precautions should be taken to protect yourself and others from accidental exposure to infectious agents such as HIV, HBV, and HCV.

HIV can be transmitted through accidental parenteral inoculation, mucous membranes, or non-intact skin contact with HIV infected blood or body fluids. HBV and HCV can be transmitted through accidental parenteral inoculation, mucous membranes, non-intact skin contact, aerosolization or ingestion.

Precautions described in CDC and FDA recommendations and OSHA blood borne pathogen rules should be followed at all times when handling program specimens and reagents.

Such precautions include the following:

- Gloves should be put on **before opening the container** and should be kept on throughout the period specimens are handled. Replace gloves if contaminated, or if their ability to function as a barrier is compromised.
- At high altitudes, specimens should be opened in a hood or biologic safety cabinet.
- There should be no eating, drinking, or smoking in the laboratory.
- Hands should be washed after removing gloves and before leaving the testing area.
- Program specimens and reagents should be kept in separate refrigerators from those containing blood or blood components for transfusion.
- Program specimens, reagents, and disposable equipment used in testing should be autoclaved or incinerated and disposed of as hazardous waste. Disposal must follow local regulations, if more stringent than regulations enforced by the CDC or the FDA.

If there has been an accident in which you have been exposed to the testing materials, call the CAP Hot Line at 800-443-3244 or 847-470-2812 (Country code: 001) at any time. You can access Safety Data Sheets (SDS) by logging on to cap.org. Under the Laboratory Improvement tab, click on Catalog and Ordering Information.

FOR ASSISTANCE

Provide your CAP number and contact information with all correspondence. Participants in countries serviced by a designated CAP distributor should contact their distributor's customer service department.

Telephone: 800-323-4040 or 847-832-7000 (Country code: 001) option 1
(Monday - Friday, 7:00 AM – 5:30 PM US Central Time)

Email: contactcenter@cap.org
Website: cap.org

Address: CAP Surveys Program
325 Waukegan Road
Northfield, IL 60093-2750
USA

Urine hCG Manfacturer Master List

Deleted codes
None

New/Updated codes
None

1735	Abbott TestPack Combo	1205	Henry Schein OneStep+ Combo	3061	Polymedco Poly stat (serum/urine)
2027	Abbott TestPack Plus Combo with or without OBC	1382	Henry Schein OneStep+ Urine Cassette	2872	Polymedco Poly stat (urine only)
		1383	Henry Schein OneStep+ Urine Strip	1372	Pulse Scientific
1736	Abbott TestPack Plus - Urine	1117	Immunostics Immuno hCG Detector	1414	Quidel QuickVue+ One-Step Combo
1784	ABI SureStep	1118	Immunostics Immuno hCG Detector Combi (serum/urine)	1475	Quidel QuickVue One-Step Combo
1782	ABI SureStep Combo			1129	Quidel QuickVue One-Step Urine
1783	ABI SureStrip	1119	Immunostics Immuno hCG Detector Stix	1338	Quidel RapidVue (urine only)
3505	ABON Biopharm	3227	Innovatek BioStrip	3468	Quidel Sofia
2938	Acceava Basic II (urine)	3634	Innovatek QuickStep Plus hCG	2479	Ramco Quik-Trak (urine only)
3168	Acceava Combo II	2474	Instant Technologies iPregnancy Cassette (serum/urine)	2480	Ramco Quik-Trak Combi Test (serum/urine)
2648	ACON One Step (urine only)				
2055	Alere hCG Cassette (20) (Acceava)	2475	Instant Technologies iPregnancy Cassette (urine only)	3137	Randox Direct
1959	Alere hCG Cassette (25) (Clearview)			1800	Roche AccuStat Combo
2403	Alere hCG Combo Cassette (20/10)	2476	Instant Technologies iPregnancy Strip (urine only)	2108	SA Scientific (serum/urine)
1299	Alere hCG Combo Cassette (25) (Clearview)			2107	SA Scientific (urine only)
		1303	J & S Medical Associates Accutex	2483	SA Scientific (SAS) Ultra
2404	Alere hCG Dipstick	1370	Jant Accustrip Value+	1836	Sekisui OSOM
2486	Alfa Scientific Instant-View Combo	2857	Jant Accutest (serum/urine)	1837	Sekisui OSOM Combo
2487	Alfa Scientific Instant-View Urine only	3409	Jant Accutest Value+ (serum/urine)	1270	Sekisui OSOM Ultra Combo
1161	Beckman Coulter ICON 20	3410	Jant Accutest Value+ (urine only)	2532	Siemens Clinitek Status
2618	Beckman Coulter ICON 25	2981	LifeSign Status (serum/urine)	2853	Signify hCG Card
3188	BioMerieux AuraTek	2980	LifeSign Status (urine only)	2854	Signify hCG Urine
2064	BioTron Diagnostics Foremost Urine	1189	LifeSign UniStep	2855	Signify hCG Urine/Serum
2354	Cardinal Health Cassette	1179	LSC (LABSCO) Pep hCG Combo	2442	SMC Direct RefuAH Combo
2355	Cardinal Health Combo	1178	LSC (LABSCO) Pep hCG Test	2441	SMC Direct RefuAH Urine
2356	Cardinal Health Dipstick	1060	Mainline Confirms hCG Combo	1438	Stanbio QuPID
2647	Cen-Med Elite Plus One Step hCG	1468	Mainline Confirms hCG (urine only)	1439	Stanbio QuPID Plus
1264	Cenogenics	1477	McKesson Medi-Lab Performance Cassette	3425	Stanbio QuPID Plus E.R.
2120	Chembio STAT-PAK			1135	Stanbio QuStick
2812	Clarity Test Cassette	1478	McKesson Medi-Lab Performance Combo	3424	Stanbio True 20 Plus
2813	Clarity Test Strip			1467	Sure-Vue (serum/urine)
1961	Clearview hCG Combo II	1476	McKesson Medi-Lab Performance Dipstick	1466	Sure-Vue (urine only)
1430	Consult Diagnostics Cassette			2052	Sure-Vue STAT (serum/urine)
1432	Consult Diagnostics Combo	2276	MediChoice Combi	1816	Syntron/CIDA QuikPac II OneStep (serum/urine)
1433	Consult Diagnostics Dipstick	2277	MediChoice Urine Only		
3140	DE Healthcare Products TruView One-Step	1091	Medline hCG Combo Cassette	3428	Technologist Choice (serum/urine)
		2465	Medline hCG Urine Cassette	2814	Wampole UCG-Beta Slide Monoclonal
2098	Eiken	2466	Medline hCG Urine Dipstick	2559	Wampole UCG-Slide Test
3517	EKLA NOVAPLUS hCG Combo	3209	Meridian ImmunoCard STAT	3158	Wondfo One Step hCG Urine
3516	EKLA NOVAPLUS hCG urine	3043	NCS One Step	3159	Wondfo One Step hCG Urine/Serum
2860	Formosa One Sure Pregnancy Kit	1288	NDC Pro Advantage Urine/Serum Cassette	1761	YD Diagnostics Preg-Q
1586	Germaine Labs AimStep			0010	Other, specify on result form
1587	Germaine Labs AimStep Combo	1491	NDC Pro Advantage Urine Cassette		
1679	Germaine Labs AimStrip	1492	NDC Pro Advantage Urine Strip		

Occult Blood Manufacturer Master List

Deleted codes
None

New/Updated codes
None

3503	ABON FOB	3443	Consult Diagnostics	2385	MedTek Instaccult
2049	Aerscher Diagnostics HemaPrompt	3502	Coral/Tulip Hemospot	1625	Polymedco OC-Auto Micro 80
2092	Aerscher Diagnostics HemaPrompt FG	3501	Dipro Hemdetect	3357	Polymedco OC-Light/OC-Light S
		1347	Eiken OC-Sensor io	2951	Polymedco OC-Sensor Diana
3402	Alfresa Hemo Techt NS-Plus C	1348	Eiken OC-Sensor Pledia	3172	Propper Seracult/Seracult Plus
1111	Beckman Coulter Hemoccult ICT	3539	Enterix (Clinical Genomics) InSure FIT	3284	Quidel QuickVue iFOB
3173	Beckman Coulter Hemoccult/II/ SENSA	3170	Helena ColoScreen/ColoScreen-ES	1519	Sekisui OSOM iFOB
		3419	Hemosure iFOB	3247	Siemens Hema-Chek slide
3504	BioMerieux bioNexia	1806	Immunostics Hema Screen/Specific	3169	Siemens Hematest reagent tablet
1264	Cenogenics Corp.	3510	Jant Accutest	2664	Stanbio
3574	CerTest Biotec	3459	Hitachi Chemical DS HM-JACK series	3026	Starline ColoScan/ColoScan-ES
3497	Clarity	3171	Laboratory Diagnostics Quik-Cult	3099	Sure-Vue/Sure-Vue ES
2008	Clearview	2383	MedTek HemaSlide	0010	Other, specify on result form

Urinalysis and Specific Gravity Method Master List

Deleted codes
None

New/Updated codes
None

1733	77 Elektronika reagent strips	1238	Eiken Uropaper	1283	Pyrogallol Red
3367	ACON Mission Reagent Strips	2786	Erba Phan test strips	2533	Refractometer
3431	Analyticon CombiScreen/ CombiScreen Plus reagent strips	1400	Germaine Labs AimTab, 2 drop	3071	Roche Chemstrip LN
		1401	Germaine Labs AimTab, 5 drop	2937	Roche Chemstrip/Combur
1534	ARKRAY Aution Sticks	1313	Henry Schein Urispec test strips	2492	Roche cobas u Pack Cassette
2547	Bayer Acetest	1862	IRIS iChem Reagent Strips	1221	Roche Urisys Cassette
2544	Bayer Clinitest, 2 drop	3400	IRIS iChemVELOCITY Reagent Strips (800-7204)	2673	Siemens Clinitek Atlas Reagent
2543	Bayer Clinitest, 5 drop			1622	Siemens Clinitek Novus/Pro Cassette
2922	Biorex DIAZO-CHEK	3206	IRIS iChemVELOCITY Reagent Strips (800-7212)	2538	Siemens Ictotest
1798	Biorex K-Check			2936	Siemens Reagent Strips (All)
1626	BioSys/Consult Diag/PSS Select/YD Diag Reagent Strips	2831	IRIS vChem Reagent Strips	3427	SMC Direct RefuAH Reagent Strips
		1855	IRIS Mass Gravity Meter	1285	Sulfosalicylic acid
2574	BTNX Rapid Response Reagent Strips	1323	IRIStrips	2552	Sysmex Reagent Strips
		1114	Jant Accustrip URS 10 Reagent Strips	2534	Uriometer
1030	CTMI/Germaine Labs/Thermo Fisher Reagent Strips	1381	Jant Accutest URS 10 Reagent Strips	0010	Other, specify on result form
		3422	McKesson/Teco Reagent Strips		
3425	Diagnostic Test Group Clarity Urocheck Reagent Strips	2468	Medline Urinalysis Reagent Strips		
		1095	M-N (Macherey-Nagel) Medi-Test Uryxxon test strips		
2332	DIRUI H series reagent strips				
2333	DIRUI H-800 series reagent strips	2546	pH Meter		

Urinalysis and Specific Gravity Instrument Master List

Deleted codes
None

New/Updated codes
None

1935	77 Elektronika urine chemistry analyzers
3368	ACON Mission U120, U500
3579	Analyticon Urilyzer Series
1456	ARKRAY Aution Eleven AE-4022
2126	ARKRAY Aution Hybrid
2675	ARKRAY Aution JET
2676	ARKRAY Aution MAX
1569	ARKRAY/Thermo BioStar PocketChem UA
3444	BioSys/Consult Diag/PSS Select/ YD Diag Urine Analyzer
2573	BTNX Rapid Response series
3424	Diagnostic Test Group Clarity Urocheck 120
3538	DIRUI FUS systems
3498	DIRUI H-800
3371	Eiken US-1200/2100R/2200
3372	Eiken US-3100R/3100Rplus/3500
3179	Erba Laura series
1864	Germaine Labs AimStrip Urine Auto Analyzer
1062	Germaine Labs AimStrip/CTMI CT-120 Urine Analyzer
1019	Henry Schein Urispec Plus
1689	Jant Accustrip URS 10 Reader
3423	McKesson 107-101 UA
1096	M-N (Macherey-Nagel) Uryxxon series
1532	Rapimat
3241	Roche Chemstrip 101
1945	Roche Chemstrip Criterion, Criterion II
1171	Roche Chemstrip Mini UA
1365	Roche Chemstrip Super UA
2097	Roche Chemstrip Urine Analyzer
1790	Roche cobas u411, Urisys 1800
2490	Roche cobas u601
1789	Roche Urisys 1100
1821	Roche Urisys 2400
1579	Siemens Clinitek 10 or 100
1845	Siemens Clinitek 50
1580	Siemens Clinitek 200 or 200+
2292	Siemens Clinitek 500, Advantus
1578	Siemens Clinitek 2000
1465	Siemens Clinitek Atlas
2681	Siemens Clinitek Novus
2532	Siemens Clinitek Status
3426	SMC Direct RefuAH U120
1261	Super Aution Analyzer
2398	Sysmex UC-3500
2186	Sysmex UX-2000
2603	Teco Uritek TC-101
2044	Visual
0010	Other, specify on result form

CMP1 participants only

1860	IRIS iChem 100
3401	IRIS iChemVELOCITY
2044	Visual
0010	Other, specify on result form

Urine Sediment Master List

Important: Consult the current *Hematology and Clinical Microscopy Glossary,* which can be accessed at cap.org, for brief descriptions or definitions.
Note: Please read the history that accompanies the static images before making your selection.

240 Immature or abnormal cell, would refer for identification (Code 240 should be used **only** if you would routinely send the cell in question to an outside laboratory with another CLIA number.)

Note: If organisms are present, choose an identification that indicates their presence.

Cells

308 Erythrocyte
189 Erythrocyte, dysmorphic
183 Leukocyte (neutrophil, eosinophil, lymphocyte)
204 Monocyte/macrophage
112 Renal tubular epithelial (RTE) cell
145 Spermatozoa
113 Squamous epithelial cell
114 Transitional epithelial cell (urothelial cell)

Casts

190 Cellular cast (neutrophil and/or RTE)
115 Fatty cast
116 Granular cast
118 Hyaline cast (includes non-hemoglobin pigmented cast)
121 RBC/muddy brown cast
123 Waxy cast

Crystals

124 Ammonium biurate
137 Ammonium magnesium (triple) phosphate
126 Amorphous urate/phosphate
127 Ampicillin
167 Bilirubin
129 Calcium oxalate
131 Cholesterol
132 Cystine
155 Hippuric acid
133 Leucine
136 Sulfonamide
138 Tyrosine
139 Uric acid

Organisms

168 Bacteria
147 Protozoa, includes *Trichomonas*
309 Yeast/fungi

Miscellaneous/Exogenous

140 Fat droplet
141 Fiber (exogenous)/fecal contamination
142 Mucus strand
172 Pollen grain
188 Stain precipitate
146 Starch granule

CSF and Body Fluids Master List

Important: Consult the current *Hematology and Clinical Microscopy Glossary*, which can be accessed at cap.org, for brief descriptions or definitions.
Note: Please read the history that accompanies the whole slide images before making your selection.

339 Object type not evaluated, would refer
240 Immature or abnormal cell, would refer for identification (Code 240 should be used only if you would routinely send the cell in question to an outside laboratory with a different CLIA number.)

Note: If microorganisms or other intracellular inclusions are seen, choose an identification that indicates their presence.

Erythrocytes
109 Erythrocyte
110 Erythrocyte, nucleated

Lymphocytes and Plasma Cells
160 Lymphocyte
152 Lymphocyte, reactive
165 Lymphoma cell
120 Plasma cell, normal/abnormal

Granulocytes
135 Basophil, mast cell
159 Eosinophil, any stage
180 Neutrophil, immature (metamyelocyte, myelocyte, promyelocyte)
207 Neutrophil, segmented or band

Mononuclear Phagocytic Cells
212 Macrophage containing abundant uniform small lipid vacuoles/droplets (Lipophage)
213 Macrophage containing erythrocyte(s) (Erythrophage)
214 Macrophage containing hemosiderin (Siderophage)
215 Macrophage containing neutrophil(s) (Neutrophage)
204 Monocyte/macrophage
111 Neutrophil/macrophage containing crystal

Lining Cells
216 Bronchial lining cell
217 Endothelial cell/Capillary
219 Mesothelial cell
220 Synoviocyte (synovial lining cell)
221 Ventricular lining cell (ependymal or choroid cell)

Miscellaneous Cells
222 Blast cell
223 Chondrocyte (cartilage cell)
224 Degenerating cell, NOS
225 Germinal matrix cell
226 Lupus erythematosus (LE) cell
227 Malignant cell (non-hematopoietic)
228 Megakaryocyte
229 Neural tissue/neuron
113 Squamous epithelial cell

Crystals
130 Calcium pyrophosphate dihydrate (CPPD) crystal
131 Cholesterol crystal
166 Crystal, NOS
230 Hematin/hematoidin crystal
231 Monosodium urate (MSU) crystal

Microorganisms
234 *Anaplasma/Ehrlichia*
233 Bacteria - extracellular
205 Neutrophil/macrophage containing bacteria
206 Neutrophil/macrophage containing fungi
144 Parasite
246 *Pneumocystis jirovecii*
150 Yeast/fungi, extracellular

Miscellaneous Findings
140 Fat droplets
235 Mitotic figure
179 Parabasal cell, basal cell (vaginal fluid only)
188 Stain precipitate
146 Starch granule

NOS = Not otherwise specified

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COLLEGE of AMERICAN PATHOLOGISTS
Laboratory Quality Solutions

CM-A 2022

Urinalysis and Clinical Microscopy Survey

ATTESTATION

- As stated in the February 28, 1992 United States *Federal Register* under Subpart H 493-801 (b) (1), "the individual testing or examining the samples and the laboratory director must attest to the routine integration of the samples into the patient work load using the laboratory's routine methods." The laboratory director or designee and the testing personnel must **sign** this form.
- Please sign and retain this attestation page for your records and inspection purposes. Alternatively, you may print, sign, and retain a copy of the attestation page included with the online result form.
- If your laboratory requires additional space for signatures, copy this form as needed.

We, the undersigned, recognizing that some special handling may be required due to the nature of proficiency testing (PT) materials, have as closely as is practical, performed the analyses on these specimens in the same manner as regular patient specimens. We confirm that results were not shared or PT specimens referred or tested outside our CLIA identification number.

DIRECTOR (OR DESIGNEE) (signature required)

_____

_____

TESTING PERSONNEL (signature required)	TESTING PERSONNEL (signature required)	TESTING PERSONNEL (signature required)

Do not return to the CAP.