
CALCIUM

Specimen Requirements: 1.0 mL plasma (green or PST)

Reference Range: 8.6 - 10.2 mg/dL
Refer to Addendum #5 for additional reference ranges.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 82310

CALCIUM IONIZED

Specimen Requirements: Adult: 1 SST tube, centrifuge and **send unopened on ice. Unopened**, spun SST tube is stable 5 days at 2-8°C.

Infants: Requires special capillary tubes, available from St. Marys Laboratory Services.

Reference Range: Adult:
Actual 1.15 - 1.27 mmol/L
At pH 7.4 1.19 - 1.27 mmol/L
Infant/Pediatric (whole blood):
Actual 1.16 - 1.44 mmol/L
At pH 7.4 1.17 - 1.45 mmol/L

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 82330

CALCIUM URINE RANDOM

Specimen Requirements: 20 mL of random urine collected without preservatives, Refrigerate, during collection. Indicate random urine on requisition.

Reference Range: No reference range established.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 82340

CALCIUM URINE TIMED

Specimen Requirements: 20 mL aliquot of 24 hour urine collected without preservatives, refrigerate during collection. Record 24 hr. volume on requisition.

Reference Range: 100 - 300 mg/24 hrs.
(varies with intake)

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 82340

CANNABINOIDS SCREEN (THC)

Specimen Requirements: 2 mL urine
Reference Range: None Detected
Report Time: 24 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 80101

CARBAMAZEPINE

Specimen Requirements: 0.5 mL serum (red). **Do not use SST.**
Draw trough specimen immediately before next dose.
Reference Range: Therapeutic: 4.0 - 12.0 ug/mL
Report Time: 24 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 80156

CARBON DIOXIDE (CO₂)

Specimen Requirements: 1 mL plasma (green or PST).
Reference Range: 22 -31 mmol/L
Refer to Addendum #5 for additional reference ranges.
Report Time: 24 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 82374

CARBON MONOXIDE (Carboxyhemoglobin) (CO)

Specimen Requirements: One 3 mL green top tube, unopened and unspun. Unspun PST is also acceptable. **Deliver immediately on ice.**
Must be received within 4 hrs.
Reference Range:
Nonsmoker: < 1.6%
Smoker: 1.5 - 5.0%
Heavy Smoker: 5.1 - 9.0%
Report Time: 24 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 82375

CBC W DIFF (COMPLETE BLOOD COUNT)

Includes: WBC, RBC, Hemoglobin, Hematocrit, and Platelet, MCV, RDW and Differential in absolute

Specimen Requirements: 1 lavender top tube and 2 labeled # & % unstained blood smears. **Vacutainer must be 1/2 full. Fingerstick/Heelstick specimens require one EDTA microtainer and a peripheral smear.** See "Specimen Handling-Hematology Specimens".

Reference Range:	WBC	3.5 - 11.0 x 10 ³ /uL
	RBC	
	Male	4.3 – 6.2 x 10 ⁶ /uL
	Female	3.8 – 5.4 x 10 ⁶ /uL
	Hemoglobin	
	Male	13.5 - 18 g/dL
	Female	11.9 - 16 g/dL
	Hematocrit	
	Male	39 - 54%
	Female	35 - 47%
	MCV	80 - 100 fL
RDW	11.5 - 14.5%	
Platelet	150 - 450 x 10 ³ /UI	

<u>Differential Auto (%)</u>		<u>Differential Auto (Absolute)</u>	
Neutrophils	44 – 75%	Neutrophils	1.7 – 7.6 x 10 ³
Lymphocytes	17 - 45%	Lymphocytes	0.9 – 3.4 x 10 ³
Monocytes	4 - 13%	Monocytes	0.3 – 0.9 x 10 ³
Eosinophils	0 - 7%	Eosinophils	0.0 – 0.7 x 10 ³
Basophils	0 - 1%	Basophils	0.0 – 0.1 x 10 ³
Immature Grans	0 - 1%		

OR

Manual Differential

Neuts	44 - 75%
Lymphs	17 - 45%
Monos	4 - 13%
Eos	0 - 7%
Basos	0 - 1%
IGs	0 – 1%

Refer to Addendum #5 for additional reference ranges.

Report Time:	24 Hours
Day(s) Set Up:	Monday through Sunday
CPT Code(s):	CBC w Auto Diff 85025

CBC WITH NO DIFF

Includes: WBC, RBC, Hemoglobin, Hematocrit, Platelet, MCV and RDW

Specimen Requirements: 1 lavender tube (must be 1/2 full) or one EDTA microtainer and one unstained peripheral smear. See "Specimen Handling-Hematology Specimens".

Reference Range:	WBC	3.5 - 11.0 x 10 ³ /uL
	RBC	
	Male	4.3 – 6.2 x 10 ⁶ /uL
	Female	3.8 – 5.4 x 10 ⁶ /uL
	Hemoglobin	
	Male	13.5 - 18 g/dL
	Female	11.9 - 16 g/dL
	Hematocrit	
	Male	39 - 54%
	Female	35 - 47%
	MCV	80 - 100 fL
RDW	11.5 - 14.5%	
Platelet	150 - 450 x 10 ³ /uL	

Refer to Addendum #5 for additional reference ranges.

Report Time:	24 hours
Day(s) Set Up:	Monday through Sunday
CPT Code(s):	CBC without differential 85027

CEA

Specimen Requirements: Serum: 2 mL serum (red top) **Avoid hemolysis.**
Fluids: 2 mL fluid in red top tube **and** 2 mL serum (red top).

Reference Range: Non-smokers: < 3.1 ng/mL
Smokers: < 5.1 ng/mL

Report Time:	48 Hours
Day(s) Set Up:	Monday, Wednesday and Friday
CPT Code(s):	82378

CELL COUNT CSF

Only cell count will be performed. If differential is required, please order:
Cell Count with Differential, CSF.

Specimen Requirements: 2 mL unspun CSF in sterile tube. **Deliver within 6 hours.**

Reference Range: WBC: ≤ 5 uL
RBC: none

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 89050

CELL COUNT FLUID

Only cell count will be performed. If differential is required, please order:
Cell Count with Differential, Fluid.

Specimen Requirements: 2 -5 mL unspun fluid in Blue Top (Citrate) tube.
Deliver within 6 hours.
Types of fluids which may be sent:
Thoracentesis, Synovial, Pleural, Peritoneal, Pericardial, Vitreous,
Ascitic (paracentesis).

Reference Range: Varies by fluid type

Report Time: 48 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 89050

CELL COUNT WITH DIFFERENTIAL CSF

Cytospin differential will be performed and interpreted by a pathologist on all cell counts.
Submit a separate order for the Cytospin.

Specimen Requirements: 2 mL unspun CSF in sterile container. **Deliver within 6 hours.**

Reference Range: WBC: ≤ 5 uL
RBC: none
Differential Interpreted by Pathologist.

Report Time: 48-72 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 89051

CELL COUNT W DIFFERENTIAL FLUID

Cytospin differential will be performed and interpreted by a pathologist on all fluid except synovial fluids. Submit a separate order for the Cytospin.

Specimen Requirements:	2 -5 mL unspun fluid in Blue Top (Citrate) tube. Deliver within 6 hours. Types of fluids which may be sent: Thoracentesis, Synovial, Pleural, Peritoneal, Pericardial, Vitreous, Ascitic (paracentesis).
Reference Range:	Varies by fluid type. Interpreted by Pathologist
Report Time:	48 Hours
Day(s) Set Up:	Monday through Sunday
CPT Code(s):	89051

CHLAMYDIA TRACHOMATIS BY PCR

For the detection of *Chlamydia trachomatis* (CT) by Roche Amplicor PCR nucleic acid amplification method in endocervical, urine, and male urethral specimens. For other sites refer to Culture, Chlamydia trachomatis.

Specimen Requirements:

Endocervix and male urethra:

Complete instructions, collection supplies, and required transporters included in each kit available from St. Marys Laboratory Services.

Urine:

Patient must not have urinated during the previous 2 hours. Collect **first void urine**, a minimum of 10 mL up to 50 mL in a sterile, leak proof container. Refrigerate until pickup.

Reference Range:	Not applicable
Report Time:	24 - 72 hours
Day(s) Set Up:	Monday through Friday
CPT Code(s):	Chlamydia by PCR 87491

CHLORIDE

Specimen Requirements:	1.0 mL plasma (green or PST). Avoid hemolysis.
Reference Range:	98 - 107 mmol/L
Report Time:	24 Hours
Day(s) Set Up:	Monday through Sunday
CPT Code(s):	82435

CHOLESTEROL

Specimen Requirements: 1.0 mL plasma (green or PST). **Fasting required.**

Reference Range: Desirable <200 mg/dL
Borderline High 200-240 mg/dL
High >240 mg/dL

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 82465

CK (CPK)

Specimen Requirements: 1.0 mL plasma (green or PST). **Avoid hemolysis.**

Reference Range: 15 - 170 U/L
Refer to Addendum #5 for additional reference ranges.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 82550

CK + CKMB

Specimen Requirements: 1.0 mL plasma (green or PST). **Avoid hemolysis.**
Refrigerate until analysis. Stable 2 days when centrifuged (PST)
or plasma separated and stored at 2-8⁰ C.

Note: Serum samples will not be accepted.

Reference Range: CK: 15 - 170 U/L
CK-MB relative index (RI): < 4.2 (Negative)

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): CKMB 82553
Total CK 82550

CLOSTRIDIUM DIFFICILE TOXIN

Specimen Requirements: 5-10 mL liquid or loose stool. Formed stools and rectal swabs unacceptable. **Refrigerate until pick up.**

Reference Range: Negative

Report Time: 1 - 3 days

Day(s) Set Up: Monday through Sunday

CPT Code(s): 87230

COCAINE SCREEN

Specimen Requirements: 2 mL urine
Reference Range: None Detected
Report Time: 24 hours
Day(s) Set Up: Monday through Sunday.
CPT Code(s): 80101

COLD AGGLUTININS TITER

Specimen Requirements: 0.5 mL serum (red or SST). **Immediately after drawing place tube in 37°C water bath for 1 hour to clot. Centrifuge and separate serum. Keep at room temperature; Refrigerate if stored longer than 24 hours.**

Reference Range: < 1:32
Report Time: 24-48 Hours
Day(s) Set Up: Monday through Friday
CPT Code(s): 86157

COMPLEMENT C3

Specimen Requirements: 1.0 mL serum (red or SST). **Refrigerate Immediately.** Redraw grossly lipemic specimens.

Reference Range: 79 - 152 mg/dL
Report Time: 1 -3 Days
Day(s) Set Up: Monday through Friday
CPT Code(s): 86160

COMPLEMENT C3 C4

Specimen Requirements: 1.0 mL serum (red or SST). **Refrigerate immediately.** Redraw grossly lipemic specimens.

Reference Range: C3 72 - 152 mg/dL
C4 16 - 38 mg/dL

Report Time: 1 - 3 Days
Day(s) Set Up: Monday through Friday
CPT Code(s): C3 86160
C4 86160

COMPLEMENT C4

Specimen Requirements: 1.0 mL serum (red or SST). **Refrigerate Immediately.**
Redraw grossly lipemic specimens.

Reference Range: 16 - 38 mg/dL

Report Time: 1 - 3 Days

Day(s) Set Up: Monday through Friday

CPT Code: 86160

COMPREHENSIVE METABOLIC PANEL

Includes: Glucose, BUN, Creatinine, Sodium, Potassium Chloride, Calcium, Total Protein, Albumin, AST, ALT, Alkaline Phosphatase, and Total Bilirubin, and Carbon Dioxide
Also includes GFR (estimated Glomerular Filtration Rate).

Specimen Requirements: 1.0 mL plasma (green or PST). Fasting preferred.
Avoid exposure to light. Avoid hemolysis.

Reference Range:	Glucose	70 – 99	mg/dL		
	BUN	9-20	mg/dL (M)	7 – 17	mg.dL (F)
	Creatinine	0.7 - 1.3	mg/dL (M)	0.5-1.0	mg/dL (F)
	Sodium	136 – 145	mmol/L		
	Potassium	3.5 - 5.1	mmol/L		
	Chloride	98 - 107	mmol/L		
	Calcium	8.6 -10.2	mg/dL		
	T. Protein	6.3 - 8.5	g/dL		
	Albumin	3.3 - 4.8	g/dL		
	ALT	21- 72	U/L (M)	9 - 52	U/L (F)
	AST	17- 59	U/L (M)	14 - 36	U/L (F)
	Alk. Phos.	38 -126	U/L		
	T. Bilirubin	0.2 -1.3	mg/dL		
	Carbon Dioxide	22 - 31	mmol/L		
	GFR	>60 ml /min / 1.73 m2		≥ 18 years	

Refer to Addendum #5 for additional reference ranges.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 80053

COOMBS DIRECT

If Positive, elution will be performed. An Antibody Identification may also be performed.

Specimen Requirements: 1 pink top tube.

Reference Range: Negative

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s):

Coombs Direct	86880
Antibody Elution, if needed	86860
Antibody I.D., if needed	86870
Rh typing, if needed	86901

CORTISOL

Specimen Requirements: 1 mL serum (SST or red). Freeze if stored longer than 48 hours. Indicate on requisition the time specimen was drawn.

Reference Range:

AM (fasting)	4.3 - 22.4 ug/dL
PM (after 1600)	3.1 - 16.7 ug/dL

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 82533

CORTISOL STIMULATION PANEL

Specimen Requirements: 1 mL serum (SST or red for each collection).
Write time of collection on each sample tube.

- 1) Draw baseline cortisol
- 2) Give 250 mcg ACTH (0.25 mg) IM
- 3) Draw serum cortisol at 30 and 60 minutes.

Reference Range:

Baseline (8AM)	4.3 - 22.4 ug/dL
30 Minutes	>18 ug/dL
60 Minutes	> 18 ug/dL

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s) 82533 X 3

CREATININE

Specimen Requirements:	1.0 mL plasma (green or PST)
Reference Range:	0.7 - 1.3 mg / dL (M) 0.5 – 1.0 mg / dL (F) Refer to Addendum #5 for additional reference ranges.
Report Time:	24 Hours
Day(s) Set Up:	Monday through Sunday
CPT Code(s):	82565

Also includes e GFR (estimated Glomerular filtration rate)

GFR Reference range >60 ml/min/1.73m² for adults ≥18 years

CREATININE CLEARANCE

Specimen Requirements:	1.0 mL heparinized plasma (green or PST) and 10 mL aliquot of 24 hr. urine collected without preservatives, refrigerate during collection . Record 24 hr. volume and the patient's height and weight on requisition.
Reference Range:	60 - 200 mL/Minute/m ²
Report Time:	24 Hours
Day(s) Set Up:	Monday through Sunday
CPT Code(s):	82575

CREATININE FLUID

Specimen Requirements:	3 mL fluid in green top or red top tube. Specimen cannot be analyzed if too viscous.
Reference Range:	No reference range established
Report Time:	24 Hours
Day(s) Set Up:	Monday through Sunday
CPT Code (s):	82570

CREATININE URINE RANDOM

Specimen Requirements:	10 mL random urine collected without preservatives
Reference Range:	No reference range established
Report Time:	24 Hours
Day(s) Set Up:	Monday through Sunday
CPT Code(s):	82570

CREATININE URINE TIMED

Specimen Requirements: 10 mL aliquot of 24 hour urine collected without preservatives, **refrigerate during collection.** Record 24 hr. volume on requisition.

Reference Range: Male: 1.0 - 1.9 g/24 hr.
Female: 0.8 - 1.7 g/24 hr.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 82570

C-REACTIVE PROTEIN HS (HIGH SENSITIVITY) (hsCRP)

This test can be used for both inflammation and cardiac risk assessment.

Specimen Requirements: 1.0 mL Serum (Red or SST). Refrigerate for up to 72 hours.
Freeze if stored longer than 72 hours.

Reference Range: < 7.4 mg/L (traditional use, for inflammatory process)

Cardiovascular Disease Risk Assessment:

< 1.0 mg/L low risk
1.0 - 3.0 mg/L moderate risk
> 3.0 mg/L high risk

If greater than 10.0 mg/L, repeat test when other sources of inflammation have been eliminated.

Report Time: 24-96 Hours

Day(s) Set Up: Monday through Friday

CPT Code(s): 86141

CRYPTOCOCCUS ANTIGEN

If Positive titer will be added.

Specimen Requirements: 0.5 mL CSF (specimen of choice) or 0.5 mL serum (red or SST)
Separate serum from barrier/clot with 2 hrs of collection

Reference Range: Negative

Report Time: 24 Hours

Day(s) Set Up: Monday through Friday

CPT Code(s): Screen 86403
Titer 86406

CRYSTAL IDENTIFICATION

Specimen Requirements: Use red top tube for bile duct fluid specimens; use **sodium** heparin green top or light blue (citrate) tube for synovial fluid specimens. Specimens too viscous can't be analyzed. **DO NOT** use EDTA, oxalate or lithium heparin.

Reference Range: No crystals present.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 89060

CULTURE AFB (ACID FAST BACTERIA)

Includes: AFB Smear and Culture and Organism ID, AFB if indicated.

Specimen Requirements: Place specimen in sterile, leak-proof container and keep refrigerated.

CSF and Other Normally Sterile Fluids: 10 mL recommended. 2 ml minimum required. AFB are unlikely to be recovered from CSF when cell count and chemistries are normal

Sputum: 2-5 mL first morning deep cough preferred. 2 or 3 specimens from different days recommended. One specimen per day accepted. Multiple samples collected same day will be pooled and tested as a single sample.

Urine: 20-50 mL first morning midstream specimen preferred. 2 or 3 specimens from different days recommended.

NOTE: There will be an additional organism identification charge whenever an acid fast bacilli is isolated by culture and an additional charge whenever susceptibilities are requested.

Reference Range: Not Applicable

Note: Most respiratory specimens require decontamination and Concentration prior to cultures (CPT 87015), tissues require homogenization prior to culture (CPT 87176), and appropriate charges will be assessed for specimen processing.

Report Time: AFB Smear – Within 24 hours of specimen receipt.
Negative result reported in 8 weeks.
Positive results will be phoned.

Day(s) Set Up: Monday through Sunday

CPT Code(s):

AFB Smear	87206
AFB Culture	87116
If indicated	
Organism ID, AFB	87143
Cult Concentrate	87015
Homogenize Tissue	87176

CULTURE ANAEROBIC WITH ROUTINE

Includes: Anaerobic, aerobic bacterial culture and organism ID if indicated.

Specimen Requirements: Specimen must be protected from air. Place aspirates or tissues in anaerobic transport tube. Anaerobic swabs are highly undesirable, but accepted. Hold at room temperature. Also refer to Culture Fluid (abdominal, pleural, synovial). **Deliver within 24 hours.** Anaerobic transporter is available from St. Marys Laboratory Services.

Reference Range: Not Applicable

Report Time: 1 - 6 Days

Day(s) Set Up: Monday through Sunday

CPT Code(s):

Culture Anaerobic:	87075
Culture Routine:	87070
The following charged for each organism if indicated:	
Organism ID Anaerobic	87076
Organism ID Aerobic	87077
Organism ID Aerobic GC	87143
Organism ID Anaerobic GC	87143
Sensitivity Anaerobic (each antibiotic)	87181
Sensitivity	87186
Smear Gram Stain	87205
Homogenize Tissue	87176

CULTURE BLOOD (Routine Bacterial)

Specimen Requirements: Obtain blood culture bottles and skin prep kits from St. Marys Laboratory Services. Store at room temperature. Disinfect the venipuncture site with CHG prep (2% chlorhexidine in 70% alcohol) using a back and forth friction scrub for 30 seconds. Allow to dry 30 seconds. Perform the venipuncture. Do not change the needle to inoculate bottles. Disinfect the bottle tops with alcohol.

Adults and older children: Test sensitivity is dependent on total volume drawn with two separate 20 ml cultures recommended. Inoculate the following bottles depending on the volume obtained:

10 - 20 mL: inoculate ½ to each
Plus Aerobic (gray cap/label)
Lytic Anaerobic (purple cap/label)
5 - 9 mL:
Plus Aerobic only (gray cap/label)
less than 5 mL:
Peds Plus only (pink cap/label)

Young pediatric and neonates: draw 1-5 ml. Inoculate the following bottles.

Routine Culture:
Peds Plus only (pink cap/label)
Aerobic & Anaerobic:

Minimum of 1 mL. Inoculate ½ to each bottle.
Peds Plus (pink cap/label, aerobic)
Peds Anaerobic (yellow cap/label)

Label each bottle with patient's name, date & time of collection. Incubate at 35-37°C if possible, or hold at room temperature until transport.

Reference Range: Not applicable.

Report Time: Positive results called upon detection. Negative results reported in 7 days.

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture Blood 87040
The following charged for each organism if indicated:
Organism ID Aerobic 87077
Sensitivity 87186
Organism ID Anaerobe GC 87143
Sensitivity Anaerobic 87181
Org ID yeast 87106

CULTURE BLOOD FUNGUS ISOLATOR

Provides enhanced recovery for *Candida (Torulopsis) glabrata*, *Histoplasma capsulatum*, filamentous molds, and possibly *Cryptococcus neoformans*. *Candida* species and most other yeasts are efficiently recovered utilizing routine bacterial blood cultures.

Specimen Requirements: Isolator 10 Microbial Tube. Collection kit with very specific instructions available from St. Marys Laboratory Service.

Hold at room temperature. The specimen must be received and processed within 16 hours.

Reference Range: Not applicable.

Report Time: Positive results called upon detection. Negative results reported after 3 weeks.

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture Blood Fungus Isolator 87103
The following charged for each organism if indicated:
Organism ID Yeast 87106
Organism ID Mold 87107

CULTURE BLOOD QUANTITATIVE BACTERIA

Provides quantitative results in colony forming units per mL for the evaluation of suspected central venous catheter related sepsis, but lacks the sensitivity of conventional blood cultures. Therefore, quantitative cultures are appropriate to order only after conventional peripheral blood cultures have first been collected.

Specimen Requirements: Isolator 1.5 Microbial Tube. Collection kit with very specific instructions available from St Marys Laboratory Services.

An order for a quantitative culture from a line consists of the initial 1.5 – 2.0 mL drawn from each line and/or port as specified on test order, and inoculated to 1.5 Isolator Tubes. Each Isolator tube submitted is a separate charge. Hold at room temperature. The specimen must be received and processed within 16 hours.

Reference Range: Results must be interpreted by an Infectious Disease physician.

Report Time: Positive results called upon detection. Final report for negative results reported after 6 days.

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture Blood 87040
The following charged for each organism if indicated:
Organism ID Aerobic 87077
Sensitivity 87186
Organism ID Yeast 87106

CULUTURE, BONE MARROW

Aspirate For Culture

1. If a single syringe is collected, aseptically inoculate the EDTA tube for hematology and cap the syringe.
2. If cultures are requested and the remaining syringe sample is to be further shared, the specimen should be handled first by Microbiology to prevent any contamination.
3. The physician needs to specify which particular cultures are requested, i.e. Bacterial, fungal, AFB, etc.
4. A minimum of 0.5 ml. Is recommended, with 3 to 5 more recommended for multiple culture requests.
5. Maintain at room temperature and promptly deliver to Microbiology

Report Time: 24 Hours

Day(s) Set Up: Monday through Friday

CPT Code(s): Printed on report.

CULTURE CHLAMYDIA TRACHOMATIS

Includes: isolation and identification of *Chlamydia trachomatis* by cell culture isolation and fluorescent monoclonal antibody staining.

Specimen Requirements: Cervical, conjunctival, NP, rectal, and urethral swabs, fluids and aspirates (epididymal, fallopian tube, semen, respiratory, etc.) and tissue are acceptable specimens. For children, separate specimens from the pharynx, rectum, and vagina (girls) are recommended.

Swab samples must be collected on a sterile rayon or dacron swab. DO NOT use wooden-shafted or calcium alginate-tipped swabs. Place all specimens in viral transport media immediately after collection and refrigerate. **Specimens must be received at St. Marys Laboratory Services within 30 hours of collection.**

See "Virus Specimen Collection" guidelines for collection instructions.

Note: Males should not urinate for 1 hour prior to collection of urethral swab. Excess mucus should be removed before collection of swab specimens.

Reference Range: Not applicable.

Report Time: 2 days

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture, Chlamydia Trachoma 87110
Culture, FA typing 87140

CULTURE CSF

Specimen Requirements: 1.0 mL minimum required. Tube #2 or higher preferred.
Deliver immediately. Do not refrigerate.

Reference Range: Not Applicable

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture CSF 87070
The following charged for each organism if indicated:
Smear Gram 87205
Organism ID non urine 87163
Sensitivity 87184

CULTURE FLUID: Abdominal, Pleural, Synovial (Bacterial)

Anaerobic or routine culture as specified on request.

Specimen Requirements: 1.0 mL minimum required. Anaerobic specimens must be protected from air. Place specimen in anaerobic transport tube or completely fill a sodium citrate (blue top) or lithium heparin (green top) tube. Hold at room temperature. **Deliver within 24 hours.** Anaerobic transporter is available from St. Marys Laboratory Services.

Reference Range: Not Applicable.

Report Time: 24 Hours.

Day(s) Set Up: Monday through Sunday.

CPT Code(s): 87070

CULTURE FUNGUS (except blood)

Specimen Requirements: CSF and Other Normally Sterile Fluids: 5 mL recommended. 2 mL minimum required. Place in sterile, leak-proof container. Refrigerate until pickup. Cryptococcal antigen is the test of choice. Fungal agents are unlikely to be recovered if CSF cell count and chemistries are normal.

Skin scrapings: Collect generous scrapings and place between 2 glass microscope slides. Tape slides together and place in protective container. Hold at room temperature.

Other specimens: Place in sterile, leak-proof container. Refrigerate until pickup.

Reference Range: Not Applicable

Report Time: 1 - 4 Weeks

Day(s) Set Up: Monday through Sunday

CPT Code(s): Hair/Skin/Nails: 87101
Other: 87102

The following charged for each organism if indicated:

Organism ID Yeast 87106

Organism ID Mold 87107

CULTURE GC (*Neisseria gonorrhoea*)

Also see "Neisseria gonorrhoea by PCR" and "STD PANEL" for PCR test method.

Specimen Requirements: Obtain sample with an aerobic culture collection swab/transporter device. Specimen must be kept moist and received within 24 hours of collection. DO NOT REFRIGERATE. Transport at room temperature.

Reference Range: Not applicable

Report Time: 1 - 3 Days

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture GC 87081
The following charged for each organism if indicated:
Organism ID Aerobic 87077

CULTURE ORGANISM IDENTIFICATION

Specimen Requirements: An actively growing, pure culture or suspected parasite.

Reference Range: Not Applicable

Report Time: Variable

Day(s) Set Up: Monday through Sunday

CPT Code(s): Bacteria, Anaerobic 87076
Bacteria, Anaerobic by GC 87143
Bacteria, Aerobic 87077
Bacteria, Aerobic by GC 87143
Bacteria, Strep Latex 87147
Yeast 87106
Mycobacteria (AFB) 87143
Mold 87107
Arthropod 87168
Parasite 87169

Subcultures or primary culture plates with a single organism present may be submitted for identification. The most appropriate charge and associated cpt code will be applied for each organism identified. Mixed cultures submitted that require isolation to obtain pure cultures will be charged for an additional routine and/or anaerobic culture, the same as if a primary specimen was submitted.

CULTURE MRSA (Methicillin resistant *Staphylococcus aureus*)

Axilla, groin, nares, urine and other superficial sites will be screened only for the presence of MRSA. Antibiotic susceptibilities will not be performed, except on specific request.

Specimen Requirements: Culture swab with transport media.
Hold at room temperature until pick-up.

Reference Range: Negative for MRSA

Report Time: 1 - 3 Days

Day(s) Set Up: Monday through Sunday

CPT Code: Culture MRSA 87081
The following charged for each organism if indicated:
Organism ID Aerobic 87077

CULTURE RESPIRATORY (Sputum, Bronchial Wash)

Specimen Requirements: Collect 1 mL or more of bronchial tree material in a sterile, leak-proof container. Sputa with >25 epithelial cells/lpf are unsatisfactory. Refrigerate until pick-up.

Reference Range: Not Applicable

Report Time: 1 - 2 Days

Day(s) Set Up: Monday through Sunday

CPT Code: Culture Respiratory 87070
The following charged for each organism if indicated:
Organism ID Aerobic 87077
Sensitivity 87186
Smear Gram Stain 87205

CULTURE ROUTINE (Aerobic, Miscellaneous)

Specimen Requirements: Place specimen in sterile, leak-proof container or transport media. Refrigerate until pickup.

Reference Range: Not Applicable

Report Time: Variable

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture Routine 87070
The following charged for each organism if indicated:
Organism ID Aerobic 87077
Organism ID Aerobic by GC 87143
Sensitivity 87186
Smear Gram Stain 87205

CULTURE STREP GROUP B

Specimens are examined for the presence of beta-hemolytic strep group B.

Specimen Requirements: Anorectal, vaginal, or combined vag/anorectal swab in transport media. Refrigerate until pickup.

Reference Range: Negative for group B beta-hemolytic strep.

Report Time: 1 - 2 Days

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture Strep Group B 87081
The following charged for each organism if indicated:
Organism ID aerobic 87077

CULTURE STOOL

Stool specimens are routinely cultured for *Salmonella*, *Shigella*, *Campylobacter* and *E. coli*: 0157. Requests for other organisms must be specified, i.e. *Yersinia*.

Specimen Requirements: A freshly passed, urine-free stool is the specimen of choice. Transport media is available from St. Marys Laboratory Services.

Use the spoon in the cap of the vial and add approximately one-third volume of stool to the volume of liquid in the vial. Sample any bloody or mucous portions of the stool. Cap the vial and gently shake to mix. Label vial with the patient's name, date and time of collection. Transport media should be held at room temperature and submitted within 4 days.

Reference Range: Not Applicable

Report Time: 1 - 3 Days

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture Sal/Shig 87045
Culture Stool Each Org. x2 87046
The following charged for each organism if indicated:
Organism ID Aerobic 87077
Sensitivity 87186

CULTURE THROAT

Specimens are examined for the presence of beta-hemolytic strep group A.

Specimen Requirements: Throat swab in transport media. Refrigerate until pickup.

Reference Range: Negative for group A beta-hemolytic strep.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture Throat 87060
The following charged for each organism if indicated:
Org ID Strep Latex 87147

CULTURE URINE

Specimen Requirements: Collect specimen in sterile, leak-proof container. Specify the method of urine collection: midstream, straight cath, indwelling cath, or infant bag. Refrigerate until pick-up.

Reference Range: Not Applicable

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture Urine 87086
The following charged for each organism if indicated:
Organism ID Aerobic 87077
Organism ID Presumptive 87088
Sensitivity 87186

CULTURE WOUND (Routine)

Specimen Requirements: Collect samples from superficial sites with an appropriate swab/transporter device. When available, aspirates or tissues are specimen of choice. Attention to skin decontamination is important. Specimens must be kept moist. Refrigerate until pick-up.

Reference Range: Not Applicable

Report Time: 1 - 4 Days

Day(s) Set Up: Monday through Sunday

CPT Code(s): Culture, routine 87070
The following charged for each organism if indicated.
Organism ID Aerobic 87077
Sensitivity 87186

CYTOGENETICS, CHROMOSOME BONE MARROW**Aspirate For Cytogenetics**

1. Approximately 0.5-2.0 ml of bone marrow aspirate is collected by the physician into a sterile syringe (supplied by the client). The sample is then inoculated into a sodium heparin vacutainer by client's lab personnel.
 2. Testing is performed Monday-Friday only at the Wisconsin State Lab of Hygiene.
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