

## AHRO Laboratories' Catalog of Tests G-K

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### Approvals

- Signature: Karen E Corson, Director, Laboratory signed on 10/7/2020, 10:22:51 AM
  - Signature: Alexandra Reichman, Physician signed on 10/8/2020, 9:53:33 AM
  - Signature: Karen E Corson, Director, Laboratory signed on 6/12/2022, 8:44:09 PM
  - Signature: Alexandra Reichman, Physician signed on 6/13/2022, 9:31:40 AM
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### Revision Insight

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#### Revision Note:

add sample requirements for OGTT[Owner changed from Jagdon, Mabtex C to Ferrusquia, Edgar by Merrill, Deborah on 01-FEB-2022]

[Added at review/expire: No change. ]

[Marked as Reviewed on 6/10/2022 by Edgar Ferrusquia: Next Review Date is 6/10/2024.]

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*Subject/Title:* **AHRO Laboratories Catalog of Tests G-K**

**Catalog Format:** Review the following alphabetical listing of our lab test catalog for each of our offered tests. Each page has at least the following elements:

- Test Name**
- Alternate Test Name**
- LIS/HIS Code**
- Storage/Transportation**
- Specimen Requirements**
- Optimal Volume**
- Minimal Volume**
- Post Testing Storage**
- Patient Preparation**
- Collection Instructions**
- Reference Ranges**
- Methodology**
- Additional Information**

## AHRO Laboratories Catalog of Tests G-K

Gentamicin	
Alternate Test Name	
HIS Code / LIS Code	Peak: GENTP Trough: GENTT Random: GENTR
Lab Tested At	AHRO
Transportation/Storage	6 weeks at 2 - 8 °C
Specimen Requirements	Heparinized Plasma or Serum Optimal Volume: 1 mL Minimal Volume: 0.25 mL
Patient Preparation	Draw levels at: Peak: 15 - 30 minutes post I.V. dose or 45 - 60 minutes post I.M. dose Trough: Immediately before the next dose
Reference Ranges	Peak: 4.0 - 10.0 µg/mL Trough: <2.0 µg/mL
Methodology	Homogeneous Enzyme Immunoassay (EMIT)
Additional Test Information	Note last dose time with requisition in the LIS

GGT	
Alternate Test Name	Gamma-Glutamyl Transferase
HIS Code / LIS Code	GGT
Where Performed	AHRO
Transportation/Storage	30 days at 2-8°C
Specimen Requirements	Serum Only
Optimal Volume	1 mL
Minimal Volume	0.25 mL
Patient Preparation	None
Reference Ranges	9 - 64 U/L
Methodology	Enzymatic Rate
Additional Test Information	

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Globulin	
Alternate Test Name	A:G Ratio, Albumin/Globulin
HIS Code / LIS Code	AGT
Where Performed	AHRO
Transportation/Storage	5 days at 2-8°C
Specimen Requirements	Heparinized Plasma or Serum
Optimal Volume	1 mL
Minimal Volume	0.25 mL
Patient Preparation	None
Reference Ranges	Globulin: 2.3 - 3.5 gm/dL A:G Ratio: 0.7 - 2.2 gm/dL
Methodology	A:G Ratio = Albumin / Globulin Globulin = Total Protein - Albumin
Additional Test Information	

Glucose (Blood or CSF or BF)	
Alternate Test Name	Sugar
HIS Code / LIS Code	Random: GLUCR Fasting: GLUCF 3 hour post prandial:GTTGLUC3 2 hour post dose/meal: GLUC2PP Post 50 gm dose: GLUC1HR50G CSF: CSFGLUC BF: BFGLUC
Where Performed	AHRO
Transportation/Storage	8 Hours at Room Temp / 3 days at 2-8°C
Specimen Requirements	Heparinized Plasma or Serum or CSF or OBF
Optimal Volume	1 mL
Minimal Volume	0.25 mL
Patient Preparation	None
Reference Ranges	Fasting Blood: 70 - 105 mg/dL CSF: 40 - 70 mg/dL BF: No Range
Methodology	Hexokinase
Additional Test Information	See following table as a guide for glucose

## ORDERS AND LAB PROTOCOLS FOR GLUCOSE

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Doctor's Orders	Patient Preparation or Instruction****	Lab Policy
Random Glucose GLUCR	None	
Fasting Glucose* GLUCF	Patient must be fasting at least 10 to 12 hours with only water (No juice, caffeine, food, etc). Note any meds patient is taking.	Sample should be centrifuged within 30 minutes after collection
1 hour PP or 1 hour glucose tolerance GTTGLUC1	If the doctor does not request Glucola dose, the lab will have the patient have a meal and come back in 1 hour after eating. (No Fasting Sample)	Patient can be non-fasting or fasting. Just note fasting status in LIS comment field. Sample should be centrifuged within 30 minutes after collection.
2 hour PP	Same as above but draw at 2 hours post dosing or meal. (No Fasting Sample)	Patient can be non-fasting or fasting. Just note fasting status in LIS comment field.
50 gm glucose GLUC1HR50G	If the doctor states "50 gm", the lab will give patient 50 grams of Glucola and draw blood 1 or 2 hours after dosing depending on the order. If no time stated for draw, the lab will draw 1 hour after the dose is given then state that in the test comment field in the LIS.. (No Fasting Sample)	Patient can be non-fasting or fasting. Just note fasting status in LIS comment field. Sample should be centrifuged within 30 minutes after collection
2 hour Glucose Tolerance Test for Non Pregnant GTT2	A fasting is drawn and the result is checked before dosing. 75 grams of glucola is then given. When the patient completes drinking the timing start for 1 and 2 hour draws	The lab must call if the fasting is $\geq 105$ mg/dL. Sample should be centrifuged within 30 minutes after collection
3 hour Glucose Tolerance for pregnant/OB patient* GTT3OB	A fasting is drawn and the result is checked before dosing. 100 grams of glucola is then given. When the patient completes drinking the timing starts for 1, 2, and 3-hour draws.	The lab must call if the fasting <u>is</u> $\geq 105$ mg/dL. Sample should be centrifuged within 30 minutes after collection
3 hour Glucose Tolerance*	A fasting is drawn and the result is checked before dosing. 75 grams of glucola is then	The lab must call if the fasting is $\geq 145$

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GTT3	given. When the patient completes drinking the timing starts for 1, 2, and 3 hour draws.	mg/dL for non-gestational patients. If the patient is a child under the age of 12 and/or if the patient is petite, dosing is based on weight (ask the CLS to calculate the dose.) Sample should be centrifuged within 30 minutes after collection
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\*Note 1: The patient must be fasting at least 10 to 12 hours with only water (no juice, caffeine, food, etc). Note any meds the patient is taking.

\*\*Note 2: If the patient complains of faintness/weakness, nausea, or is sweating profusely, lab staff reviews results and the physician is notified if results are critical. If the patient throws up the glucola, the testing is ended and the doctor is notified. The order may be credited depending on how early the testing was ended.

hCG, Qualitative (Serum or Urine)	
Alternate Test Name	Pregnancy Test
HIS Code / LIS Code	Serum: HCGQUAL IC Urine: U PREG IC
Where Performed	AHRO
Transportation/Storage	Serum or Urine: 48 hours at 2 - 8°C.
Specimen Requirements	Serum or Urine, Random
Optimal Volume	0.5 mL
Minimal Volume	0.5 mL
Patient Preparation	None
Reference Ranges	Negative for hCG (<25 mIU/mL)
Methodology	Monoclonal Antibody
Additional Test Information	

hCG, Quantitative	
Alternate Test Name	Beta HCG
HIS Code / LIS Code	HCGQNT
Where Performed	AHRO
Transportation/Storage	8 Hours at Room Temp / 48 hours at 2-8°C
Specimen Requirements	Serum
Optimal Volume	1 mL
Minimal Volume	0.25 mL

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Patient Preparation	None																				
Reference Ranges	<7.7 mIU/mL for non-pregnant patients or for gestational ages: (per chart below)																				
	<table border="1" style="width: 100%;"> <thead> <tr> <th></th> <th>Expected Total hCG</th> </tr> <tr> <th>Gestational Ages</th> <th>Values (mIU/mL)</th> </tr> </thead> <tbody> <tr> <td>0.2-1 week</td> <td>7.8 - 50</td> </tr> <tr> <td>1-2 weeks</td> <td>50-500</td> </tr> <tr> <td>2-3 weeks</td> <td>100-5,000</td> </tr> <tr> <td>3-4 weeks</td> <td>500-10,000</td> </tr> <tr> <td>4-5 weeks</td> <td>1,000-50,000</td> </tr> <tr> <td>5-6 weeks</td> <td>10,000-100,000</td> </tr> <tr> <td>6-8 weeks</td> <td>15,000-200,000</td> </tr> <tr> <td>2-3 months</td> <td>10,000-100,000</td> </tr> </tbody> </table>		Expected Total hCG	Gestational Ages	Values (mIU/mL)	0.2-1 week	7.8 - 50	1-2 weeks	50-500	2-3 weeks	100-5,000	3-4 weeks	500-10,000	4-5 weeks	1,000-50,000	5-6 weeks	10,000-100,000	6-8 weeks	15,000-200,000	2-3 months	10,000-100,000
	Expected Total hCG																				
Gestational Ages	Values (mIU/mL)																				
0.2-1 week	7.8 - 50																				
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5-6 weeks	10,000-100,000																				
6-8 weeks	15,000-200,000																				
2-3 months	10,000-100,000																				
Methodology	Two Step Immunoenzymatic “Sandwich” Assay																				
Additional Test Information																					

HDL Cholesterol	
Alternate Test Name	High Density Lipoprotein
HIS Code / LIS Code	HDL
Where Performed	AHRO
Transportation/Storage	14 Hours at Room Temp / 7 days at 2-8°C
Specimen Requirements	Heparinized Plasma or Serum
Optimal Volume	1 mL
Minimal Volume	0.25 mL
Patient Preparation	Patient should be fasting for 10 - 12 hours
Reference Ranges	>40 mg/dL
Methodology	Accelerator Selective Detergent
Additional Test Information	

Helicobacter pylori stool antigen	
Alternate Test Name	HPSA
HIS Code / LIS Code	1571, HPSA
Where Performed	Reference Lab
Transportation/Storage	Store and transport at 2-8°C. Maybe held up to 72 hours at 2-8°C prior to testing
Specimen Requirements	2 grams fresh stool in Sterile Screw Cap Container
Instructions	Collect stool in sterile leak-proof container without media or preservative
Patient Preparation	

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Reference Ranges	Helicobacter pylori antigen not detected
Methodology	Enzyme Immunoassay
Additional Test Information	Processed daily

Hemoglobin A1c	
Alternate Test Name	Glycohemoglobin
HIS Code / LIS Code	A1CHPLC
Where Performed	AHRO
Transportation/Storage	24 Hours in Room Temps / 14 days at 2 - 8 °C
Specimen Requirements	EDTA Whole Blood
Optimal Volume	1 mL
Minimal Volume	10 µL
Patient Preparation	None
Reference Ranges	4.2 – 5.8%
Methodology	High Performance Liquid Chromatography (HPLC)
Additional Test Information	Run daily Sunday to Friday.

Hemogram, Hemoglobin, Hematocrit, Fluid Hematocrit	
Alternate Test Name	ABC, Hemoglobin, Hematocrit, H & H
HIS Code / LIS Code	Hemogram w/o platelets - 1140 Hemoglobin – 1128 Hematocrit – 1098 Hemogram - 1392 Fluid Hematocrit -1062 Hemoglobin - HGB Hematocrit - HCT Hemogram – ABC Fluid Hematocrit - FHCT
Where Performed	AHRO
Transportation/Storage	Performed at laboratory where specimen is collected.
Specimen Requirements	EDTA whole blood, fluid in EDTA tube
Optimal Volume	2.0 EDTA
Minimal Volume	0.25 ml EDTA Microtainer
Storage	
Patient Preparation	none
Reference Ranges	Hgb: 14 - 18 (male) 12 - 16 (female) HCT: 42 - 52 (male) 37 - 47 (female)
Methodology	Automated Instrumentation
Additional Test Information	



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HEPARIN ASSAY	
Alternate Test Name	ANTI-Xa ASSAY
HIS Code / LIS Code	29874,UNFRACT HEPARIN ANTI XA
Transportation/Storage	Centrifuge within one hour after collection. Run as soon as received in hematology.
Where Performed	RMH
Specimen Requirements	Plasma from a 3.2% Sodium citrate tube is the required specimen. Test - must be performed within two hours if the patient is on heparin therapy. Tube must be correctly filled, ratio of anticoagulant to blood is critical. A discard tube or discard syringe, if from a line, must be drawn before citrate tube to ensure quality of sample
Optimal Volume	Citrated blood 9:1 (blood to anticoagulant) 3.2% sodium citrate. Follow CLSI guidelines H3-A6 and H21-A5, or latest revision.
Minimal Volume	Citrated blood 9:1 (blood to anticoagulant) 3.2% sodium citrate. Follow CLSI guidelines H3-A6 and H21-A5, or latest revision.
Storage	Stat Spin for 3 minutes. Perform centrifugation within 1 hour after the sample collection if the blood was collected in a conventional citrate anticoagulant. Plasma storage: Citrate tubes:2 hours for @ 20 ± 5 °C
Patient Preparation	No Patient Preparation needed.
Patient Instructions	The patient should dip the sampling bottle transfer wand into the stool for collection and place it back into the sampling bottle. Specimens must be collected in a sample vial within 4 hours of defecation. Do not collect samples during, or until three days after your menstrual period, or while you have bleeding hemorrhoids or blood in your urine. Remove toilet bowl cleaners from toilet tank and flush twice before proceeding.
Reference Ranges	0.30-0.70 IU/ml
Methodology	Quantitative determination of the plasma levels of unfractionated heparin (UFH) by the measurement of their anti-Xa activity in a competitive system using a synthetic chromogenic substrate.
Additional Test Information	This test is frequently used to monitor heparin therapy. Under those conditions the timing of the blood draw in relation to the administration of the heparin is critical
Special Requirements for Coagulation Testing Specimens	See separate procedure for special instructions for collection of coagulation

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Influenza A and B by PCR	
Alternate Test Name	Rapid Flu A and B
HIS Code / LIS Code	INFABPCR
Where Performed	AHRO
Transportation/Storage	Refrigerated 2° to 8° C. Specimen must be transported refrigerated
Specimen Requirements	Use: Xpert nasopharyngeal sample collection kit with viral transport medium
Storage	May be stored 2° to 8° C up to 7 days
Patient Preparation	Refer to the collection of microbiology samples.
Reference Ranges	Influenza A and B not detected
Methodology	Enzyme immunoassay
Additional Test Information	Processed ASAP 7 days a week, all shifts

Ionized Calcium	
Alternate Test Name	I-Ca <sup>++</sup>
HIS Code / LIS Code	CA ION WB
Where Performed	AHRO
Transportation/Storage	24 hours at 2-8°C
Specimen Requirements	Heparinized Plasma; Whole Blood Sample (Blood Gas Syringe)
Optimal Volume	1 mL
Minimal Volume	0.25 mL
Patient Preparation	None
Reference Ranges	1.12 – 1.32 mmol/L
Methodology	Ion Selective Electrode
Additional Test Information	

Iron	
Alternate Test Name	Fe
HIS Code / LIS Code	IRON
Where Performed	AHRO
Transportation/Storage	4 days at Room Temp / 7 Days at 2 – 8 °C
Specimen Requirements	Heparinized Plasma or Serum
Optimal Volume	1 mL
Minimal Volume	0.25 mL
Patient Preparation	None
Reference Ranges	Male: 45 - 182 µg/dL

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	Female: 28 - 170 µg/dL
Methodology	Ferrozine Iron Complex
Additional Test Information	

Ketones (Blood)	
Alternate Test Name	Acetone, Qualitative
HIS Code / LIS Code	1008/ACET
Where Performed	RMH
Transportation/Storage	1 hour at 18 - 25°C
Specimen Requirements	Heparinized Plasma or Serum preferred Heparinized Whole Blood acceptable
Optimal Volume	1.0 mL
Minimal Volume	0.5 mL
Patient Preparation	None
Reference Ranges	Negative for Acetoacetic acid or Acetone
Methodology	Nitroprusside
Additional Test Information	

Kleihauer Betke Stain	
Alternate Test Name	Fetal Hemoglobin Elution Method
HIS Code / LIS Code	Kleihauer Betke QNT/ KBFetBldQNT
Where Performed	AHRO
Transportation/Storage	Samples should be ran as soon as possible, samples should be stored at 2-8°C until assayed.
Specimen Requirements	Blood - maternal blood collected in an EDTA tube Amniotic fluid may be used. Specimens may need to be spun down and the cells washed with saline prior to assay.
Optimal Volume	4 mL EDTA tube of maternal blood
Minimal Volume	1 mL EDTA tube of maternal blood or amniotic fluid
Storage	
Patient Preparation	None

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Reference Ranges	<1 % adults 64-95% newborns 5% 6 months
Methodology	Kleihauer Betke Stain
Additional Test Information	In adults with "hereditary persistence of fetal hemoglobin" the hemoglobin F is 26% of the total cells. Red blood cells in adults with this hemoglobin and other hemoglobin abnormalities will stain with varying degrees of intensity.