

**Addendum 1
VIROLOGY PANELS**

Test name	Test Diagnostic Techniques Included
<p>The general virus culture is a conventional cell culture suitable for all specimen types, but is not recommended for isolation of RSV, CMV or VZV⁴. General virus culture does not include any form of rapid testing.</p>	
VIRUS CULTURE GENERAL	Broad spectrum cell culture capable of isolating respiratory viruses ¹ , enteroviruses, adenoviruses, measles, mumps, HSV, and high titer CMV and VZV ⁴ .
TAT: CULTURE:	Preliminary result at 5 days, negatives finalized at 14 days.
<p>The following test panel is specific for Herpes simplex virus. The culture will isolate other viruses; however it is not all-encompassing. If viruses other than HSV are suspected, a general virus culture would provide the most complete diagnosis.</p>	
VIRAL CULTURE HERPES SIMPLEX	Herpes simplex-specific cell culture.
TAT: CULTURE:	Preliminary negative result at 2 days, and finalized at 5 days.
<p>The following test panels are optimized to isolate influenza and RSV includes rapid techniques to reduce turnaround time, and a general virus culture as described above.</p>	
VIRAL CULTURE INFLUENZA RAPID	Direct smear and shell vial culture ³ specific for Influenza A and B and a general virus culture.
VIRAL CULTURE RSV RAPID	Direct smear and shell vial culture specific for RSV, and a general virus culture.
TAT: DIRECT SMEAR⁵:	RSV Rapid - 2 hrs after specimen enters laboratory.
	Influenza Rapid -2 hrs after specimen enters laboratory.
	RSV Rapid - 1 to 2 days.
	Influenza Rapid - 1 to 2 days.
	Negatives finalized at 10 days.
<p>The following panels are designed to optimize CMV and VZV⁴ isolation. Included are a rapid shell vial culture and a general virus culture held for 21 days. Ordering a general virus culture for either CMV or VZV may result in a false negative culture result due to the fastidious nature of these viruses.</p>	
VIRAL CULTURE CMV PANEL	Shell vial culture for CMV and a general virus culture held for 21 days.
VIRAL CULTURE VARICELLA ZOSTER⁴	Direct smear and shell vial culture specific for VZV, and a general virus culture held for 21 days.
TAT: DIRECT SMEAR⁵:	VZV - 2 hrs after specimen enters laboratory.
	2-5 days
	Negatives finalized at 21 days.

¹Respiratory viruses include Influenza A and B, Parainfluenza 1, 2, and 3, RSV, and Adenovirus.

²The direct smear includes either a direct or indirect fluorescent antibody staining of the patient specimen prior to culturing.

³The shell vial is a centrifugation-enhanced culture method which utilizes virus-specific monoclonal antibodies to detect virus prior to development of cytopathic effect.

⁴VZV (Varicella-Zoster virus) is synonymous to Herpes Zoster, Chicken Pox, and shingles.

⁵Direct smear availability limited. Please see specific test listing in technical manual for actual times performed.

Addendum 2

SPECIMEN OF CHOICE BY CLINICAL PRESENTATION

Clinical Presentation	Specimen of Choice	Other Specimens	Suspected Viral Agents
Bronchitis Bronchiolitis	Nasopharyngeal (NP) swab and aspirate	Bronchoalveolar lavage	RSV, Parainfluenza, Influenza, Adenovirus, Measles
Colds, Upper Respiratory Tract Infections	NP swab and aspirate	NP swab and throat swab	Rhinovirus, RSV, Parainfluenza, Adenovirus, Influenza
Croup	NP swab and aspirate	NP swab and throat swab	Parainfluenza, RSV, Influenza, Adenovirus
Exanthems	Vesicle swab and/or fluid		HSV, VZV, Adenovirus, Enterovirus, CMV
Gastroenteritis	Stool	Rectal swab	Rotavirus, Adenovirus, Enterovirus
Influenza syndrome	NP and throat swab		Influenza
Meningitis	Cerebrospinal fluid (CSF)	Throat swab or stool	Enterovirus, HSV, Mumps, Adenovirus
Pharyngitis	NP swab and aspirate; NP swab and throat swab		Rhinovirus, Adenovirus, Influenza, Parainfluenza, HSV
Pneumonia or Lower Respiratory Tract Infection	NP swab and aspirate	BAL; or NP swab and throat swab	RSV, Influenza, Parainfluenza, Adenovirus, Enterovirus

Table derived from Manual of Clinical Virology Chapter 5, Table 1 (p.23)

References

Wiedbrauk, Danny L., and Sheryl L. G. Johnston. 1993. *Manual of clinical Virology. "Specimen Collection and Processing"*. Raven Press. New York, NY.

Addendum 3

SPECIMEN OF CHOICE BY VIRAL AGENT

Virus	Specimen of Choice	Time of Collection	Appropriate Test Order
Adenovirus	Throat and NP swab/wash, rectal swab/stool, urine	During symptomatic disease.	Viral Culture General
Cytomegalovirus	Urine, throat swab/wash, blood, BAL	During symptomatic disease.	Viral Culture CMV
Enterovirus ¹	Throat swab, stool/rectal swab, CSF	First week of symptoms.	Viral Culture General
Herpes Simplex Virus	Vesicle/lesion swab, throat/mouth swab, urogenital swab	First 3 days of lesion.	Viral Culture Herpes Simplex
Influenza ²	Throat and NP swab/wash	First 3 days of symptoms.	Viral Culture Influenza Rapid
Measles	Throat or NP swab, urine blood	First 2 days of symptoms.	Viral Culture General
Mumps	Saliva, throat swab, urine	First 7 days of symptoms.	Viral Culture General
Parainfluenza	Throat and NP swab/wash	First 3 days of symptoms.	Viral Culture General
Respiratory Syncytial Virus	NP swab and aspirate	First 3 days of symptoms.	Viral Culture RSV Rapid
Rhinovirus	Nasal wash/swab (Not Nasopharyngeal)	First 2 days of symptoms.	Viral Culture General
Rubella	Throat swab, rectal swab/stool, urine	First 4 days of symptoms.	Viral Culture General
Varicella-Zoster	Vesicle fluid/swab, lesion swab	First 2 days of symptoms.	Viral Culture Varicella Zoster

¹ For optimal enterovirus isolation, a throat and rectal swab should be submitted. For suspected encephalitis or meningitis, CSF and either a throat or rectal swab should be submitted.

² For optimal influenza isolation, a throat and NP swab should be collected, and the 2 swabs placed together in viral transport media.

References

Wiedbrauk, Danny L., and Sheryl L. G. Johnston. 1993. Manual of clinical Virology. "Specimen Collection and Processing". Raven Press. New York, NY.

Addendum 4

VIRUS SPECIMEN COLLECTION AND HANDLING GUIDELINES

General Specimen Requirements

1. Specimens must be labeled with patient's name and specimen type.
2. Use sterile, leak-proof containers for specimen collection.
3. Collect swab specimens with a cotton, rayon, or Dacron plastic-shafted swab. Culturettes are acceptable. **Calcium alginate swabs or wood shafts are unacceptable.**
4. Collect blood and bone marrows in EDTA anticoagulant. **Clotted specimens are unacceptable.**
5. Refrigerate all specimens except blood. Hold blood at room temperature. **Any specimen frozen at -20°C is unacceptable for virus culture.**

Specimen Requirements, Collection and Handling Protocols

BLOOD

Collect blood in EDTA anticoagulant. 5 mL blood is required for adults and 3 mL for children. **Hold specimen at room temperature.** Blood must be received at St. Marys within 24 hours of collection.

BODY FLUIDS (CSF, PLEURAL FLUIDS, PERICARDIAL FLUIDS, ETC.)

Collect specimen in sterile container. 2.0 mL or more of fluid is optimal. 1.5 mL is the minimum volume that will be accepted. **Refrigerate. Do not add viral transport media.**

BONE MARROW

Collect specimen in EDTA anticoagulant. A minimum of 2.0 mL is required. **Refrigerate.**

BRONCHOALVEOLAR LAVAGE (BAL) OR BRONCHIAL WASH

5-6 mL of BAL or 8-10 mL of bronch wash is optimal. 2 ml of either is the minimum volume accepted. **Refrigerate.**

VIRUS SPECIMEN COLLECTION AND HANDLING GUIDELINES

CERVICAL SPECIMENS

Use a vaginal speculum to facilitate specimen collection. With a sterile swab remove mucus from the endocervix and discard. With a second sterile swab carefully sample the exocervical surface and endocervical canal. Rotate the swab to ensure collection of cervical columnar epithelial cells. Use caution when removing the swab to avoid contamination with vaginal flora. **Place swab in a tube of viral transport media and refrigerate.**

EYE (CONJUNCTIVA)

Gently pull the lower eyelid downward. Using a swab moistened with sterile saline, swab the lower conjunctiva to collect both fluid and cells. If culturing both eyes, use a separate, sterile swab for each. If eye scrapings are required, they should be collected only by a trained physician or ophthalmologist. **Place swab(s) in a tube of viral transport media and refrigerate.**

LESION (SKIN OR MUCOSAL)

Avoid collecting specimens from ulcerative or crusted lesions. Do not clean area with alcohol or iodine prior to specimen collection. Moisten a swab with sterile saline and rub it over the base of the lesion to collect infected epithelial cells. Collect any fluid that is present in the lesion on the same swab. **Place swab in a tube of viral transport media and refrigerate.**

NASOPHARYNGEAL (NP) ASPIRATE

Both an NP swab and aspirate is optimal. Suction and discard any purulent nasal discharge. A saline rinse may be helpful. First collect the NP swab (see NP swab instructions) to dislodge epithelial cells and then the aspirate. Clip the needle off a 19 ga. butterfly or use a French feeding tube (no. 5 or 8) with a 5 mL syringe and pull up 1-2 mL of sterile saline. From the tip of the tubing, measure the distance from the patient's nostril to their ear and mark with thumb and forefinger on the tubing, then insert to the NP via the nares until the thumb and forefinger touch the patient's nose. Instill and then vigorously aspirate back the fluid.

Place the aspirate and swab together into one tube of viral transport media (VTM). It may be helpful to pull some VTM up into the syringe through the tubing, and then express the sample back into the VTM tube. **Refrigerate immediately. Recommend transporting RSV specimens on ice.**

VIRUS SPECIMEN COLLECTION AND HANDLING GUIDELINES

NASOPHARYNGEAL SWAB

Use a mini tip aluminum-shafted NP swab to collect the specimen (calcium alginate swabs are not acceptable). Suction and discard any nasal discharge. Approximate the distance from the patient's nostril to ear which indicates how far it is necessary to insert the NP swab to reach the posterior pharynx. Via the nares, insert the swab forward with gentle downward pressure on the lower nasal floor to the posterior wall of the nasopharynx. Gently rotate the swab back and forth slightly to the left and then to the right for a few seconds. Hold the swab in place for a few more seconds to become fully saturated and then withdraw. **Place the swab in viral transport media and immediately refrigerate. Recommend transporting RSV specimens on ice.**

RECTAL SWAB

Insert a dry swab at least 5 cm into the rectum. Rotate swab and carefully withdraw. The swab should contain fecal material. **Place swab in a tube of viral transport media and refrigerate.**

SALIVA

Rub a sterile dry swab near the Stenson's ducts and then over the anterior floor of the mouth. **Place swab in a tube of viral transport media and refrigerate.**

SEMEN

Collect in a sterile container. A minimum of 1.0 mL of semen is required. **Place specimen in a tube of viral transport media and refrigerate.**

SPUTUM

Collect specimen in a sterile container. **Transfer a pea-sized portion (0.5-1.0 mL) to a tube of viral transport media using a sterile swab, transfer pipet, or disposable loop and refrigerate.**

STOOL

Adult: Collect 10-30 grams (walnut-sized portion) of stool in a clean, sealable container. **Do not add any preservatives.**

Pediatric: Scrape stool from diaper immediately after child's bowel movement. A minimum of 1 gram or 1 mL is required. Place in a clean, sealable container. **Do not add preservatives.**

NOTE: Absorbent paper diapers will quickly soak up liquid stools and bind any virus present. To avoid this problem either place a piece of plastic in the diaper to collect the stool or apply the diaper to the child with the outer plastic cover next to the child's skin. **Refrigerate. Do not add viral transport media.**

VIRUS SPECIMEN COLLECTION AND HANDLING GUIDELINES

THROAT SWAB

Moisten a swab with sterile saline and vigorously rub it across the tonsils and posterior pharynx. **Place swab in a tube of viral transport media and refrigerate.**

THROAT WASH

Rinse mouth and throat with drinking water to remove all mucus and nasal secretions. Discard water rinse, then gargle with 2-3 mL of sterile saline for 30-60 seconds and expectorate wash into a sterile collection cup. **Refrigerate. Do not add viral transport media.**

TISSUE

Collect tissue aseptically. Collect autopsy specimens within 24 hrs of time of death. **Place tissue in tube of viral transport media and refrigerate.**

URETHRAL SWAB

Insert a fine, aluminum-shafted swab 2-4 cm into the urethra and carefully rotate 3 times. **Place swab in a tube of viral transport media and refrigerate.**

URINE

Collect clean catch, early morning urine in a sterile container. **Refrigerate.** Do not add viral transport media.

VESICLE FLUID

Obtain fluid from a vesicle containing clear fluid. Do not clean area with alcohol or iodine prior to collection. Aseptically unroof the vesicle and blot the fluid with a sterile swab. Gently rub the base of the vesicle to collect infected epithelial cells. Avoid contaminating the specimen with blood, as red blood cells may interfere with viral isolation. **Place swab in a tube of viral transport media and refrigerate.**

References:

Isenberg, Henry D. 1992. Clinical Microbiology Procedures Handbook Vol.2. "Selection, Collection, and Transport of Specimens for Viral and Rickettsial Cultures". American Society for Microbiology. Washington, D.C.

Wiedbrauk, Danny L., and Sheryl L. G. Johnston. 1993. Manual of clinical Virology. "Specimen Collection and Processing". Raven Press. New York, NY.

Addendum 4

VIRUS SPECIMEN COLLECTION AND HANDLING GUIDELINES

CROSS REFERENCE

CMV CULTURE	= VIRAL CULTURE CMV
CYTOMAGALOVIRUS CULTURE	= VIRAL CULTURE CMV
GENERAL VIRUS CULTURE	= VIRAL CULTURE GENERAL
ADENOVIRUS CULTURE	= VIRAL CULTURE GENERAL
COXSACKIEVIRUS CULTURE	= VIRAL CULTURE GENERAL
ECHOVIRUS CULTURE	= VIRAL CULTURE GENERAL
ENTEROVIRUS CULTURE	= VIRAL CULTURE GENERAL
MEASLES VIRUS CULTURE	= VIRAL CULTURE GENERAL
MUMPS VIRUS CULTURE	= VIRAL CULTURE GENERAL
POLIO VIRUS CULTURE	= VIRAL CULTURE GENERAL
RHINOVIRUS CULTURE	= VIRAL CULTURE GENERAL
PARAINFLUENZA CULTURE	= VIRAL CULTURE GENERAL
HSV CULTURE	= VIRAL CULTURE HERPES SIMPLEX
HERPES SIMPLEX VIRUS CULTURE	= VIRAL CULTURE HERPES SIMPLEX
GENITAL HERPES	= VIRAL CULTURE HERPES SIMPLEX
INFLUENZA RAPID	= VIRAL CULTURE INFLUENZA RAPID
INFLUENZA A CULTURE	= VIRAL CULTURE INFLUENZA RAPID
INFLUENZA B CULTURE	= VIRAL CULTURE INFLUENZA RAPID
RSV RAPID	= VIRAL CULTURE RSV RAPID
RESPIRATORY SYNCYTIAL VIRUS CULTURE	= VIRAL CULTURE RSV RAPID
ROTAVIRUS	= ROTAVIRUS AG
VZV CULTURE	= VIRAL CULTURE VARICELLA ZOSTER
VARICELLA ZOSTER VIRUS CULTURE	= VIRAL CULTURE VARICELLA ZOSTER
HERPES ZOSTER VIRUS CULTURE	= VIRAL CULTURE VARICELLA ZOSTER
CHICKENPOX CULTURE	= VIRAL CULTURE VARICELLA ZOSTER
SHINGLES CULTURE	= VIRAL CULTURE VARICELLA ZOSTER

Addendum 5
AGE SPECIFIC REFERENCE RANGES
FOR NEONATES, PEDIATRICS AND ADOLESCENTS

TEST	AGE	NORMAL VALUES
Albumin	0 - 5 days	2.6 - 3.6 g/dL
	6 days – 2years 364 days	3.4 - 4.2 g/dL
	3 years - 6 years	3.5 - 5.2 g/dL
	6 years 1 day - 19 years	3.7 - 5.6 g/dL
Alkaline Phosphatase	0 - 5 days	110 - 300 U/L
	6 days – 2 years 364 days	145 – 320 U/L
	3 years – 6 years	150 - 380 U/L
	6 years 1 day - 9 years	175 - 420 U/L
	9 years 1 day - 11 years (male)	135 - 530 U/L
	9 years 1 day - 11 years (female)	130 - 560 U/L
	11 years 1 day - 13 years (male)	200 - 495 U/L
	11 years 1 day - 13 years (female)	105 - 420 U/L
	13 years 1 day - 15 years (male)	130 - 525 U/L
	13 years 1 day - 15 years (female)	70 - 230 U/L
	15 years 1 day - 19 years (male)	65 - 260 U/L
15 years 1 day - 19 years (female)	50 - 130 U/L	
Amylase	0 - 19 years	30 - 100 U/L
Bilirubin, Total	0 - 28 days	1.0 - 10.5 mg/dl
	29days - 19 years	0.6 - 1.4 mg/dl
Calcium	0 – 5 days	7.9 - 10.7 mg/dL
	6 days – 2 years 364 days	8.7 - 9.8 mg/dL
	3 years – 9 years	8.8 - 10.1 mg/dL
	9 years 1 day – 11 years	8.9 - 10.1 mg/dL
	11 years 1 day – 13 years	8.8 - 10.6 mg/dL
	13 years 1 day – 15 years	9.2 - 10.7 mg/dL
	15 years 1 day – 19 years	8.9 - 10.7 mg/dL
Calcium, Ionized	Pediatric Actual	1.16 - 1.44 mmol/L
	At pH 7.4	1.17 – 1.45 mmol/L
CK	0 - 36 months	50 - 305 U/L
	37 months - 6 years	75 - 230 U/L
	6 - 9 years	60 - 365 U/L
	10 - 11 years (male)	55 - 215 U/L
	10 - 11 years (female)	80 - 230 U/L
	12 - 13 years (male)	60 - 330 U/L
	12 - 13 years (female)	50 - 295 U/L
	14 - 15 years (male)	60 - 335 U/L
	14 - 15 years (female)	50 - 240 U/L
	16 - 19 years (male)	55 - 370 U/L
	16 - 19 years (female)	45 - 230 U/L
C02	0 – 7 days	17 - 26 mmol/L
	8 days -30 days	17 - 27 mmol/L
	31 days – 182 days	17 - 29 mmol/L
	183 days – 364 days	18 - 29 mmol/L
	365 days – 4 years 364 days	22 – 31 mmol/L

Creatinine	0 – 7 days 8 days – 30 days 30 days – 364 days 1 year – 3 years 3 years – 5 years 6 years 1 day – 9 years 9 years 1 day – 13 years 13 years 1 day – 19 years	0.6 - 1.1 mg/mL 0.3 - 0.7 mg/mL 0.2 - 0.4 mg/mL 0.1 - 0.6 mg/dL 0.1 - 0.7 mg/dL 0.3 - 0.7 mg/dL 0.4 - 1.0 mg/dL 0.6 - 1.2 mg/dL
GGT	0 - 5 days 6 days - 36 months 37 months - 6 years 7 - 9 years 10 - 11 years (male) 10 - 11 years (female) 12 - 13 years (male) 12 - 13 years (female) 14 - 15 years (male) 14 - 15 years (female) 16 - 19 years (male) 16 - 19 years (female)	34 - 263 U/L 6 - 19 U/L 10 - 22 U/L 13 - 25 U/L 17 - 30 U/L 17 - 28 U/L 17 - 44 U/L 14 - 25 U/L 12 - 33 U/L 14 - 26 U/L 11 - 34 U/L 11 - 28 U/L
IgA	newborn 1 - 3 months 4 - 6 months 7 - 24 months 25 - 36 months 3 - 8 years 9 - 11 years	<1.0 mg/dL 6 - 58 mg/dL 10 - 96 mg/dL 36 - 165 mg/dL 41 - 150 mg/dL 62 - 214 mg/dL 82 - 226 mg/dL
IgG	newborn 1 - 3 months 4 - 6 months 7 - 24 months 25 - 36 months 3 - 8 years 9 - 11 years	750 - 1500 mg/dL 270 - 780 mg/dL 190 - 860 mg/dL 345 - 1130 mg/dL 510 - 1220 mg/dL 605 - 1393 mg/dL 780 - 1327 mg/dL
IgM	newborn 1 - 3 months 4 - 6 months 7 - 24 months 25 - 36 months 3 - 8 years 9 - 11 years	11 - 35 mg/dL 12 - 87 mg/dL 25 - 120 mg/dL 54 - 132 mg/dL 49 - 195 mg/dL 54 - 189 mg/dL 60 - 190 mg/dL
LDH	0 - 5 days 6 days - 36 months 37 months - 6 years 7 - 9 years 10 - 11 years (male) 10 - 11 years (female) 12 - 13 years (male) 12 - 13 years (female) 14 - 15 years (male) 14 - 15 years (female) 16 - 19 years (male/female)	934 - 2150 U/L 500 - 920 U/L 470 - 900 U/L 420 - 750 U/L 432 - 700 U/L 380 - 770 U/L 470 - 750 U/L 380 - 640 U/L 360 - 730 U/L 390 - 580 U/L 340 - 670 U/L

Phosphorus	0- 5 days	4.8 - 8.2 mg/dL
	6 days - 36 months	3.8 - 6.5 mg/dL
	37 months - 6 years	4.1 - 5.4 mg/dL
	7 - 11 years	3.7 - 5.6 mg/dL
	12 - 13 years	3.3 - 5.4 mg/dL
	14 - 15 years	2.9 - 5.4 mg/dL
	16 - 19 years	2.7 - 4.7 mg/dL
Protein Total	0-5 days	5.4 – 7.0 g/dL
	6 days to 2 years 364 days	5.9 – 7.0 g/dL
	3 years to 6 years	5.9 - 7.8 g/dL
	6 years 1 day to 9 years	6.2 - 8.1 g/dL
	9 years 1 day to 19 years	6.3 - 8.6 g/dL

Complete Blood Count

<u>Age</u>	<u>RBC</u> x10 ³ /mL	<u>Hgb</u> g/dL	<u>Hct</u> %	<u>MCV</u> fL	<u>MCH</u> pg
0 – 30 Days	4.1 - 6.7	15.0-24.0	44-70	102-115	33-39
31 Days - 1Yr 364Days	3.8 - 5.4	10.5-14.0	32-42	72-88	24-30
2 - 9 years	4.0 - 5.3	11.5-14.5	33-43	76-90	25-31
10 - 17 years (male)	4.2-5.6	12.5-16.1	36-47	78-95	26-32
10 - 17 years (Female)	4.1-5.3	12.0-15.0	35-45	78-95	26-32
	<u>MCHC</u> g/dL	<u>RDW</u> %	<u>PLT</u> x10 ³ /mL	<u>MPV</u> fL	<u>WBC</u> x10 ³ /mL
0 – 30 Days	32-36	13.0-18.0	150-450	6-9.5	9.1-34.0
31 Days - 1Yr 364Days	32-36	11.5-16.0	150-450	6-9.5	6.0-14.0
2 - 9 years	32-36	11.5-15.0	150-450	6-9.5	4.0-12.0
10 - 17years	32-36	11.5-14.0	150-450	6-9.5	4.0-10.5

Chemistry Test Panel Configuration

Federal Government Mandated Chemistry Panels (as of 03/01/2000)

Official Panel Name	Electrolytes	Basic Metabolic Panel	Renal Function Panel	Comprehensive Metabolic Panel	Hepatic Function Panel	Lipid Panel
Components	Sodium Potassium Chloride CO2	Sodium Potassium Chloride CO2 Glucose BUN Creatinine Calcium	Sodium Potassium Chloride CO2 Glucose BUN Creatinine Calcium Albumin Phosphorus	Sodium Potassium Chloride CO2 Glucose BUN Creatinine Calcium Albumin Total Protein Total Bilirubin Alk Phosphatase AST (SGOT) ALT (SGPT)*	Alk Phosphatase Bilirubin Direct Bilirubin Total Albumin AST (SGOT) ALT (SGPT) Protein Total*	Cholesterol Triglyceride HDL (Calc. LDL)
Alternative Abbreviation	Lytes	Basic Panel, BMP	Kidney Function Panel, KFP	Comp Panel, CMP	Liver Function Panel, LFT, LFP	Coronary Risk Panel
Replaced:	No change	Chem 7	New panel for 2000	Chem 13	No change	No change

Other Chemistry Panels Which Can Still Be Ordered

- **CK and CKMB if HIGH:** If total CK value is high, a CKMB is performed
- **Hepatitis A Profile:** HAV, HAV-IgM
- **Hepatitis B Panel:** HBsAg, HBsAb, HBcAb
- **Hepatitis Acute Screen:** HAV-IgM, HBsAg, HBcAb-IgM, HCV
- **Immunoglobulins:** IgA, IgG, IgM
- **Thyroid Screen:** TSH reflexed to free T4, if TSH is abnormal

PEDIATRIC PATIENTS - GLUCOSE BEVERAGE DOSE

APPROXIMATE WT. (lbs)	Kg	DOSAGE (oz.)
26	11.8	2.1
28	12.7	2.2
30	13.6	2.4
32	14.5	2.6
34	15.4	2.7
36	16.3	2.9
38	17.3	3.1
40	18.2	3.2
42	19.1	3.3
44	20	3.5
46	20.9	3.7
48	21.8	3.8
50	22.7	4
52	23.6	4.1
54	24.5	4.3
56	25.4	4.4
58	26.3	4.6
60	27.2	4.8
62	28.1	4.9
64	29.1	5.1
66	30	5.2
68	30.9	5.4
70	31.8	5.6
72	32.7	5.7
74	33.6	5.9
76	34.5	6
78	35.4	6.2
80	36.3	6.4
82	37.2	6.5
84	38.1	6.7
86	39	6.8
88	40	7
90	40.9	7.2
92	41.8	7.3
94 and above	42.7 and above	7.5

Using Fisherbrand Sun-Dex 100 Glucose Tolerance Test Beverage (100 gm glucose/10 oz)