

CRITICAL LINK



Specimen Collection: General Guidelines for Clinic Staff

A laboratory can contribute little to a patient's diagnosis unless clinic staff make proper specimen selection, collection, and management a priority. Therefore all medical, nursing, and support staff who deal with laboratory specimens in local health departments must understand the critical nature of ensuring specimen quality.

Staff at each specimen collection site should have routine access to needed information related to specimen selection, collection, acceptability, labeling, protection (integrity), and transportation. Each local health department should develop and maintain an up-to-date specimen management policy that details proper collection and handling of laboratory specimens for both adult and pediatric populations. Pediatric specimens often require special care due to the special character of the patient population and the special procedures often needed to obtain acceptable specimens.

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Thick & Thin Blood Films

Blood parasite infections, including babesiosis, Chagas Disease, leishmaniasis, and malaria, are becoming less rare in the United States due to increasing numbers of immigrants, overseas travel, and global climate change. This requires clinicians and laboratorians who possess and maintain skills to diagnose the infections and identify the parasites.

Microscopic evaluation involving the preparation and examination of thick and thin blood films has remained the gold standard diagnostic technique for over 100 years. However, preparing and reading blood films are skills that require practice. The first and last time most clinicians had an opportunity to prepare blood films was when they were students in medical or nursing school. This article will serve as a refresher in how to prepare blood films for clinicians who do not have the luxury of immediate access to a laboratory.

Thick films increase the chances of detecting a light infection by allowing a larger amount of blood to be examined. However, morphological characteristics of blood parasites are best viewed and speciated in thin films. Since both thick and thin films have their own advantages and disadvantages, both types should be prepared and submitted for examination in all cases.

Blood Collection

Depending on the life cycle, various parasites can be recovered in blood. These include *Plasmodium*, *Babesia*, and *Trypanosoma* species, *Leishmania donovani*, and microfilariae.¹ Species identification requires the examination of permanently stained thick and thin blood films. Blood can be collected by sticking a finger previ-

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Safety

Health care workers should be aware of potential etiological agent(s) (e.g., *Neisseria gonorrhoeae*, *Mycobacterium tuberculosis*, norovirus) that may be present in the various specimens (e.g., blood, bodily secretions, stool) being collected. Clinics should have policies meant to protect staff from accidental exposure to these agents. Although there are detailed safety references^{1,2} available, clinic staff should comply with at least the following policies to help ensure safety in specimen management:

1. Wear gloves when collecting specimens and where appropriate, gowns and masks or goggles;
2. Use leak-proof specimen containers and transport them within a sealable, leak-proof plastic bag with a separate compartment for paperwork;
3. Never submit syringes with needles to the laboratory; and
4. Do not submit leaking specimen containers to the laboratory--obtain a new specimen and properly discard the leaking one.

Specimen Selection and Collection

The first rule of proper specimen collection is to select a collection site that represents a location of active disease. Even careful collection methods will not produce a useful specimen if it is not obtained from a site of active infection (e.g., requesting a test for influenza virus in stool, norovirus in a wound specimen, or pinworm eggs in blood).

The second rule is to protect against specimen contamination at the collection site. Common sites of infection often are readily contaminated. For example, without proper preparation urine will be contaminated with organisms from the urethra and perineum. Blood will become contaminated by commensal flora from an improperly disinfected venipuncture site. Some other collection sites that commonly may be contaminated with skin or mucous membrane flora include the external auditory canal, the nasal sinus and sites of subcutaneous infections and superficial wounds. Physicians and nursing staff should have access to general specimen-selection and collection reference(s)^{3,4} and be trained in routine procedures that will allow staff to:

1. Identify and select the correct anatomical site from which to obtain a specimen;
2. Collect specimens using proper techniques and supplies;

3. Always check expiration dates of transport and culture media;
4. Avoid commensal contamination from indigenous flora whenever possible, to prevent overgrowth of a true pathogen and interference with interpreting culture results;
5. Collect adequate specimen volumes to prevent false-negative results;
6. Place the specimen in the proper container to promote survival of the suspected pathogen(s) and to prevent leakage. For example:
 - a. *Neisseria gonorrhoeae* by placing the specimen in a CO₂ environment and maintaining the specimen at room temperature during transport;
 - b. Anaerobes by using proper precautions, procedures and supplies (e.g., biopsy or needle aspirates are the specimens of choice);
7. Label each specimen container by clearly printing the patient's full name and the date the specimen is collected;
8. Include all information requested by the laboratory (e.g., source of specimen, date and time of collection, and initials of collector) when completing the test requisition form that must accompany the specimen.

Specimen Acceptability/Rejection Criteria:

When a specimen that has been improperly selected, collected, or transported arrives at the laboratory, the laboratory is required under federal and State laboratory law and regulations to take corrective action. Since processing and reporting test results on such specimens can mislead a clinician, the laboratory must maintain and adhere to a strict policy of specimen acceptance and rejection. The Laboratories Administration's general specimen acceptance/rejection policies include:

- 1) **No Label on Specimen Container:** The laboratory will immediately contact the submitting physician or nurse. Specimens collected by non-invasive means (e.g., urines, sputums, throat swabs) must be recollected and resubmitted. Specimens obtained by invasive procedures (e.g., needle aspirates, tissues) may be processed only after the laboratory is able to directly consult with the patient's physician or the clinician who collected the specimen. In such cases the problem will be noted on the laboratory report.
- 2) **Prolonged Transport Time:** Specimens collected by noninvasive means will not be processed but the submitter will be informed and asked to submit a repeat specimen. The report on the original specimen will note: "Received after prolonged delay." With specimens collected by invasive procedures, the patient's physician will be contacted as in 1), immediately above.

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Specimen Collection: General Guidelines for Clinic Staff

3) **Improper or leaking container:** Specimens will be handled as under 2), immediately above. Any report on the original specimen will note: "Leaked in transit".

4) **Specimen Unsuitable for Request:** The specimen will not be processed. The submitter will be contacted to explain the discrepancy, clarify the test request, and to request a proper specimen for the test requested.

5) **No test requested, no accompanying requisition form, etc.:** The specimen will not be processed. The submitter will be contacted to provide the information needed to ensure the correct test is requested and the correct specimen for that test has been submitted.

There may be instances involving a difficult or unusual case in which a given specimen must be processed even though its quality is compromised. However, such a specimen may be processed only after a consult between the patient's physician and the laboratory director. The following types of specimens provide little, if any, clinical information and processing them is strongly discouraged: colostomy discharge, catheter tips, gastric aspirates of newborns, lochia (vaginal discharge that occurs the first week or two after childbirth), and vomitus.

Answers to specimen collection and handling questions concerning a specific patient population, collection site, specimen type, or collection procedure may be obtained by working with Sheila DeLaquil, the Laboratories Administration's Quality Assurance Officer, by calling 410-767-5426, by contacting the Director's Office at 410-767-6100, or by referring to references such as 3 or 4, listed below.

Material for this article compiled by Dr. Jack DeBoy.

References

¹ U.S. Dept. of Health and Human Services. 2007. *Biosafety in Microbiological and Biomedical Laboratories*, 5th ed. U.S. Gov. Printing Office, Wash., DC www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm

² National Research Council. 1989. *Biosafety in the Laboratory: Prudent Practices for the Handling and Disposal of Infectious Material*. Nat. Acad. Press, Wash., DC.

³ *Manual of Clinical Microbiology*. 2007, 9th ed. ASM Press, Wash., DC.

⁴ Murray, P.R. 1996. *ASM Pocket Guide to Clinical Microbiology*. ASM Press, Wash., DC.

The Critical Link
is accessible at:

[http://www.dhmh.state.md.us/
labs/html/
critical-link.html](http://www.dhmh.state.md.us/labs/html/critical-link.html)

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Thick and Thin Blood Films

ously cleaned with alcohol and allowed to dry. After the fingerstick blood should flow freely and not be milked. Milking dilutes the number of parasites per microscopic field with tissue fluids.

An alternative approach to a fingerstick is the collection of fresh, whole blood containing EDTA as an anticoagulant.² Heparin and other anticoagulants are not recommended. When handling blood that may contain blood parasites, universal precautions should be employed. For best results films should be prepared within 1 hour after a specimen is collected. After that time, while overall parasite morphology may be acceptable, stippling may not be visible on stained films.²

Slide Cleaning

Accurate and reliable identification of parasites in blood films requires the use of absolutely clean, grease-free microscope slides. Old, unscratched slides should first be cleaned in detergent, rinsed in warm tap water, rinsed in distilled water, and then in ethyl alcohol (preferably 90 or 95 percent), before drying with a clean lintless cloth.³ New slides should also be cleaned with alcohol and allowed to dry before use. Cleaned slides, ready for use, should be held at the edges, never letting the fingers touch the surface of the glass. Once clean, slides should be protected from dust by placing them in a slide box or wrapping groups of them, slide over slide, in toilet tissue.³

Thick Film Preparation

To prepare a thick film, a clinician or laboratorian places 2 or 3 small drops of capillary blood directly from a fingerstick (no anticoagulant) on an alcohol-cleaned slide. Using the corner of another slide and a circular motion, the drops are mixed and spread over an area of 2 centimeters in diameter. Stirring should continue for 30 seconds to prevent the formation of fibrin strands that can obscure parasites after staining. If blood with anticoagulant is used, stirring for 30 seconds is not necessary.

If too much blood is used, or any grease remains on a slide, the blood may flake off during staining. If you can barely read ordinary newsprint through the wet film before drying, it is not too thick.⁴ The proper thickness is important since films that are too thin will contain fewer parasites and those that are too thick tend to crack on drying. The slide, with film facing up, is allowed to air-dry at room temperature in a slide box or dust-free area. Alternatively, thick films can be placed to dry in a 37°C incubator for 10-15 minutes.¹ The thick film is then

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ready to be sent to the laboratory. Slides should be stained within a day. This is particularly important for thick films because they harden with age and become difficult to dehemoglobinize.⁵

Thin Film Preparation

The specific technique of preparing a thin blood film, is depicted in Figure 1 and explained as follows:

“Place a small drop of blood near one end of a slide and lay this flat on a bench or table. Steadying the slide with the left forefinger and thumb at the end remote from the drop, bring another slide, the spreader, held at an angle, up against that edge of the drop which is nearest the center of the slide; the blood will run along the back of the spreader and the spreader is then pushed toward the other end of the slide with a smooth steady movement. The spreader should have one or both corners cut or broken off, so that the resultant film is narrower than the slide on which it is spread.”⁴

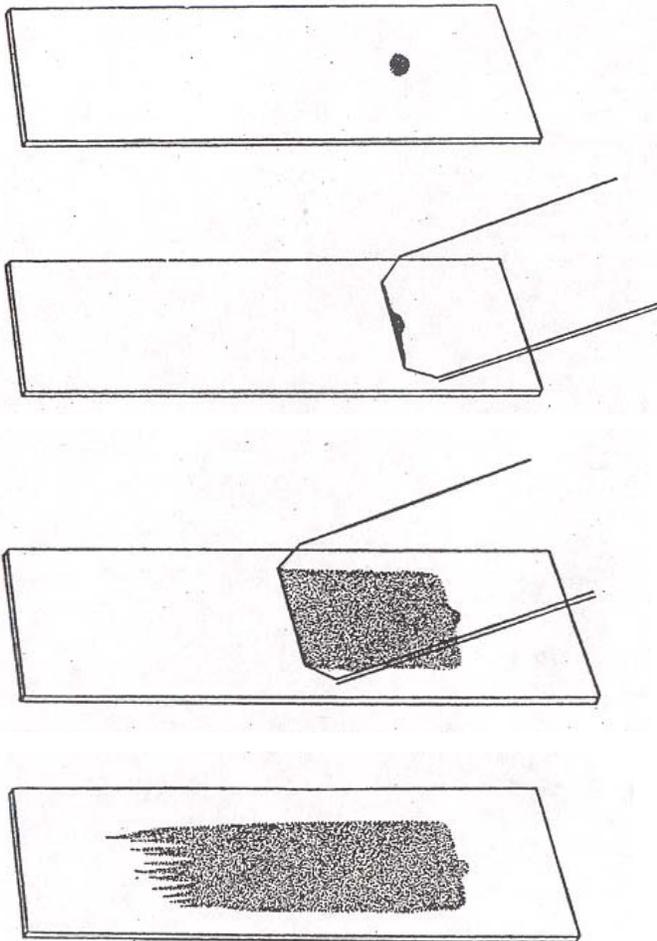


Figure 1. Preparation of a thin blood film. (Source: Ref. 4, p. 14)

The thin blood film is thick at one end and thin at the other, where the thin end consists of a single layer of evenly distributed red blood cells with no cell overlap. The thin, feathered end should be at least 2 centimeters long. The film should occupy the center of the slide, with free margins on both slides. Any holes in the film show the presence of grease on the slide.

The film's thickness depends on the size of the drop, the angle between the slides (should be 30-40 degrees⁶), and the rapidity with which the smear is made. If a suitably small drop of blood has been placed on the slide, the center of the resulting thin film looks almost clear and devoid of red color. If the center of the film looks red, it is too thick due to too much blood and a thinner film should be prepared.⁴ After a thin film has been air-dried, it's ready for submission to a laboratory for staining.

Slides should be stained within a day within a day after preparing them to obtain maximum staining quality.⁵ Any questions concerning the preparation or use of thick and thin blood films to diagnose bloodborne parasites should be addressed to the Public Health Microbiology Division by calling 410-767-6125.

Material for this article compiled by Dr. Jack DeBoy

References

- ¹ *Manual of Clin. Micro.* 2007, 9th ed. ASM Press, Wash., DC, pp. 2035-2038.
- ² *Lab. Diagnosis of Blood-Borne Parasitic Dis.* 2000. Approved guideline M15-A, Nat. Comm. for Clin. Lab. Stds., Villanova, PA.
- ³ Wilcox, A. 1950. *Manual for the Microscopical Diag. of Malaria in Man*, NIH Health Bull. No. 180 (Revised), Fed. Security Agency, PHS, USGPO, Wash., DC, pp. 22-23.
- ⁴ Blacklock, D.A. and T. Southwell. *A Guide to Human Parasitol. for Med. Practitioners.* 1932. Williams & Wilkins Co., Balto. MD, pp. 13-17.
- ⁵ *Lab. Procedures in Parasitol.* 1961. Dept. of the Army Tech. Manual (TM 8-227-2), H.Q. Dept. of the Army, Wash., DC, p. 4-1.
- ⁶ Cable, R.N. 1966. *An Illustrated Lab. Man. of Parasitol.*, Burgess Pub. Co., Minneapolis, MN, p. 131.

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Questions concerning technical content of
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LABORATORY STATISTICS

NS – Not Speciated NT – Non-Typeable
VRE – Vancomycin Resistant SP – Species
NG – No Growth

* This genus has recently been given a new genus name.
The genus name in parenthesis is the old name.
** Formerly a part of the *Trichosporon beigeli* complex.
***Alpha streptococci other than *S. pneumoniae* and *Enterococcus*.

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ENTERIC BACTERIOLOGY

GENUS	SEROVAR	SEX	AGE	#	JURISDICTION
CAMPYLOBACTER COLI	M		75	1	ANNE ARUNDEL
	F		86	1	BALTIMORE
CAMPYLOBACTER JEJUNI	F		41	1	BALTIMORE
	F		57	1	BALTIMORE
	M		32	1	BALTIMORE
	M		63	1	FREDERICK
	M		41	1	HARFORD
	M			1	PRINCE GEORGE'S
	M		68	1	PRINCE GEORGE'S
	F		20	1	BALTIMORE CITY
	F		50	1	BALTIMORE CITY
	SALMONELLA AGONA	M		1	1
U			8	1	OUT OF STATE
SALMONELLA BARDO	M			1	TALBOT
SALMONELLA BAREILLY	F		14	1	BALTIMORE
SALMONELLA BRAENDERUP	M		10	1	OUT OF STATE
	U		58	1	OUT OF STATE
SALMONELLA ENTERITIDIS	F		31	1	ALLEGANY
	F		1	1	BALTIMORE
	F		16	1	BALTIMORE
	F		93	1	BALTIMORE
	M			1	BALTIMORE
	M		6	1	BALTIMORE
	F		26	1	CALVERT
	M		28	1	CALVERT
	F		65	1	FREDERICK
	F			1	HARFORD
	M		24	1	MONTGOMERY
	F			1	BALTIMORE CITY
	M		27	1	BALTIMORE CITY
	M		48	1	BALTIMORE CITY
	U			1	BALTIMORE CITY
F		68	1	OUT OF STATE	
M		50	1	OUT OF STATE	
M		53	1	OUT OF STATE	
U			2	OUT OF STATE	
U		4	1	OUT OF STATE	
U		43	1	OUT OF STATE	
SALMONELLA GAMINARA	F			1	WICOMICO
SALMONELLA HEIDELBERG	F		15	1	BALTIMORE
	F		7	1	WASHINGTON
	M		84	1	WICOMICO
	F			1	BALTIMORE CITY
SALMONELLA I 8:NONMOTILE	U		67	1	OUT OF STATE
SALMONELLA I 9,12:-:1,5	U		9	1	KENT
SALMONELLA KENTUCKY	U		60	1	FREDERICK

SALMONELLA LOMALINDA			
F	1	1	BALTIMORE CITY
SALMONELLA NEWPORT			
U	51	1	ANNE ARUNDEL
F	55	1	DORCHESTER
M	34	1	WORCESTER
U		1	BALTIMORE CITY
F	33	1	OUT OF STATE
U	24	1	OUT OF STATE
U	75	1	OUT OF STATE
SALMONELLA NORWICH			
M		1	CHARLES
SALMONELLA PARATYPHI A			
F	29	1	ANNE ARUNDEL
SALMONELLA POONA			
M	76	1	OUT OF STATE
SALMONELLA POTSDAM			
M	14	1	ANNE ARUNDEL
SALMONELLA SAINTPAUL			
F	52	1	PRINCE GEORGE'S
SALMONELLA SANDIEGO			
M	52	1	OUT OF STATE
SALMONELLA TYPHIMURIUM			
M	11	1	FREDERICK
F	12	1	BALTIMORE CITY
SALMONELLA TYPHIMURIUM VAR COPENHAGEN			
F	3	1	ALLEGANY
F	4	1	BALTIMORE
M	27	1	HOWARD
M	1	1	BALTIMORE CITY
U	3	1	OUT OF STATE
SALMONELLA UNTYPABLE			
F	1	1	BALTIMORE
F	26	1	BALTIMORE CITY
M	58	1	BALTIMORE CITY
SALMONELLA 4,12:i:-			
M	23	1	ALLEGANY
M		1	ANNE ARUNDEL
M	6	1	BALTIMORE
SALMONELLA 4,5,12:i:-			
U	50	1	FREDERICK
F	51	2	ST. MARY'S
F	61	1	ST. MARY'S
F	80	1	WASHINGTON
SHIGELLA FLEXNERI II:3,4			
F		1	BALTIMORE CITY
SHIGELLA SONNEI			
U	64	1	PRINCE GEORGE'S
M	8	1	ST. MARY'S
F	6	1	OUT OF STATE
U	2	1	OUT OF STATE
VIBRIO PARAHAEMOLYTICUS			
M	61	1	CARROLL
YERSINIA ENTEROCOLITICA			
F	70	2	ALLEGANY
TOTAL		87	

ISOLATES – THROAT CULTURES

COUNTY	GROUP A ¹	NON-GROUP A
ALLEGANY	1	16
ANNE ARUNDEL	0	1
BALTIMORE CITY	0	4
BALTIMORE	0	2
MONTGOMERY	6	4
PRINCE GEORGE'S	1	3
SOMERSET	2	2
WICOMICO	4	3
TOTAL	14	35

¹ *Streptococcus pyogenes*

BACTERIOLOGY IDENTIFICATIONS

Referrals

GENUS SPECIES	SOURCE	#	JURISDICTION
HAEMOPHILUS INFLUENZAE SEROTYPE B			
		1	BALTIMORE CITY
HAEMOPHILUS INFLUENZAE SEROTYPE E			
		1	BALTIMORE CITY
HAEMOPHILUS INFLUENZAE SEROTYPE F			
		1	PRINCE GEORGE'S
NEISSERIA MENINGITIDIS SEROGROUP Y			
		1	ANNE ARUNDEL
TOTAL		4	

ISOLATES – MISCELLANEOUS

GENUS SPECIES	SOURCE	#	JURISDICTION
ACINETOBACTER CALCOACETICUS-BAUMANNII COMPLEX			
WOUND		1	BALTIMORE CITY
PENIS		1	CECIL
TOE		1	FREDERICK
SKIN		1	MONTGOMERY
BACILLUS SPECIES			
FOOT		1	FREDERICK
CORYNEBACTERIUM SPECIES			
BLOOD		2	BALTIMORE CITY
FOOT		1	FREDERICK
PENIS		1	MONTGOMERY
ENTEROBACTER AEROGENES			
BLOOD		1	BALTIMORE CITY
ENTEROBACTER CLOACAE			
BLOOD		1	BALTIMORE CITY
TOE		1	FREDERICK
FOOT		1	FREDERICK
ENTEROCOCCUS FAECALIS			
ABDOMINAL		1	BALTIMORE CITY
BLOOD		1	BALTIMORE CITY
FOOT		1	FREDERICK
PENIS		1	MONTGOMERY
ENTEROCOCCUS FAECIUM			
CSF		1	BALTIMORE CITY
ESCHERICHIA COLI			
BLOOD		1	BALTIMORE CITY
VAGINAL		1	MONTGOMERY
GARDNERELLA VAGINALIS			
VAGINAL		1	SOMERSET
KLEBSIELLA OXYTOCA			
FOOT		1	FREDERICK
MORGANELLA MARGANII			
PENIS		1	MONTGOMERY
PROTEUS MIRABILIS			
EAR		1	CARROLL
PROTEUS SPECIES			
VAGINAL		2	ANNE ARUNDEL
PSEUDOMONAS AERUGINOSA			
EAR		1	CARROLL
STAPHYLOCOCCUS AUREUS			
WOUND		1	BALTIMORE
KNEE		1	BALTIMORE
BLOOD		3	BALTIMORE CITY
TOE		5	FREDERICK
SKIN		1	MONTGOMERY
VAGINAL		1	MONTGOMERY
STAPHYLOCOCCUS SPECIES			
BLOOD		5	BALTIMORE CITY
CSF		1	BALTIMORE CITY
LESION		1	CECIL

PENIS	1	CECIL
TOE	3	FREDERICK
FOOT	2	FREDERICK
INCISION	1	FREDERICK
SKIN	1	MONTGOMERY
STENOTROPHOMONAS MALTOPHILIA		
WOUND	1	FREDERICK
FOOT	1	FREDERICK
STREPTOCOCCUS ALPHA-HEMOLYTIC		
BLOOD	4	BALTIMORE CITY
STREPTOCOCCUS BETA-HEMOLYTIC GROUP B		
BLOOD	1	BALTIMORE CITY
VAGINAL	4	HOWARD
VAGINAL	1	MONTGOMERY
VAGINAL	1	PRINCE GEORGE'S
STREPTOCOCCUS BETA-HEMOLYTIC GROUP G		
BLOOD	1	BALTIMORE CITY
EAR	1	CARROLL
STREPTOCOCCUS BETA-HEMOLYTIC NON-GROUPABLE		
CSF	1	BALTIMORE CITY
STREPTOCOCCUS NON-HEMOLYTIC		
BLOOD	4	BALTIMORE CITY
STREPTOCOCCUS SALIVARIUS		
BLOOD	1	BALTIMORE CITY
TOTAL	75	

SEXUALLY TRANSMITTED DISEASES

GENUS SPECIES	SEX	#	JURISDICTION
NEISSERIA GONORRHEAE			
	F	1	ALLEGANY
	M	2	ALLEGANY
	F	1	ANNE ARUNDEL
	M	2	ANNE ARUNDEL
	F	2	BALTIMORE
	M	3	BALTIMORE
	M	2	CAROLINE
	F	1	CARROLL
	F	1	CECIL
	M	4	CHARLES
	F	0	DORCHESTER
	M	3	DORCHESTER
	M	2	HOWARD
	F	0	KENT
	M	1	KENT
	F	3	MONTGOMERY
	M	1	MONTGOMERY
	F	16	PRINCE GEORGE'S
	M	33	PRINCE GEORGE'S
	F	1	ST. MARY'S
	F	0	SOMERSET
	M	2	SOMERSET
	M	2	WASHINGTON
	F	2	WICOMICO
	M	0	WICOMICO
	F	0	WORCESTER
	M	1	WORCESTER
	F	1	BALTIMORE CITY
	M	6	BALTIMORE CITY
TOTAL		93	
SYPHILIS SEROLOGY			
	F	1	ALLEGANY
	F	6	ANNE ARUNDEL
	M	7	ANNE ARUNDEL
	F	14	BALTIMORE
	M	21	BALTIMORE

F	1	CAROLINE
F	1	CARROLL
M	1	CARROLL
F	1	CECIL
F	1	CHARLES
M	1	DORCHESTER
F	1	FREDERICK
M	1	FREDERICK
F	2	HARFORD
M	6	HARFORD
M	2	HOWARD
F	6	MONTGOMERY
M	6	MONTGOMERY
F	22	PRINCE GEORGE'S
M	36	PRINCE GEORGE'S
U	1	PRINCE GEORGE'S
M	1	ST. MARY'S
F	3	SOMERSET
F	2	TALBOT
F	2	WASHINGTON
M	4	WASHINGTON
F	2	WICOMICO
M	2	WICOMICO
U	1	WICOMICO
F	1	WORCESTER
F	25	BALTIMORE CITY
M	46	BALTIMORE CITY
F	2	OUT OF STATE
M	2	OUT OF STATE

TOTAL 231

CHLAMYDIA TRACHOMATIS

F	4	ALLEGANY
M	8	ALLEGANY
F	17	ANNE ARUNDEL
M	21	ANNE ARUNDEL
F	24	BALTIMORE
M	5	BALTIMORE
F	2	CALVERT
F	2	CAROLINE
M	3	CAROLINE
F	1	CARROLL
M	3	CARROLL
F	2	CECIL
M	2	CECIL
F	7	CHARLES
M	3	CHARLES
F	2	DORCHESTER
F	10	FREDERICK
M	2	FREDERICK
M	1	GARRETT
F	10	HARFORD
M	4	HARFORD
F	4	HOWARD
M	3	HOWARD
F	2	KENT
M	1	KENT
F	18	MONTGOMERY
M	16	MONTGOMERY
U	2	MONTGOMERY
F	40	PRINCE GEORGE'S
M	14	PRINCE GEORGE'S
U	1	PRINCE GEORGE'S
M	2	QUEEN ANNE'S
F	2	ST. MARY'S
M	3	ST. MARY'S
F	4	SOMERSET
M	1	SOMERSET
U	1	SOMERSET
F	1	TALBOT
M	1	TALBOT
F	3	WASHINGTON
M	4	WASHINGTON

F	18	WICOMICO
M	3	WICOMICO
F	4	WORCESTER
M	4	WORCESTER
F	9	BALTIMORE CITY
M	24	BALTIMORE CITY
F	3	OUT OF STATE
M	2	OUT OF STATE

TOTAL 323

MYCOBACTERIOLOGY

GENUS SPECIES

SEX	AGE	#	JURISDICTION
MYCOBACTERIUM TUBERCULOSIS			
F	22	1	MONTGOMERY
M	55	1	MONTGOMERY
F	25	1	BALTIMORE CITY
MYCOBACTERIUM TUBERCULOSIS COMPLEX			
M	70	1	ALLEGANY
F	32	1	BALTIMORE
F	75	1	BALTIMORE
M	56	1	BALTIMORE
F	22	1	CAROLINE
F	74	1	HARFORD
F	26	1	HOWARD
M	59	1	HOWARD
F		1	MONTGOMERY
F	21	2	MONTGOMERY
F	22	1	MONTGOMERY
F	26	2	MONTGOMERY
F	31	1	MONTGOMERY
F	32	1	MONTGOMERY
F	41	1	MONTGOMERY
F	42	1	MONTGOMERY
M	55	1	MONTGOMERY
M	63	1	MONTGOMERY
M	73	1	MONTGOMERY
M	21	1	PRINCE GEORGE'S
M	26	1	PRINCE GEORGE'S
M	28	1	PRINCE GEORGE'S
M	32	1	PRINCE GEORGE'S
M	36	1	PRINCE GEORGE'S
M	44	1	PRINCE GEORGE'S
M	47	1	PRINCE GEORGE'S
M	58	1	PRINCE GEORGE'S
F	25	1	BALTIMORE CITY
F	36	1	BALTIMORE CITY
F	39	1	BALTIMORE CITY
F	56	1	BALTIMORE CITY
M	47	1	BALTIMORE CITY
M	48	1	BALTIMORE CITY
M	49	1	BALTIMORE CITY
M	50	1	BALTIMORE CITY
M	57	1	BALTIMORE CITY
MYCOBACTERIUM AVIUM COMPLEX			
F	43	1	ANNE ARUNDEL
F	77	1	BALTIMORE
M	2	1	BALTIMORE
M	58	1	BALTIMORE
M	68	1	BALTIMORE
M	47	1	CAROLINE
F	63	1	CECIL
F	62	1	FREDERICK
F	68	1	FREDERICK
F	75	1	FREDERICK
F	65	1	MONTGOMERY
F	70	1	PRINCE GEORGE'S
M	41	1	PRINCE GEORGE'S
U	51	1	PRINCE GEORGE'S
F	39	1	ST. MARY'S

F	79	1	WICOMICO
M	81	1	WICOMICO
U	52	1	WICOMICO
F	14	1	BALTIMORE CITY
F	28	1	BALTIMORE CITY
F	47	1	BALTIMORE CITY
F	83	1	BALTIMORE CITY
M	35	1	BALTIMORE CITY
M	45	1	BALTIMORE CITY

MYCOBACTERIUM BOVIS

M	70	1	ALLEGANY
---	----	---	----------

MYCOBACTERIUM CHELONAE

U	52	1	WICOMICO
---	----	---	----------

MYCOBACTERIUM FORTUITUM

M	58	1	PRINCE GEORGE'S
M	64	1	PRINCE GEORGE'S
M	57	1	BALTIMORE CITY

MYCOBACTERIUM FORTUITUM COMPLEX

F	74	1	HARFORD
M	55	1	MONTGOMERY
M	58	1	PRINCE GEORGE'S
M	64	1	PRINCE GEORGE'S

MYCOBACTERIUM GORDONAE

F	19	1	FREDERICK
F	76	1	MONTGOMERY
M	27	1	MONTGOMERY
F	85	1	PRINCE GEORGE'S
M	57	1	PRINCE GEORGE'S
M	47	1	TALBOT
F	45	1	BALTIMORE CITY
M	65	1	BALTIMORE CITY

MYCOBACTERIUM KANSASII

M	57	1	BALTIMORE CITY
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MYCOBACTERIUM MARINUM

M	53	1	ANNE ARUNDEL
---	----	---	--------------

TOTAL 84

MYCOBACTERIUM SUSCEPTIBILITY RESULTS

DURING THE MONTH OF JUNE, 2007, WE REPORTED SUSCEPTIBILITY RESULTS ON 36 ISOLATES OF *M. TUBERCULOSIS* COMPLEX.*

9 DRUG RESISTANT STRAINS WERE IDENTIFIED:

#	JURISDICTION	DRUG RESISTANCE
2 ^{AB}	ALLEGANY	@ to PYRAZINAMIDE
1	CAROLINE	@ to STREPTOMYCIN and ISONIAZID
2	MONTGOMERY	@ to STREPTOMYCIN
1	MONTGOMERY	@ to STREPTOMYCIN and ISONIAZID
1 ^C	MONTGOMERY	@ to STREPTOMYCIN, ISONIAZID, RIFAMPIN, RIFABUTIN, ETHIONAMIDE, PYRAZINAMIDE, and PARA AMINOSALICYLIC ACID
1 ^C	MONTGOMERY	@ to ISONIAZID, STREPTOMYCIN, RIFAMPIN, RIFABUTIN, and ETHAMBUTOL
1	BALTIMORE CITY	@ to STREPTOMYCIN

^A Two isolates from the same patient

^B Probable *M. bovis*

^C Meets the case definition of Multi-Drug Resistant Tuberculosis (MDRTB) @ RESISTANT

* *Mycobacterium tuberculosis* complex consists of:

- M. tuberculosis*
- M. bovis*
- M. bovis*, BCG
- M. africanum*
- M. microti*
- M. canettii*

MYCOLOGY

GENUS SPECIES
SEX AGE # JURISDICTION

AEROBIC ACTINOMYCETES

F 93 1 BALTIMORE

ALTERNARIA SP

F 53 1 ALLEGANY
F 59 1 ALLEGANY
F 47 1 CAROLINE
M 72 1 DORCHESTER
F 34 1 PRINCE GEORGE'S
F 46 1 TALBOT
U 1 WICOMICO

ASPERGILLUS FLAVUS

M 67 1 CARROLL
F 87 1 CECIL

ASPERGILLUS FUMIGATUS

F 61 1 ALLEGANY
M 9 1 ALLEGANY
M 68 1 ANNE ARUNDEL
F 64 1 CALVERT
M 36 1 CALVERT
M 87 1 CALVERT
F 49 1 PRINCE GEORGE'S
F 70 1 PRINCE GEORGE'S
F 80 1 PRINCE GEORGE'S
M 64 1 PRINCE GEORGE'S
M 81 1 PRINCE GEORGE'S
M 82 1 TALBOT
F 2 BALTIMORE CITY
M 45 1 BALTIMORE CITY
M 80 1 BALTIMORE CITY
F 47 1 OUT OF STATE
F 48 1 OUT OF STATE

ASPERGILLUS NIGER

F 37 1 CALVERT
F 54 1 TALBOT

ASPERGILLUS VERSICOLOR GROUP

M 68 1 BALTIMORE CITY
M 75 1 BALTIMORE CITY

BISPORA SP

F 46 1 HOWARD

CANDIDA ALBICANS

F 18 1 ANNE ARUNDEL
F 23 1 BALTIMORE
M 58 1 BALTIMORE
M 53 1 CECIL
M 31 1 FREDERICK
F 35 1 MONTGOMERY
F 42 1 MONTGOMERY
M 85 1 MONTGOMERY
F 21 2 PRINCE GEORGE'S
F 22 1 PRINCE GEORGE'S
F 29 1 PRINCE GEORGE'S
F 32 1 PRINCE GEORGE'S
F 38 2 PRINCE GEORGE'S
F 40 1 PRINCE GEORGE'S
F 42 1 PRINCE GEORGE'S
F 44 1 PRINCE GEORGE'S
F 49 1 PRINCE GEORGE'S
F 62 1 PRINCE GEORGE'S
F 70 1 PRINCE GEORGE'S
M 65 1 PRINCE GEORGE'S
F 20 1 SOMERSET
F 44 1 BALTIMORE CITY
M 42 1 BALTIMORE CITY
M 57 1 BALTIMORE CITY
M 58 1 BALTIMORE CITY
M 60 1 BALTIMORE CITY
M 63 1 BALTIMORE CITY

U 49 1 BALTIMORE CITY

CANDIDA GLABRATA

M 45 1 BALTIMORE
F 53 1 PRINCE GEORGE'S
M 42 1 BALTIMORE CITY

CANDIDA GUILLIERMONDII

F 55 1 BALTIMORE CITY

CANDIDA KRUSEI

M 65 1 CARROLL

CANDIDA LUSITANIAE

M 60 1 BALTIMORE CITY

CANDIDA PARAPSILOSIS

M 75 1 BALTIMORE

CANDIDA SP (NOT C. ALBICANS)

M 68 1 BALTIMORE CITY

CANDIDA TROPICALIS

F 67 1 OUT OF STATE

CLADOSPORIUM SP

F 2 1 ALLEGANY
F 49 1 TALBOT
U 1 WASHINGTON

EPICOCCUM SP

M 63 1 ALLEGANY
M 1 TALBOT
U 1 WICOMICO

EXOPHIALA SP

F 1 TALBOT

FUSARIUM SP

M 64 1 TALBOT

HISTOPLASMA CAPSULATUM

M 34 1 WASHINGTON

NOCARDIA NOVA

M 25 1 TALBOT

PAECILOMYCES SP

F 49 1 BALTIMORE
M 42 1 BALTIMORE CITY

PAECILOMYCES VARIOTTII

M 83 1 ALLEGANY
F 1 WICOMICO

PENICILLIUM SP

M 59 1 ALLEGANY
M 74 1 ALLEGANY
U 68 1 ALLEGANY
M 67 1 CARROLL
F 46 1 HOWARD
F 34 1 PRINCE GEORGE'S
F 60 1 TALBOT
U 1 WASHINGTON

PITHOMYCES SP

F 63 1 TALBOT

RHODOTORULA SP

M 45 1 MONTGOMERY

SACCHAROMYCES CEREVISIAE

M 45 1 BALTIMORE

SCEDOSPORIUM PROLIFICANS

F 11 1 CARROLL

SCOPULARIOPSIS SP

M 59 1 ALLEGANY

STREPTOMYCES ANULATUS

M 83 1 BALTIMORE

TRICHOPHYTON MENTAGROPHYTES

M 47 1 FREDERICK
U 81 1 TALBOT

TRICHOPHYTON RUBRUM

F 50 1 ALLEGANY
M 49 1 ALLEGANY
M 69 1 ALLEGANY
F 71 1 BALTIMORE
F 76 1 CARROLL
U 48 1 TALBOT

TRICHOPHYTON SP

M 9 1 PRINCE GEORGE'S

TRICHOPHYTON TONSURANS			
F	4	1	BALTIMORE CITY
WANGIELLA DERMATITIDIS			
F	78	1	ANNE ARUNDEL
TOTAL	111		

PARASITOLOGY

GENUS SPECIES	#	JURISDICTION
PROTOZOA		
BLASTOCYSTIS HOMINIS	2	FREDERICK
	3	MONTGOMERY
	1	PRINCE GEORGE'S
DIENTAMOEBA FRAGILIS	2	HOWARD
ENDOLIMAX NANA	3	FREDERICK
	1	GARRETT
	2	HOWARD
	2	MONTGOMERY
	3	PRINCE GEORGE'S
	1	WASHINGTON
ENTAMOEBA COLI	5	MONTGOMERY
	1	PRINCE GEORGE'S
ENTAMOEBA HARTMANNI	2	MONTGOMERY
GIARDIA LAMBLIA	2	FREDERICK
	2	PRINCE GEORGE'S
IODAMOEBA BUTSCHLII	1	PRINCE GEORGE'S
TOTAL	33	
NEMATODES		
ASCARIS LUMBRICOIDES	1	MONTGOMERY
ENTEROBIUS VERMICULARIS	1	WASHINGTON
HOOKWORM	3	WASHINGTON
TOTAL	5	

ARTHROPOD IDENTIFICATION

DERMACENTOR SPECIES	1	BALTIMORE
TOTAL	1	

TICK IDENTIFICATION

NO SPECIMENS RECEIVED

WATER MICROBIOLOGY

	# TESTED	# NON-COMPLIANT
COMMUNITY	0	1
NON-COMMUNITY	248	52
TOTAL	248	53

FOOD SAFETY

FOOD AND SHELLFISH MICROBIOLOGY

	# OF SAMPLES	NOTABLE PATHOGENS
FOOD	2	0
		# STANDARDS EXCEEDED *
CRABMEAT	0	0
		# STANDARDS EXCEEDED **
SHELLFISH	3	0
SHELLFISH GROWING WATERS	249	
TOTAL	254	0

STANDARDS

*CRABMEAT-FRESH
ESCHERICHIA COLI = LESS THAN 36 MPN/100 GRAM
 STANDARD PLATE COUNT = LESS THAN 100,000 PER GRAM

** SHELLFISH
 FECAL COLIFORMS = LESS THAN 230 MPN/100 GRAM
 STANDARD PLATE COUNT = LESS THAN 500,000 PER GRAM

VIRUS ISOLATION

ISOLATE	SEX	AGE	#	JURISDICTION
ADENOVIRUS	M	22	1	OUT OF STATE
SUBTOTAL			1	
PARAINFLUENZA TYPE 3	M	22	1	ANNE ARUNDEL
SUBTOTAL			1	
RESPIRATORY SYNCYTIAL VIRUS	F		1	BALTIMORE CITY
SUBTOTAL			1	
HERPES SIMPLEX UNTYPABLE	F	34	1	PRINCE GEORGE'S
	M	21	1	BALTIMORE CITY
	M	33	1	BALTIMORE CITY
SUBTOTAL			3	
HERPES SIMPLEX I	F	29	1	BALTIMORE
	F	22	1	CAROLINE
	M	22	1	CECIL
	F	26	1	CHARLES
	F	17	1	DORCHESTER
	F	16	1	KENT
	F	17	2	PRINCE GEORGE'S
	F	19	1	PRINCE GEORGE'S
	F	21	1	PRINCE GEORGE'S
	F	25	1	PRINCE GEORGE'S
	F	20	1	WICOMICO
	F	21	1	WICOMICO
	F	18	2	BALTIMORE CITY
	F	19	1	BALTIMORE CITY
	F	20	1	BALTIMORE CITY
	F	22	1	BALTIMORE CITY
	M	21	1	BALTIMORE CITY
	M	37	1	BALTIMORE CITY
	U	24	1	BALTIMORE CITY
	F	15	1	OUT OF STATE
SUBTOTAL			22	

HERPES SIMPLEX II

M	27	1	ALLEGANY
F	32	1	ANNE ARUNDEL
M	22	1	ANNE ARUNDEL
F	23	1	BALTIMORE
F	26	1	BALTIMORE
F	32	1	CARROLL
M	20	1	CHARLES
F	20	1	DORCHESTER
F	24	1	FREDERICK
F	20	1	HARFORD
F	31	1	HARFORD
F	26	1	HOWARD
F	32	1	HOWARD
F	33	1	HOWARD
F		1	MONTGOMERY
F	15	1	MONTGOMERY
F	16	1	PRINCE GEORGE'S
F	17	1	PRINCE GEORGE'S
F	18	1	PRINCE GEORGE'S
F	19	2	PRINCE GEORGE'S
F	20	3	PRINCE GEORGE'S
F	23	2	PRINCE GEORGE'S
F	24	1	PRINCE GEORGE'S
F	26	1	PRINCE GEORGE'S
F	29	1	PRINCE GEORGE'S
F	33	1	PRINCE GEORGE'S
M	21	1	PRINCE GEORGE'S
M	25	1	PRINCE GEORGE'S
M	53	1	PRINCE GEORGE'S
U	29	1	PRINCE GEORGE'S
F	36	1	WASHINGTON
F	23	1	WICOMICO
F	28	1	WICOMICO
M	34	1	WICOMICO
F	17	1	BALTIMORE CITY
F	19	1	BALTIMORE CITY
F	20	4	BALTIMORE CITY
F	23	2	BALTIMORE CITY
F	29	1	BALTIMORE CITY
F	30	1	BALTIMORE CITY
F	37	2	BALTIMORE CITY
F	38	1	BALTIMORE CITY
F	53	1	BALTIMORE CITY
M		3	BALTIMORE CITY
M	23	1	BALTIMORE CITY
M	26	1	BALTIMORE CITY
M	27	1	BALTIMORE CITY
M	28	2	BALTIMORE CITY
M	33	1	BALTIMORE CITY
M	34	1	BALTIMORE CITY
M	37	1	BALTIMORE CITY
M	38	3	BALTIMORE CITY
M	39	1	BALTIMORE CITY
M	47	1	BALTIMORE CITY
M	56	1	BALTIMORE CITY
U	22	1	BALTIMORE CITY
U	28	2	BALTIMORE CITY
M	21	1	OUT OF STATE

SUBTOTAL 73

TOTAL 101

VIRAL HEPATITIS

ORGANISM	# OF SPECIMENS	POSITIVES	JURISDICTION
HEPATITIS A			
	1	0	ALLEGANY
	2	0	ANNE ARUNDEL
	16	0	BALTIMORE

	1	0	CARROLL
	2	0	CECIL
	2	0	FREDERICK
	1	0	GARRETT
	2	0	HOWARD
	1	0	KENT
	2	0	MONTGOMERY
	2	0	PRINCE GEORGE'S
	1	0	SOMERSET
	1	0	WASHINGTON
	1	0	WICOMICO
	2	0	BALTIMORE CITY
SUBTOTAL	37	0	

HEPATITIS B			
	52	1	ALLEGANY
	102	2	ANNE ARUNDEL
	89	0	BALTIMORE
	9	0	CALVERT
	4	0	CAROLINE
	33	1	CARROLL
	108	0	CECIL
	6	0	CHARLES
	1	0	DORCHESTER
	107	1	FREDERICK
	19	0	GARRETT
	67	0	HARFORD
	43	0	HOWARD
	6	1	KENT
	252	7	MONTGOMERY
	236	4	PRINCE GEORGE'S
	7	0	QUEEN ANNE'S
	3	0	ST. MARY'S
	6	0	SOMERSET
	18	0	TALBOT
	50	1	WASHINGTON
	116	2	WICOMICO
	4	0	WORCESTER
	339	4	BALTIMORE CITY
	21	0	OUT OF STATE
SUBTOTAL	1,698	24	

HEPATITIS C			
	53	4	ALLEGANY
	115	27	ANNE ARUNDEL
	114	16	BALTIMORE
	9	0	CALVERT
	4	0	CAROLINE
	35	7	CARROLL
	44	5	CECIL
	4	0	CHARLES
	1	0	DORCHESTER
	103	7	FREDERICK
	18	0	GARRETT
	19	1	HARFORD
	22	2	HOWARD
	5	0	KENT
	44	3	MONTGOMERY
	154	1	PRINCE GEORGE'S
	8	1	QUEEN ANNE'S
	3	1	ST. MARY'S
	3	0	SOMERSET
	15	0	TALBOT
	55	15	WASHINGTON
	28	0	WICOMICO
	2	0	WORCESTER
	361	96	BALTIMORE CITY
	21	2	OUT OF STATE
SUBTOTAL	1,240	188	
TOTAL	2,975	212	

RABIES

SOURCE	#	JURISDICTION	
BAT	2	ANNE ARUNDEL	
	1	BALTIMORE	
	5	MONTGOMERY	
	1	PRINCE GEORGE'S	
	1	BALTIMORE CITY	
CAT	1	CARROLL	
FOX	1	CALVERT	
	1	CARROLL	
	1	CHARLES	
	2	HOWARD	
	3	MONTGOMERY	
	1	SOMERSET	
	GROUNDHOG	1	FREDERICK
	1	PRINCE GEORGE'S	
	RACCOON	1	ALLEGANY
		1	ANNE ARUNDEL
		1	CAROLINE
		1	CARROLL
1		CHARLES	
1		DORCHESTER	
2		FREDERICK	
2		MONTGOMERY	
1		QUEEN ANNE'S	
2		SOMERSET	
2		WASHINGTON	
2		UNKNOWN	
TOTAL POSITIVES	39		
TOTAL SPECIMENS	512		

CHLAMYDOPHILIA (CHLAMYDIA) PSITTACI

REPORTED QUARTERLY
FOR APRIL 2007 THROUGH JUNE 2007

NO SPECIMENS RECEIVED

PENICILLIN RESISTANT GONORRHEA STATISTICS

REPORTED QUARTERLY
FOR APRIL 2007 THROUGH JUNE 2007

NO PENICILLIN RESISTANT GONORRHEA REPORTED

CD4 FLOW CYTOMETRY WORKLOAD

REPORTED QUARTERLY
COMPARING APRIL 1, 2007 THROUGH JUNE 30, 2007 TO
APRIL 1, 2006 THROUGH JUNE 30, 2006

CASE DEF.	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
	≥29%	28%-14%	<14%	
4/07 - 6/07	290	648	331	1269
4/06 - 6/06	372	668	352	1392

NEWBORN & CHILDHOOD SCREENING

STATISTICS FOR JUNE 2007

PRESUMPTIVE POSITIVES	
DISORDERS	#
PHENYLKETONURIA	3
MAPLE SYRUP URINE DISEASE	9
HOMOCYSTEINURIA	2
TYROSINEMIA	4
ARGININEMIA	0
CITRULLINEMIA	0
GALACTOSEMIA	3
BIOTINIDASE DEFICIENCY	0
HYPOTHYROIDISM	59
HEMOGLOBIN -DISEASE	18
HEMOGLOBIN -BENIGN	263
CONGENITAL ADRENAL HYPERPLASIA (CAH)	29
CYSTIC FIBROSIS	3
FATTY ACID OXIDATIONS	18
ORGANIC ACIDEMIAS	9
ACYLCARNITINE - BORDERLINE	4
ACYLCARNITINE - OTHERS	3

MONTHLY TOTALS	
# OF SPECIMENS SCREENED	11,307
NUMBER OF TESTS	782,322
% OF UNSATISFACTORY SPECIMENS	4.6

YEAR-TO-DATE CONFIRMED CASES	
CONDITIONS	# CONFIRMED
MCAD	2
3MCC	1
SCAD	1
VLCAD	1
GA-I	0
MAPLE SYRUP URINE DISEASE	1
PKU- CLINICALLY SIGNIFICANT	2
VARIANT HYPERPHENYLALANINEMIA - NOT CLINICALLY SIGNIFICANT	2
GALACTOSEMIA- CLASSICAL GALT DEFICIENCY	0
GALACTOSEMIA - VARIANT	1
BIOTINIDASE DEFICIENCY	0
GALACTOSE EPIMERASE DEFICIENCY	0
GALACTOSE TRANSFERASE DEFICIENCY- (GALT CLASSICAL)	1
PARTIAL BIOTINIDASE DEFICIENCY	2
CAH- CLASSICAL SALT WASTING	2
CAH-NON-CLASSICAL	0
HYPOTHYROIDISM - PRIMARY	7
HYPOTHYROIDISM - SECONDARY	1
OTHER HYPOTHYROIDISM	3
SICKLE CELL DISEASE -SS	10
SICKLE CELL DISEASE -SC	5
SICKLE CELL DISEASE -S BETA THALASSEMIA	2
CYSTIC FIBROSIS	2

LEAD SCREENING - BLOOD LEAD

CLASS	RANGE ug/dl	TESTS # of
MARYLAND		
I	<10	120
IIA	10-14	5
IIB	15-19	1
III	20-44	1
IV	45-69	0
V	>69	0
TOTAL		127
WASHINGTON DC		
I	<10	35
IIA	10-14	0
IIB	15-19	0
III	20-44	0
IV	45-69	0
V	>69	0
TOTAL		35

ENVIRONMENTAL CHEMISTRY

SAMPLES	# NON-COMPLIANT	# TESTED
ASBESTOS		
AIR	0	0
BULK	7	10
AIR QUALITY		
PM _{2.5}	0	288
PM ₁₀	0	0
RADIATION		
AIR/CHARCOAL FILTERS	0	64
MILK	0	5
WIPES	0	36
RAW WATER	0	10
VEGETATION	0	0
OTHER	0	8
DRINKING WATER		
METALS		
COMMUNITY	1	4
NON-COMMUNITY	1	31
PRIVATE WELLS	52	195
PESTICIDES & PCBs		
COMMUNITY	0	69
NON-COMMUNITY	0	44
PRIVATE WELLS	0	0
VOLATILE ORGANIC COMPOUNDS		
COMMUNITY	0	316
NON-COMMUNITY	0	62
PRIVATE WELLS	0	203
RADIATION		
COMMUNITY	43	126
NON-COMMUNITY	0	0
PRIVATE WELLS	3	13
INORGANICS		
COMMUNITY	0	9
NON-COMMUNITY	5	96
PRIVATE WELLS	7	187
FOOD CHEMISTRY		
SUSPECTED TAMPERING	0	0
MICROSCOPIC FILTH	0	0
LABELING	0	0
SURVEILLANCE	0	9
CHEMICAL CONTAMINATION	0	0
TOTAL	119	1,785

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LEAD ENVIRONMENTAL

TEST	#	ELEV	BRL	UNSAT
TOTAL PAINT	6	3	1	0
TOTAL SOIL	9	1	0	0
DUST				
FLOOR	262	24	220	0
SILL	421	6	349	0
WELL	214	10	145	0
OTHER	9	3	4	0
TOTAL DUST	906	43	718	0
GRAND TOTAL	921	47	719	0

INTERPRETATION OF RESULTS:

= Number of Samples Received

ELEV= Elevated

BRL= Below Reporting Limit

UNSAT = Unsatisfactory

PAINT Positive in excess of 0.5%

SOIL Action level 400 - 5,000 ppm

DUST Clearance limits: Floor/Other 40 ug/sq ft
Window Sill 250 ug/sq ft
Window Well 400 ug/sq ft

VIRAL LOAD SPECIMENS (JUNE 2007)

JURISDICTION	HIV-1 RNA COPIES/ML				TOTALS
	<10 ³	10 ³ -10 ⁴	10 ⁴ -10 ⁵	>10 ⁵	
ALLEGANY	14	1	0	1	16
CHEVERLY HEALTH CTR	64	16	8	4	92
CLIFTON T. PERKINS	1	0	0	0	1
DYER/CLINTON CTR	17	2	2	1	22
FREDERICK	1	0	0	0	1
MONTGOMERY	74	15	20	4	113
SOMERSET	0	1	0	0	1
SPRINGFIELD HOSPITAL	2	0	0	0	2
WASHINGTON	3	2	2	0	7
WICOMICO	0	0	4	0	4
SUBTOTAL	176	37	36	10	259
DEPT OF CORRECTIONS	120	31	55	19	225
GRAND TOTAL	296	68	91	29	484

HIV ANTIBODY SCREENING – BLOOD (JUNE 2007)

SPECIMEN SOURCES	TOTAL	POSITIVE EIA	%	POSITIVE WB	%
HEALTH DEPARTMENTS AND CLINICS	2,645	117	4.42%	109	93.16%
HOSPITALS	118	6	5.08%	6	100.00%
DETENTION CENTERS	559	11	1.97%	7	63.63%
PRIVATE PHYSICIANS	9	0	0.00%	0	0.00%
STUDENT HEALTH CLINICS	115	1	0.87%	1	100.00%
EMPLOYEE HEALTH CLINICS	2	0	0.00%	0	0.00%
AUTOPSIES	337	18	5.34%	9	50.00%
ORGAN/TISSUE DONORS	65	2	3.06%	2	100.00%
TOTAL	3,850	155	4.03%	134	86.45%



MAILING LABEL

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