

CRITICAL LINK



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Secretary

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The Laboratories Administration—Maryland's State Public Health Laboratory

Bacteria levels in lake waters and their impact on the public

The Western Maryland Regional Laboratory monitors recreational waters to safeguard swimmers

The summer weather is still with us. Late summer vacations are in full swing for some. For others, who are going back to school while the weather is still warm, visiting a local recreational water source close to home can be a regular occurrence. Western Maryland has many attractions for local residents and out-of-state visitors. Hot, humid weather has urged many people to frequent the beaches and lakes of Western Maryland State parks. Swimming, wading, and boating in these waters is fun and relaxing. It offers a cool break from the high temperatures the summer weather has offered.

Many times, adults may not realize the contaminants that a beach or lake can present to their families and friends.

Many think that as long as the water is clear, then it is safe to swim or to participate in other water activities. This can be far from the truth and many need to realize that water activities in these waters are never risk free.¹ There are many things that we cannot see with the naked eye that are harmful to us. Bacteria and viruses are two major organisms that pose a threat to our health and may be lurking in the waters of bathing beaches and their lakes.² These

organisms can cause sickness at a high level of contamination. Signs of sickness from contaminated water may appear as a gastrointestinal illness with diarrhea, vomiting, nausea, and/or a stomach ache. Also a sore throat, cough, runny nose, cold, or fever can present as a respiratory illness acquired from contaminated water. Other sicknesses may include a skin rash, eye irritation, or an earache. Therefore, it is imperative that the public health officials monitor the bathing waters and lakes and assist to insure the health of the individuals who use them.³

In February 2005, the Maryland Department of Environment (MDE)



Photo 1: Lake Habeeb is a 243 acre man-made lake in Allegany County's Rocky Gap State Park, fed by Rocky Gap Run and Evitts Mountain. Photo credit: Jo Ann Flinn

became more diligent in monitoring our bathing beaches.⁴ Therefore, the increased monitoring forced the county health officials to sample the water more frequently and to give public notification of beach information.³ MDE describes a bathing beach as natural (fresh) waters used by the public for swimming, bathing, surfing, or other similar water activities. This would be a place where

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CRITICAL LINK

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people could become submerged in water or ingest the water. Memorial Day though Labor Day is the period in which the beaches are monitored and open for public use.⁴

It is required by the U.S. Environmental Protection Agency and Code of Maryland Regulations (COMAR) that the general public be offered timely and accurate water quality conditions at the bathing beaches.⁴ The beaches in Garrett and Allegany Counties are typically monitored bi-weekly by the County Health Departments and tested by the Western Maryland Regional Laboratory (WMRL.) These counties use *Escherichia coli* (*E. coli*), as an indicator for bathing beach monitoring of contamination. The test, Colilert, which tests for *E. coli* and is used by the WMRL, is far less costly and more reliable than other biological tests.² *E. coli* is referred to as an indicator organism because it is used to measure the water quality and hard-to-detect pathogenic organisms that may be present. The presence of *E. coli* is a sign of pathogenic organisms and conversely, the absence of *E. coli* signifies pathogenic organisms are absent.⁴ Indicator organisms, such as *E. coli*, are not always a pathogenic organism. Only some strains of *E. coli* are pathogenic this organism is used as an indicator as it is indicative of current fecal contamination.⁴ Fecal coliforms or contamination commonly originate from warm blooded animals, such as geese, ducks, and deer. This means a large number of the pathogens that can be found in the water are from untreated sewage or animal waste.² Indicator organisms also have a behavior, such as longevity and movement, in the environment similar to the actual pathogens that cause human sickness.⁴

In reality, bathing beaches do have some level of fecal contamination. It is the job of the public health officials to determine the amount of fecal contamination that is unsafe for the public to use these waters. The Environmental Protection Agency EPA

has set limits for water safety, which Maryland has adopted for public health officials to follow.⁴ Beaches are prioritized based upon utilization frequency, nature of use, and proximity of pollution sources. The highest priority is classified as Tier One and the lowest as Tier Three. Sample results are calculated based upon the geometric mean. The geometric mean is the average, which indicates the central tendency, or typical value of a set of numbers. It is similar to the arithmetic mean except that the numbers of the samples are multiplied together and then the nth root value is taken (where the "n" is the number of samples per beach).

For fresh water beaches using *E. coli* as the indicator test organism, the State has set the upper limit at 126 MPN per 100 milliliters. When beaches exceed this limit, a variety of actions may be taken by the public health authority, which includes resampling, sanitary surveys, public notice postings or closures.^{4,5} The samples that County Health Departments send to the WMRL, are tested for *E. coli* (the indicator) and based upon the results of the sample are given a most probable number (MPN). The MPN is a method of estimating the amount of microbial concentrations in the water of our bathing beaches.⁶ Water testing officials take multiple samples at the beaches to better depict the water quality. This also helps to increase the confidence in the water results and to make the best public health decisions concerning closures and advisories.⁴

Laughter and smiles radiate from these locations and all individuals deserve the best quality of health and safety from the environment. Therefore, the increased surveillance of our bathing beaches by MDE improves the water quality and makes it safer for the public. Providing more accurate and timely public information regarding the water quality to the recreationalists, allows them to use the information intelligently to make decisions that safeguard their health and safety. This should be a desire of all who use these recreational waters for their enjoyment.

This article written by Jo Ann Flinn.

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**Bacteria levels in lake waters
and their impact on the public**

References

- ¹ Maryland Department of the Environment. *MDE. Maryland Beaches*. <http://www.mde.state.md.us/programs/Water/Beaches/Pages/BeachesHome.aspx>
- ² Missouri Department of Natural Resources. *E. Coli Monitoring at the Lake of the Ozarks*. <http://www.dnr.mo.gov/pubs/index.html>
- ³ U.S. Environmental Protection Agency. *Protecting Our Nation's Beaches*. Maryland Beaches Program Workshop, March 16, 2006.
- ⁴ *Bacterial Geometric Mean Use Policy for Beach Managers*. Maryland Department of the Environment. Maryland Beaches Program. Technical and Regulatory Services Administration. February 2005.
- ⁵ Jim Swauger, Environmental Health, Allegany County Health Dept.
- ⁶ *Most Probable Number* http://filebox.vt.edu/users/chagedor/biol_4684/Methods/mpn1.html



Lake Habeeb has white sand beaches and Rocky Gap Lodge and golf course are lakeside. Photo credit: Jo Ann Flinn

Laboratory Statistics

Reported by the
Laboratories Administration
covering results from the month of
JUNE 2011

ENTERIC BACTERIOLOGY

GENUS SEROVAR
SEX AGE # JURISDICTION

CAMPYLOBACTER			
M	1	2	ALLEGANY
F	64	1	BALTIMORE
F	57	1	OUT OF STATE
M	0	1	OUT OF STATE

M	47	1	OUT OF STATE
CAMPYLOBACTER JEJUNI			
M	33	1	ALLEGANY
M	3	1	ALLEGANY
M	62	1	ANNE ARUNDEL
U	0	1	BALTIMORE
F	45	1	BALTIMORE
F	30	1	BALTIMORE
F	12	1	BALTIMORE
F	2	1	BALTIMORE
M	35	1	BALTIMORE
M	63	1	BALTIMORE CITY
M	55	1	BALTIMORE CITY
M	72	1	CHARLES
U	50	1	OUT OF STATE
F	36	1	OUT OF STATE
F	24	1	OUT OF STATE
M	23	1	OUT OF STATE
M	21	1	OUT OF STATE
M	2	1	OUT OF STATE
F	22	1	PRINCE GEORGE'S
M	17	1	WICOMICO
ESCHERICHIA COLI, SEROTYPE O157:H7			
U	6	1	CARROLL
SALMONELLA			
F	87	1	BALTIMORE CITY
F	2	1	FREDERICK
M	65	1	KENT
M	1	2	MONTGOMERY
M	5	1	OUT OF STATE
F	0	1	OUT OF STATE
SALMONELLA SER. ALTONA			
M	1	1	BALTIMORE
F	71	1	FREDERICK
SALMONELLA SER. ANATUM			
F	24	1	ANNE ARUNDEL
F	43	1	ANNE ARUNDEL
SALMONELLA SER. ENTERITIDIS			
F	0	1	BALTIMORE

F	52	1	BALTIMORE
U	0	1	BALTIMORE CITY
U	84	1	BALTIMORE CITY
U	84	1	BALTIMORE CITY
F	84	1	BALTIMORE CITY
F	66	1	BALTIMORE CITY
F	23	1	BALTIMORE CITY
F	22	1	BALTIMORE CITY
F	0	1	BALTIMORE CITY
M	2	1	BALTIMORE CITY
M	2	1	BALTIMORE CITY
M	9	1	CALVERT
F	61	1	CARROLL
M	54	1	FREDERICK
M	10	1	FREDERICK
F	28	2	HARFORD
F	52	1	KENT
F	28	1	OUT OF STATE
M	63	1	OUT OF STATE
M	57	1	OUT OF STATE
M	48	1	OUT OF STATE
M	29	1	OUT OF STATE
M	57	1	PRINCE GEORGE'S
SALMONELLA SER. INFANTIS			
M	74	1	ANNE ARUNDEL
M	7	1	OUT OF STATE
F	52	1	OUT OF STATE
M	50	1	OUT OF STATE
SALMONELLA SER. NEWPORT			
F	41	1	BALTIMORE
M	28	1	BALTIMORE
SALMONELLA SER. NORWICH			
F	0	1	CHARLES
F	73	1	OUT OF STATE
M	33	4	OUT OF STATE
SALMONELLA SER. PARATYPHI B			
F	67	1	BALTIMORE
F	67	3	BALTIMORE CITY

SALMONELLA SER. SAINTPAUL			
F	2	1	MONTGOMERY
SALMONELLA SER. SENFTENBERG			
M	61	1	BALTIMORE CITY
SALMONELLA SER. TYPHIMURIUM			
M	73	1	ALLEGANY
F	10	1	BALTIMORE CITY
F	30	1	OUT OF STATE
F	3	1	OUT OF STATE
M	1	1	OUT OF STATE
F	28	1	TALBOT
SHIGELLA FLEXNERI			
F	53	1	BALTIMORE CITY
SHIGELLA SONNEI			
F	50	1	OUT OF STATE
VIBRIO PARAHAEMOLYTICUS			
M	26	1	BALTIMORE
M	87	1	BALTIMORE CITY
M	51	1	BALTIMORE CITY
F	77	1	BALTIMORE CITY
YERSINIA ENTEROCOLITICA			
M	27	1	OUT OF STATE

TOTAL 94

ISOLATES - MISCELLANEOUS

GENUS SPECIES			
SOURCE	#	JURISDICTION	
ACINETOBACTER CALCOACETICUS-			
ACINETOBACTER BAUMANNI COMPLEX			
WOUND	1	PRINCE GEORGE'S	
SPUTUM	1	WASHINGTON	
ACINETOBACTER LWOFFI			
WOUND	1	PRINCE GEORGE'S	
CORYNEBACTERIUM SPECIES			
WOUND	1	BALTIMORE CITY	
ENTEROBACTER CLOACAE			
BLOOD	1	BALTIMORE CITY	
VAGINAL	1	PRINCE GEORGE'S	
ENTEROCOCCUS FAECALIS			
BLOOD	1	BALTIMORE CITY	
ENTEROCOCCUS GALLINARUM			
CSF	1	BALTIMORE CITY	
ESCHERICHIA COLI			
BLOOD	2	BALTIMORE CITY	
CSF	1	BALTIMORE CITY	
GARDNERELLA VAGINALIS			
VAGINAL	3	PRINCE GEORGE'S	
KLEBSIELLA PNEUMONIAE			
BLOOD	1	BALTIMORE CITY	
PSEUDOMONAS AERUGINOSA			
VAGINAL	1	MONTGOMERY	
SERRATIA MARCESCENS			
WOUND	1	CARROLL	
STAPHYLOCOCCUS AUREUS			
WOUND	1	BALTIMORE	
BLOOD	1	BALTIMORE CITY	
CSF	1	BALTIMORE CITY	
SKIN	1	BALTIMORE CITY	
WOUND	3	PRINCE GEORGE'S	
STREPTOCOCCUS,			
BETA HEMOLYTIC GROUP A			
BLOOD	1	BALTIMORE CITY	
STREPTOCOCCUS,			
BETA HEMOLYTIC NON-GROUP A			
THROAT	1	ALLEGANY	

STREPTOCOCCUS,			
BETA HEMOLYTIC GROUP B			
VAGINAL	3	ANNE ARUNDEL	
BLOOD	1	BALTIMORE CITY	
WOUND	1	CARROLL	
VAGINAL	1	PRINCE GEORGE'S	
VAGINAL	6	PRINCE GEORGE'S	
STAPHYLOCOCCUS,			
COAGULASE NEGATIVE			
BLOOD	1	BALTIMORE CITY	
CSF	1	BALTIMORE CITY	
STREPTOCOCCUS INTERMEDIUS			
BLOOD	1	BALTIMORE CITY	
STREPTOCOCCUS, VIRIDANS GROUP			
BLOOD	1	BALTIMORE CITY	

TOTAL 42

SEXUALLY TRANSMITTED DISEASES

GENUS SPECIES		
SEX	#	JURISDICTION

SYPHILIS SEROLOGY		
SEX	#	JURISDICTION
F	1	ALLEGANY
M	3	ANNE ARUNDEL
F	7	BALTIMORE
M	8	BALTIMORE
U	1	BALTIMORE
F	6	BALTIMORE CITY
M	24	BALTIMORE CITY
F	1	CARROLL
M	1	CHARLES
M	2	HARFORD
M	1	HOWARD
F	3	MONTGOMERY
M	9	MONTGOMERY
F	11	PRINCE GEORGE'S
M	37	PRINCE GEORGE'S
F	1	SAINT MARY'S
U	1	SOMERSET
F	1	TALBOT
M	1	UNKNOWN
F	1	WASHINGTON
F	3	WICOMICO
M	1	WICOMICO

TOTAL 124

CHLAMYDIA TRACHOMATIS		
SEX	#	JURISDICTION
F	1	ALLEGANY
M	2	ALLEGANY
F	22	ANNE ARUNDEL
M	10	ANNE ARUNDEL
U	1	ANNE ARUNDEL
F	25	BALTIMORE
M	9	BALTIMORE
U	1	BALTIMORE
F	17	BALTIMORE CITY
M	28	BALTIMORE CITY
F	5	CALVERT
M	6	CALVERT
F	1	CAROLINE
F	2	CARROLL
M	2	CARROLL
F	2	CECIL
M	3	CECIL

F	7	CHARLES
M	9	CHARLES
F	2	DORCHESTER
F	7	FREDERICK
M	3	FREDERICK
F	1	GARRETT
F	12	HARFORD
M	4	HARFORD
F	2	HOWARD
M	6	HOWARD
M	2	KENT
F	14	MONTGOMERY
M	6	MONTGOMERY
F	59	PRINCE GEORGE'S
M	48	PRINCE GEORGE'S
F	1	QUEEN ANNE'S
M	1	QUEEN ANNE'S
F	5	SAINT MARY'S
M	5	SAINT MARY'S
U	1	SAINT MARY'S
F	3	SOMERSET
M	4	SOMERSET
F	2	TALBOT
F	4	WASHINGTON
M	2	WASHINGTON
F	15	WICOMICO
M	10	WICOMICO
U	1	WICOMICO
F	1	WORCESTER
M	4	WORCESTER

TOTAL 378

NEISSERIA GONORRHOEA		
SEX	#	JURISDICTION
M	1	BALTIMORE
F	2	DORCHESTER
M	1	DORCHESTER
M	2	MONTGOMERY
F	13	PRINCE GEORGE'S
M	25	PRINCE GEORGE'S
M	1	WICOMICO

TOTAL 45

PENICILLIN-RESISTANT GONORRHEA

REPORTED QUARTERLY 01.01.2011 - 03.31.2011

SEX	AGE	#	JURISDICTION
M	18	1	MONTGOMERY
M	19	1	PRINCE GEORGE'S
F	18	1	PRINCE GEORGE'S
F	16	1	PRINCE GEORGE'S
M	21	1	PRINCE GEORGE'S
F	24	1	PRINCE GEORGE'S
F	30	1	PRINCE GEORGE'S
F	30	1	PRINCE GEORGE'S
F	37	1	PRINCE GEORGE'S
M	21	1	PRINCE GEORGE'S
M	36	1	PRINCE GEORGE'S

TOTAL 11

MYCOBACTERIUM SUSCEPTIBILITY RESULTS

14 ISOLATES IDENTIFIED

1 DRUG RESISTANT STRAIN FOUND

#	JURISDICTION	DRUG(S)
1	WASHINGTON DC	ISONIAZID

^A TWO ISOLATES FROM THE SAME PATIENT

^B PROBABLE FOR M. BOVIS

^C MEETS CASE DEFINITION OF MULTI-DRUG TUBERCULOSIS (MDRTB)

Mycobacterium tuberculosis complex consists of:

<i>M. tuberculosis</i>	<i>M. africanum</i>
<i>M. bovis</i>	<i>M. microti</i>
<i>M. bovis, BCG</i>	<i>M. canettii</i>

MYCOBACTERIOLOGY

ISOLATE	SEX	AGE	#	JURISDICTION
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ACID-FAST BACILLUS

F	55	1	BALTIMORE
M	22	1	BALTIMORE CITY
MYCOBACTERIUM AVIUM COMPLEX			
F	49	1	ANNE ARUNDEL
F	55	2	ANNE ARUNDEL
F	69	1	ANNE ARUNDEL
F	72	1	ANNE ARUNDEL
M	70	1	ANNE ARUNDEL
U	81	1	BALTIMORE
F	71	1	BALTIMORE
F	78	2	BALTIMORE
F	89	2	BALTIMORE
M	52	1	BALTIMORE
M	61	1	BALTIMORE
F	27	1	BALTIMORE CITY
F	30	1	BALTIMORE CITY
F	77	1	BALTIMORE CITY
F	78	3	BALTIMORE CITY
F	85	1	BALTIMORE CITY
F	54	1	FREDERICK
F	75	1	FREDERICK
F	87	1	FREDERICK
M	68	3	FREDERICK
F	67	1	HARFORD
F	56	1	MONTGOMERY
F	86	1	MONTGOMERY
M	40	2	OUT OF STATE
F	46	1	PRINCE GEORGE'S
F	80	1	WASHINGTON
M	48	1	WASHINGTON
M	60	1	WICOMICO
M	61	1	WICOMICO
M	62	1	WICOMICO
M	76	1	WICOMICO
MYCOBACTERIUM CHELONAE			
M	64	1	WICOMICO
MYCOBACTERIUM FORTUITUM			
M	76	1	WICOMICO
MYCOBACTERIUM FORTUITUM COMPLEX			
F	66	1	BALTIMORE
F	90	1	BALTIMORE CITY
M	40	1	FREDERICK
M	65	1	FREDERICK

M	45	2	MONTGOMERY
F	46	1	OUT OF STATE
M	33	1	OUT OF STATE
M	40	2	OUT OF STATE
M	80	1	PRINCE GEORGE'S
MYCOBACTERIUM GORDONAE			
M	42	1	BALTIMORE
M	83	1	BALTIMORE
M	84	1	BALTIMORE CITY
F	53	1	HOWARD
F	89	1	MONTGOMERY
F	38	1	OUT OF STATE
M	18	1	PRINCE GEORGE'S
M	80	1	PRINCE GEORGE'S
M	24	1	WICOMICO
M	62	1	WICOMICO
MYCOBACTERIUM KANSASII			
F	61	1	MONTGOMERY
MYCOBACTERIUM MARINUM			
M	42	1	ANNE ARUNDEL
M	67	1	ANNE ARUNDEL
M	61	1	BALTIMORE
M	58	1	TALBOT
M	68	1	TALBOT
MYCOBACTERIUM TUBERCULOSIS			
M	91	1	ANNE ARUNDEL
M	32	1	BALTIMORE
M	68	1	BALTIMORE
F	17	1	BALTIMORE CITY
F	35	2	BALTIMORE CITY
M	43	1	BALTIMORE CITY
M	81	1	BALTIMORE CITY
M	27	1	MONTGOMERY
M	35	1	MONTGOMERY
M	36	1	MONTGOMERY
M	45	1	MONTGOMERY
M	46	1	MONTGOMERY
M	61	1	MONTGOMERY
M	79	1	MONTGOMERY
F	81	1	OUT OF STATE
M	30	1	OUT OF STATE
M	46	1	OUT OF STATE
F	75	1	PRINCE GEORGE'S
M	14	1	PRINCE GEORGE'S
MYCOBACTERIUM TUBERCULOSIS COMPLEX			
F	37	1	ANNE ARUNDEL
F	38	1	BALTIMORE
F	83	1	BALTIMORE
M	32	2	BALTIMORE
M	68	6	BALTIMORE
M	80	1	BALTIMORE
F	29	1	BALTIMORE CITY
M	28	1	BALTIMORE CITY
M	34	2	BALTIMORE CITY
M	70	1	BALTIMORE CITY
M	71	1	BALTIMORE CITY
M	81	1	HOWARD
M	27	4	MONTGOMERY
M	35	1	MONTGOMERY
M	45	7	MONTGOMERY
M	46	5	MONTGOMERY
M	61	8	MONTGOMERY
F	21	1	OUT OF STATE
F	25	1	OUT OF STATE
F	29	1	OUT OF STATE
F	30	1	OUT OF STATE
F	52	1	OUT OF STATE
M	24	1	OUT OF STATE
M	30	1	OUT OF STATE
M	46	1	OUT OF STATE
M	72	1	OUT OF STATE
F	46	4	PRINCE GEORGE'S

M	14	2	PRINCE GEORGE'S
M	30	3	PRINCE GEORGE'S
M	62	1	PRINCE GEORGE'S
NON-PHOTOCHROMOGENIC MYCOBACTERIA			
M	56	2	ALLEGANY
F	51	1	OUT OF STATE
SCOTOCHROMOGENIC MYCOBACTERIA			
M	59	1	ANNE ARUNDEL
M	65	1	FREDERICK

TOTAL 158

PARASITOLOGY

GENUS/SPECIES	#	JURISDICTION
ASCARIS LUMBRICOIDES		
	1	FREDERICK
	2	MONTGOMERY
BLASTOCYSTIS HOMINIS		
	1	FREDERICK
	1	MONTGOMERY
	1	WICOMICO
	2	MONTGOMERY
	1	FREDERICK
CLONORCHIS	5	BALTIMORE CITY
CRYPTOSPORIDIUM		
	1	FREDERICK
DIENTAMOEBIA FRAGILIS	5	PRINCE GEORGE'S
ENDOLIMAX NANA		
	1	FREDERICK
	3	PRINCE GEORGE'S
	4	BALTIMORE CITY
	1	WICOMICO
	1	MONTGOMERY
	1	PRINCE GEORGE'S
	1	HOWARD
	1	HOWARD
ENTAMOEBIA COLI		
	2	MONTGOMERY
	1	FREDERICK
	1	PRINCE GEORGE'S
	1	WICOMICO
	3	MONTGOMERY
ENTAMOEBIA HARTMANNI		
	1	PRINCE GEORGE'S
	1	FREDERICK
	1	WASHINGTON
ENTEROBIUS VERMICULARIS		
	1	MONTGOMERY
	2	WASHINGTON
	2	FREDERICK
GIARDIA LAMBLIA		
	2	BALTIMORE CITY
	1	PRINCE GEORGE'S
	1	FREDERICK
	3	PRINCE GEORGE'S
	3	MONTGOMERY
	1	BALTIMORE CITY
	1	MONTGOMERY
	1	FREDERICK
HOOKWORM	1	HOWARD
IODAMOEBIA BÜTSCHLI		
	3	PRINCE GEORGE'S
	1	FREDERICK
OPISTHORCHIS		
	4	BALTIMORE CITY
PLASMODIUM FALCIPARUM		
	1	BALTIMORE CITY
TOTAL	71	

WATER MICROBIOLOGY

	# TESTED	# NON-COMPLIANT
COMMUNITY	0	0
NON-COMMUNITY	465	111
TOTAL	465	111

FOOD PROTECTION

TOTALS

FOOD

SAMPLES TESTED* 40

NOTABLE PATHOGENS:

CAMPYLOBACTER SP.
LISTERIA SPP.
SALMONELLA SPP.
EHEC/STEC
OTHER

CRABMEAT

SAMPLES TESTED 11

EXCEEDING STANDARDS¹ 0

NOTABLE PATHOGENS:

LISTERIA SPP.

SHELLFISH

SAMPLES TESTED 7

EXCEEDING STANDARDS² 2

SHELLFISH GROWING WATERS

NUMBER OF SAMPLES 689

OTHER

CLOSTRIDIUM BOTULINUM

*RETAIL MEAT TEST DATA NOT INCLUDED

STANDARDS

¹CRABMEAT FRESH

ESCHERICHIA COLI AT < 36 MPN/100 GRAMS

STANDARD PLATE COUNT AT < 100

²SHELLFISH

FECAL COLIFORMS AT < 230 MPN/100 GRAMS

STANDARD PLATE COUNT AT < 500,000 PER GRAM

VIRUS ISOLATION

ISOLATE
SEX AGE # JURISDICTION

ADENOVIRUS

M 2 1 MONTGOMERY
 HERPES SIMPLEX VIRUS TYPE 2
 F 18 1 TALBOT

TOTAL 2

VIRAL POLYMERASE CHAIN REACTION (PCR)

ISOLATE
SEX AGE # JURISDICTION

HERPES SIMPLEX VIRUS TYPE 1

U 19 1 ALLEGANY
 F 31 1 ANNE ARUNDEL
 F 24 1 BALTIMORE
 M 22 1 BALTIMORE
 U 30 1 BALTIMORE CITY
 F 15 1 BALTIMORE CITY
 F 16 1 BALTIMORE CITY
 F 23 1 BALTIMORE CITY
 F 26 1 BALTIMORE CITY
 M 22 1 BALTIMORE CITY
 F 21 1 CALVERT
 F 22 1 CALVERT
 M 18 1 CALVERT
 F 22 1 CARROLL
 F 25 1 CECIL
 F 21 1 FREDERICK
 F 33 1 HARFORD
 F 25 1 HOWARD
 F 28 1 HOWARD
 M 21 1 HOWARD
 F 23 1 MONTGOMERY
 M 32 1 MONTGOMERY
 F 20 2 PRINCE GEORGE'S
 F 24 1 PRINCE GEORGE'S
 M 20 1 PRINCE GEORGE'S
 M 24 1 PRINCE GEORGE'S
 M 31 1 PRINCE GEORGE'S
 F 21 1 WICOMICO
 F 22 1 WICOMICO

HERPES SIMPLEX VIRUS TYPE 1 AND TYPE 2

U 45 1 BALTIMORE CITY

HERPES SIMPLEX VIRUS TYPE 2

F 34 1 BALTIMORE
 M 30 1 BALTIMORE
 U 20 1 BALTIMORE CITY
 U 24 1 BALTIMORE CITY
 U 33 1 BALTIMORE CITY
 U 40 1 BALTIMORE CITY
 F 15 1 BALTIMORE CITY
 F 16 2 BALTIMORE CITY
 F 18 3 BALTIMORE CITY
 F 19 1 BALTIMORE CITY
 F 20 2 BALTIMORE CITY
 F 22 2 BALTIMORE CITY
 F 24 1 BALTIMORE CITY
 F 27 1 BALTIMORE CITY
 F 29 1 BALTIMORE CITY
 F 42 1 BALTIMORE CITY
 M 19 1 BALTIMORE CITY
 M 21 2 BALTIMORE CITY
 M 22 1 BALTIMORE CITY
 M 25 1 BALTIMORE CITY
 M 27 1 BALTIMORE CITY
 M 40 1 BALTIMORE CITY

M 47 1 BALTIMORE CITY
 M 68 1 BALTIMORE CITY
 M 23 1 CALVERT
 F 26 1 CARROLL
 F 26 1 CECIL
 F 23 1 CHARLES
 F 26 1 CHARLES
 M 35 1 FREDERICK
 F 18 1 HARFORD
 F 19 1 HARFORD
 F 22 1 HARFORD
 F 29 1 HARFORD
 F 40 1 HARFORD
 F 19 1 HOWARD
 F 21 1 MONTGOMERY
 F 27 1 MONTGOMERY
 F 35 1 MONTGOMERY
 F 37 1 MONTGOMERY
 M 23 1 MONTGOMERY
 F 18 1 PRINCE GEORGE'S
 F 21 1 PRINCE GEORGE'S
 F 23 1 PRINCE GEORGE'S
 F 25 1 PRINCE GEORGE'S
 F 26 1 PRINCE GEORGE'S
 F 29 1 PRINCE GEORGE'S
 F 30 1 PRINCE GEORGE'S
 F 31 1 PRINCE GEORGE'S
 F 32 1 PRINCE GEORGE'S
 F 34 1 PRINCE GEORGE'S
 M 16 1 PRINCE GEORGE'S
 M 26 3 PRINCE GEORGE'S
 M 33 1 PRINCE GEORGE'S
 F 23 1 SAINT MARY'S
 F 19 1 WICOMICO
 F 54 1 WICOMICO

TOTAL 96

VIRAL HEPATITIS

ORGANISM

ORGANISM	# SPECIMENS	# POSITIVES	JURISDICTION
	2	0	PRINCE GEORGE'S
HEPATITIS B	42	0	ALLEGANY
	104	2	ANNE ARUNDEL
	45	2	BALTIMORE
	433	6	BALTIMORE CITY
	9	0	CALVERT
	31	0	CARROLL
	121	2	CECIL
	1	0	CHARLES
	1	0	DORCHESTER
	15	0	FREDERICK
	18	0	GARRETT
	36	0	HARFORD
	27	0	HOWARD
	1	0	KENT
	417	4	MONTGOMERY
	284	5	PRINCE GEORGE'S
	3	0	QUEEN ANNE'S
	23	0	SAINT MARY'S
	1	0	SOMERSET
	5	0	TALBOT
	3	0	UNKNOWN
	40	1	WASHINGTON
	59	0	WICOMICO

SUBTOTAL 1,719 22

HEPATITIS C		
40	9	ALLEGANY
118	24	ANNE ARUNDEL
43	4	BALTIMORE
201	56	BALTIMORE CITY
9	0	CALVERT
34	7	CARROLL
59	3	CECIL
1	0	CHARLES
1	0	DORCHESTER
16	1	FREDERICK
22	1	GARRETT
69	5	HARFORD
12	2	HOWARD
1	0	KENT
158	4	MONTGOMERY
134	4	PRINCE GEORGE'S
5	0	QUEEN ANNE'S
22	1	SAINT MARY'S
4	0	TALBOT
1	0	UNKNOWN
14	0	WASHINGTON
14	0	WICOMICO

SUBTOTAL
978 121

TOTALS
2,697 143

RABIES

SOURCE	#	JURISDICTION
BAT	1	ANNE ARUNDEL
	2	BALTIMORE CITY
	2	MONTGOMERY
CAT	1	HOWARD
	2	SAINT MARY'S
	1	SOMERSET
FOX	1	CALVERT
GROUND HOG	1	PRINCE GEORGE'S
RACCOON	2	BALTIMORE
	1	BALTIMORE CITY
	1	CALVERT
	1	CECIL
	1	DORCHESTER
	2	FREDERICK
	2	HARFORD
	2	MONTGOMERY
	1	PRINCE GEORGE'S
	2	SOMERSET
	1	TALBOT
	1	WICOMICO

TOTAL POSITIVES 28

TOTAL SPECIMENS 463

CHLAMYDIOPHILIA PSITTACI (CHLAMYDIA)

REPORTED QUARTERLY
NONE REPORTED 04.01.2011 - 06.30.2011

VIRAL DISEASE ASSESSMENT - HIV

LYMPHOCYTE PHENOTYPING
(METHOD - FLOW CYTOMETRY)

DATES Quarterly comparison 2010-2011	% CD4 LYMPHOCYTES			TOTAL
	<14%	14%- 28%	≥29%	
04/01/2011 - 06/30/2011	119	328	265	712
04/01/2010 - 06/30/2010	150	416	306	872

VIRAL LOAD SPECIMENS

HIV-1 RNA COPIES/ML	<10 ³	10 ³ -10 ⁴	10 ⁴ -10 ⁵	>10 ⁵	TOTALS
ALLEGANY	14	1	1	0	16
FREDERICK	3	0	0	0	3
MONTGOMERY	53	7	5	2	67
PRINCE GEORGE'S	89	17	9	4	119
WASHINGTON	2	2	0	0	4
WICOMICO	1	0	1	0	2
SUBTOTALS	162	27	16	6	211
DEPT. OF CORRECTIONS	7	0	0	0	7
TOTALS	169	27	16	6	218

HIV ANTIBODY SCREENING

SUBMITTER	TOTAL SPECIMENS	#EIA POSITIVE	% EIA POSITIVE	#WB POSITIVE	% WB POSITIVE
CORRECTION FACILITY JUVENILE	128	0	0.00%	0	0.00%
CORRECTIONAL INSTITUTIONS	233	1	0.43%	0	0.00%
FAMILY PLANNING (NON-GOVERNMENT)	23	0	0.00%	0	0.00%
HEALTH CENTERS (NON-GOVERNMENT)	481	21	4.37%	19	90.48%
HLTH DEPT, NON-STD, FAMILY PLAN	355	0	0.00%	0	0.00%
HLTH DEPT, NON-STD, OB/GYN	26	0	0.00%	0	0.00%
HLTH DEPT, NON-STD, OTHER	532	55	10.34%	51	92.73%
HLTH DEPT, STD CLINICS	1,199	20	1.67%	17	85.00%
HOSPITAL, OTHER	126	7	5.56%	6	85.71%
HOSPITAL, PUBLIC	42	2	4.76%	2	0.00%
LABORATORIES (NON-HOSPITAL)	358	14	3.91%	5	35.71%
PEDIATRIC - CHILD HEALTH	3	0	0.00%	0	0.00%
PRIVATE STUDENT HEALTH CTRS	9	0	0.00%	0	0.00%
PUBLIC STUDENT HEALTH CTRS	53	0	0.00%	0	0.00%
UNKNOWN, NOT SPECIFIED	2	0	0.00%	0	0.00%
TOTALS	3,570	120	3.36%	100	83.33%

**NEWBORN & CHILDHOOD SCREENING
PRESUMPTIVE POSITIVES**

DISORDERS	#
PHENYLKETONURIA (PKU)	9
MAPLE SYRUP URINE DISEASE (MSUD)	8
HOMOCYSTINURIA	21
TYROSINEMIA	11
ARGININEMIA	3
CITRULLINEMIA	0
GALACTOSEMIA	1
BIOTINIDASE DEFICIENCY	17
HYPOTHYROIDISM	90
HEMOGLOBIN -DISEASE	18
HEMOGLOBIN -BENIGN	524
CONGENITAL ADRENAL HYPERPLASIA (CAH)	19
CYSTIC FIBROSIS	2
FATTY ACID OXIDATIONS	15
ORGANIC ACIDEMIAS	15
ACYLCARNITINE - BORDERLINE	9
ACYLCARNITINE - OTHERS	0

MONTHLY TOTALS

# OF SPECIMENS SCREENED	13,192
NUMBER OF TESTS	720,111
% UNSATISFACTORY SPECIMENS	1.8

2011 YEAR-TO-DATE CONFIRMED CASES

CONDITIONS	# CONFIRMED
3-METHYLCROTONYL-CoA CARBOXYLASE DEFICIENCY (3-MCC)	1
MEDIUM CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (MCAD)	2
SHORT CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (SCAD)	4
VERY LONG-CHAIN ACY-Co-A DEHYDROGENASE DEFICIENCY (VLCAD) - CARRIER	2
CARNITINE DEFICIENCY (MATERNAL)	1
CARNITINE UPTAKE DEFICIENCY (CUD)	1
CITRULLINEMIA (CIT)	1
TYROSINEMIA III	1
CLASSICAL PHENYLKETONURIA (PKU)	2
HYPERPHENYLALANINEMIA	1
HYPOTHYROIDISM - PRIMARY	21
OTHER HYPOTHYROIDISM	4
TBG DEFICIENCY	4
CONGENITAL ADRENAL HYPERPLASIA-SALT WASTING	1
BIOTINIDASE DEFICIENCY - CARRIER	1
BIOTINIDASE DEFICIENCY - PARTIAL	2
PROBABLE BIOTINIDASE CARRIER	3
PROBABLE GN	1
CYSTIC FIBROSIS	6
GALACTOSEMIA - VARIANT -DG	1
GALACTOSEMIA - VARIANT -DN	1
SICKLE CELL DISEASE -SS	11
SICKLE CELL DISEASE -SC	8
SICKLE CELL DISEASE -SV	1
SICKLE CELL TRAIT - FAS	1

ENVIRONMENTAL CHEMISTRY

SAMPLE TYPES	# NON-COMPLIANT	# TESTED
ASBESTOS		
AIR	0	0
BULK	10	21
AIR QUALITY		
PM _{2.5}	0	271
RADIATION		
AIR/CHARCOAL FILTERS	0	78
MILK	0	0
WIPES	0	39
RAW WATER	0	13
VEGETATION	0	0
OTHER	0	10
DRINKING WATER		
METALS		
COMMUNITY	6	14
NON-COMMUNITY	4	16
PRIVATE WELLS	26	148
PESTICIDES & PCBs		
COMMUNITY	1	125
NON-COMMUNITY	0	101
PRIVATE WELLS	0	1
VOLATILE ORGANIC COMPOUNDS		
COMMUNITY	1	89
NON-COMMUNITY	0	180
PRIVATE WELLS	0	73
RADIATION		
COMMUNITY	2	50
NON-COMMUNITY	0	0
PRIVATE WELLS	0	23
INORGANICS		
COMMUNITY	0	7
NON-COMMUNITY	3	113
PRIVATE WELLS	6	136
FOOD CHEMISTRY		
SUSPECTED TAMPERING	0	0
MICROSCOPIC FILTH	0	0
LABELING	0	0
SURVEILLANCE	0	0
CHEMICAL CONTAMINATION	0	0
TOTAL	59	1,508

The services and facilities of the Maryland Department of Health and Mental Hygiene (DHMH) are operated on a non-discriminatory basis. This policy prohibits discrimination on the basis of age; ancestry; color; creed; marital status; mental or physical disability; national origin; race; religious affiliation, belief, or opinion; sex; or sexual orientation and plies to the provisions of employment and granting of advantages, privileges and accommodations.

The Department, in compliance with the Americans with Disabilities Act, ensures that qualified individuals with disabilities are given an opportunity to participate in and benefit from DHMH services, programs, benefits, and employment opportunities.

Laboratory Statistics

Reported by the
Laboratories Administration
 covering results from the month of
JULY 2011

ENTERIC BACTERIOLOGY

GENUS SEROVAR

SEX	AGE	#	JURISDICTION
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CAMPYLOBACTER

F	35	1	BALTIMORE
F	64	1	OUT OF STATE
F	2	1	OUT OF STATE
F	1	1	OUT OF STATE
M	47	1	OUT OF STATE
M	15	1	OUT OF STATE
U	21	1	TALBOT

CAMPYLOBACTER JEJUNI

F	48	1	BALTIMORE
F	47	1	BALTIMORE
F	22	1	BALTIMORE
F	6	1	BALTIMORE
M	53	1	BALTIMORE
M	42	1	BALTIMORE
M	28	1	BALTIMORE
M	14	1	BALTIMORE
F	45	1	BALTIMORE CITY
M	30	1	BALTIMORE CITY
F	17	1	MONTGOMERY
M	35	1	MONTGOMERY
U	45	1	OUT OF STATE
U	30	1	OUT OF STATE
F	65	1	OUT OF STATE
F	56	1	OUT OF STATE
M	62	1	OUT OF STATE
M	61	1	OUT OF STATE
M	59	1	OUT OF STATE
M	53	1	OUT OF STATE
M	53	1	OUT OF STATE
M	41	1	OUT OF STATE
M	37	1	OUT OF STATE
M	37	1	OUT OF STATE
M	32	1	OUT OF STATE
M	27	1	OUT OF STATE
M	25	1	OUT OF STATE
M	10	1	OUT OF STATE
M	2	1	OUT OF STATE
M	1	1	OUT OF STATE

F	42	1	TALBOT
M	42	2	TALBOT
CAMPYLOBACTER SPECIES			
F	33	1	OUT OF STATE
ESCHERICHIA COLI, SEROTYPE O157:H7			
F	5	6	BALTIMORE
F	5	1	BALTIMORE CITY
U	14	1	OUT OF STATE
U	14	1	OUT OF STATE
F	2	1	WASHINGTON
SALMONELLA			
F	53	1	ALLEGANY
U	0	1	ANNE ARUNDEL
F	4	1	BALTIMORE
F	92	1	BALTIMORE CITY
F	86	3	BALTIMORE CITY
F	48	1	BALTIMORE CITY
M	60	1	CARROLL
M	4	1	FREDERICK
M	1	2	MONTGOMERY
M	4	1	OUT OF STATE
M	4	1	OUT OF STATE
M	68	1	PRINCE GEORGE'S
M	0	1	WICOMICO
SALMONELLA SER. 4,12:I:-			
F	24	1	BALTIMORE
SALMONELLA SER. 4,5,12:I:-			
F	1	1	KENT
U	5	1	TALBOT
SALMONELLA SER. AGONA			
M	59	1	HOWARD
M	59	1	MONTGOMERY
SALMONELLA SER. ENTERITIDIS			
F	21	1	ANNE ARUNDEL
F	45	1	BALTIMORE
F	10	1	BALTIMORE
M	13	2	BALTIMORE
M	6	1	BALTIMORE
U	0	1	BALTIMORE CITY
U	58	2	BALTIMORE CITY
F	72	1	BALTIMORE CITY
F	46	1	BALTIMORE CITY
F	45	1	BALTIMORE CITY
F	25	1	BALTIMORE CITY
F	12	1	BALTIMORE CITY
F	11	1	BALTIMORE CITY
M	60	1	BALTIMORE CITY
M	50	1	BALTIMORE CITY
M	12	1	BALTIMORE CITY
M	11	1	BALTIMORE CITY
M	5	1	BALTIMORE CITY
U	26	1	BALTIMORE CITY
F	28	2	HARFORD
M	28	1	MONTGOMERY
F	70	1	OUT OF STATE
F	55	1	OUT OF STATE
F	37	1	OUT OF STATE
F	2	1	OUT OF STATE
M	51	1	OUT OF STATE
M	48	1	OUT OF STATE
M	27	1	OUT OF STATE
M	26	1	OUT OF STATE
M	25	1	OUT OF STATE
M	14	1	OUT OF STATE
M	8	1	OUT OF STATE
F	38	1	PRINCE GEORGE'S
F	28	1	PRINCE GEORGE'S

F	18	1	PRINCE GEORGE'S
M	3	1	TALBOT
SALMONELLA SER. HEIDELBERG			
M	32	1	OUT OF STATE
SALMONELLA SER. INFANTIS			
F	73	1	ANNE ARUNDEL
SALMONELLA SER. JAVIANA			
M	47	1	WICOMICO
M	22	1	WICOMICO
SALMONELLA SER. NEWPORT			
F	41	1	BALTIMORE CITY
SALMONELLA SER. NORWICH			
M	23	2	CALVERT
SALMONELLA SER. ORANIENBURG			
M	27	1	OUT OF STATE
F	28	3	OUT OF STATE
SALMONELLA SER. PARATYPHI B VAR L (+) TARTRATE +			
F	11	1	BALTIMORE
SALMONELLA SER. SAINTPAUL			
F	67	1	OUT OF STATE
SALMONELLA SER. SENFTENBERG			
U	61	1	BALTIMORE CITY
M	0	1	BALTIMORE CITY
M	61	1	BALTIMORE CITY
SALMONELLA SER. TYPHI			
F	69	2	HARFORD
SALMONELLA SER. TYPHIMURIUM			
M	78	1	ALLEGANY
M	73	1	ALLEGANY
M	19	1	BALTIMORE
U	53	1	BALTIMORE CITY
F	79	1	BALTIMORE CITY
M	54	1	BALTIMORE CITY
F	8	1	MONTGOMERY
M	15	1	MONTGOMERY
F	1	1	OUT OF STATE
M	3	1	OUT OF STATE
F	63	2	WASHINGTON
F	60	1	WASHINGTON
SALMONELLA SER. UNTYPEABLE			
F	62	1	ANNE ARUNDEL
SHIGELLA FLEXNERI			
F	4	1	BALTIMORE
M	3	1	MONTGOMERY
SHIGELLA FLEXNERI II:3,4			
M	25	1	BALTIMORE CITY
U	0	1	UNKNOWN
SHIGELLA SONNEI			
M	25	1	BALTIMORE CITY
M	59	1	BALTIMORE CITY
VIBRIO PARAHAEMOLYTICUS			
M	4	1	WORCESTER

TOTAL 150

ISOLATES - MISCELLANEOUS

GENUS SPECIES		
SOURCE	#	JURISDICTION
ENTEROBACTER CLOACAE		
VAGINAL	1	PRINCE GEORGE'S
ENTEROCOCCUS FAECIUM		
CSF	1	BALTIMORE CITY
ESCHERICHIA COLI		
BLOOD	1	BALTIMORE CITY

WOUND	1	FREDERICK
VAGINAL	1	PRINCE GEORGE'S
GARDNERELLA VAGINALIS		
VAGINAL	1	PRINCE GEORGE'S
KLEBSIELLA OXYTOCA		
BLOOD	1	BALTIMORE CITY
KLEBSIELLA PNEUMONIAE		
BLOOD	1	BALTIMORE CITY
PSEUDOMONAS PUTIDA		
BLOOD	1	BALTIMORE CITY
STAPHYLOCOCCUS AUREUS		
WOUND	1	ALLEGANY
BLOOD	1	BALTIMORE CITY
CSF	1	BALTIMORE CITY
OTHER	2	BALTIMORE CITY
SKIN	1	BALTIMORE CITY
NASAL	1	CARROLL
SKIN	1	CARROLL
WOUND	1	CARROLL
SPUTUM	1	WASHINGTON
STAPHYLOCOCCUS,		
COAGULASE NEGATIVE		
BLOOD	1	BALTIMORE CITY
WOUND	1	PRINCE GEORGE'S
STREPTOCOCCUS,		
BETA HEMOLYTIC NON GROUP A		
THROAT	1	ALLEGANY
STREPTOCOCCUS		
BETA HEMOLYTIC GROUP B		
VAGINAL	4	ANNE ARUNDEL
VAGINAL	1	PRINCE GEORGE'S
VAGINAL	2	PRINCE GEORGE'S
STREPTOCOCCUS ORALIS		
CSF	1	BALTIMORE CITY

TOTAL 30

SEXUALLY TRANSMITTED DISEASES

GENUS SPECIES		
SEX	#	JURISDICTION

SYPHILIS SEROLOGY		
M	3	ANNE ARUNDEL
F	6	BALTIMORE
M	8	BALTIMORE
U	1	BALTIMORE
F	11	BALTIMORE CITY
M	16	BALTIMORE CITY
M	1	DORCHESTER
M	2	FREDERICK
M	1	HARFORD
M	1	HOWARD
F	5	MONTGOMERY
M	11	MONTGOMERY
F	6	PRINCE GEORGE'S
M	24	PRINCE GEORGE'S
U	1	PRINCE GEORGE'S
F	1	TALBOT
F	1	WASHINGTON
F	1	WICOMICO
M	2	WICOMICO
U	1	WORCESTER

TOTAL 103

CHLAMYDIA TRACHOMATIS		
F	3	ALLEGANY
M	3	ALLEGANY
F	21	ANNE ARUNDEL
M	10	ANNE ARUNDEL
F	18	BALTIMORE
M	15	BALTIMORE
U	1	BALTIMORE
F	13	BALTIMORE CITY

M	20	BALTIMORE CITY
F	4	CALVERT
M	3	CALVERT
F	1	CAROLINE
M	3	CAROLINE
F	2	CARROLL
M	3	CARROLL
F	3	CECIL
M	3	CECIL
F	12	CHARLES
M	6	CHARLES
F	2	DORCHESTER
F	1	FREDERICK
M	5	FREDERICK
F	1	GARRETT
F	6	HARFORD
M	5	HARFORD
F	10	HOWARD
M	3	HOWARD
F	1	KENT
M	1	KENT
F	4	MONTGOMERY
M	7	MONTGOMERY
F	34	PRINCE GEORGE'S
M	51	PRINCE GEORGE'S
F	1	QUEEN ANNE'S
M	1	QUEEN ANNE'S
U	1	QUEEN ANNE'S
F	3	SAINT MARY'S
M	4	SAINT MARY'S
F	2	SOMERSET
M	3	SOMERSET
F	1	TALBOT
M	1	TALBOT
F	3	WASHINGTON
F	10	WICOMICO
M	5	WICOMICO
F	1	WORCESTER
M	1	WORCESTER

TOTAL 312

NEISSERIA GONORRHOEAE		
M	2	MONTGOMERY
F	5	PRINCE GEORGE'S
M	13	PRINCE GEORGE'S

TOTAL 20

MYCOBACTERIOLOGY

ISOLATE			
SEX	AGE	#	JURISDICTION

ACID-FAST BACILLUS			
M	61	1	BALTIMORE CITY
F	30	1	HOWARD
MYCOBACTERIUM ABSCESSUS			
F	90	1	BALTIMORE
MYCOBACTERIUM AVIUM COMPLEX			
M	70	2	ANNE ARUNDEL
F	50	1	BALTIMORE
F	53	2	BALTIMORE
F	78	1	BALTIMORE
M	51	1	BALTIMORE
M	66	1	BALTIMORE
M	68	1	BALTIMORE
U	76	1	BALTIMORE
F	41	1	BALTIMORE CITY
F	59	1	BALTIMORE CITY
F	82	1	BALTIMORE CITY
F	85	1	BALTIMORE CITY
F	73	1	FREDERICK
F	86	1	FREDERICK

F	67	1	HARFORD
F	86	1	MONTGOMERY
F	87	1	OUT OF STATE
F	46	1	PRINCE GEORGE'S
F	45	2	TALBOT
F	72	1	WICOMICO
MYCOBACTERIUM CHELONAE			
F	70	1	ANNE ARUNDEL
M	63	1	BALTIMORE CITY
M	71	1	MONTGOMERY
MYCOBACTERIUM FORTUITUM COMPLEX			
M	53	1	ANNE ARUNDEL
F	68	1	BALTIMORE
F	64	1	MONTGOMERY
M	71	2	MONTGOMERY
M	45	1	PRINCE GEORGE'S
MYCOBACTERIUM GORDONAE			
F	70	1	BALTIMORE
M	87	1	BALTIMORE
F	73	1	FREDERICK
F	45	1	OUT OF STATE
MYCOBACTERIUM KANSASII			
F	45	1	BALTIMORE CITY
M	44	1	PRINCE GEORGE'S
MYCOBACTERIUM MARINUM			
M	42	1	ANNE ARUNDEL
M	71	1	BALTIMORE CITY
F	41	1	CALVERT
M	70	1	CALVERT
MYCOBACTERIUM TUBERCULOSIS			
F	62	1	ANNE ARUNDEL
M	43	1	ANNE ARUNDEL
F	38	1	BALTIMORE
U	38	1	BALTIMORE
F	28	1	BALTIMORE CITY
M	28	1	BALTIMORE CITY
M	72	1	MONTGOMERY
F	77	1	OUT OF STATE
M	0	1	OUT OF STATE
M	80	1	OUT OF STATE
F	33	1	PRINCE GEORGE'S
M	24	1	PRINCE GEORGE'S
M	28	1	PRINCE GEORGE'S
M	49	1	PRINCE GEORGE'S
MYCOBACTERIUM TUBERCULOSIS COMPLEX			
M	43	2	ANNE ARUNDEL
F	28	3	BALTIMORE
M	68	6	BALTIMORE
M	34	1	BALTIMORE CITY
M	61	1	BALTIMORE CITY
M	91	2	CALVERT
M	81	4	HOWARD
M	27	1	MONTGOMERY
M	45	3	MONTGOMERY
M	61	2	MONTGOMERY
M	46	5	OUT OF STATE
M	80	1	OUT OF STATE
F	46	1	PRINCE GEORGE'S
M	24	3	PRINCE GEORGE'S
M	39	3	PRINCE GEORGE'S
M	49	2	PRINCE GEORGE'S
NON-PHOTOCHROMOGENIC MYCOBACTERIA			
M	51	1	BALTIMORE
RAPIDLY GROWING MYCOBACTERIA			
F	61	1	MONTGOMERY
M	80	1	OUT OF STATE
SCOTOCHROMOGENIC MYCOBACTERIA			
F	76	2	MONTGOMERY
M	45	1	MONTGOMERY
M	74	1	WICOMICO
TOTAL	106		

MYCOBACTERIUM SUSCEPTIBILITY RESULTS

14 ISOLATES IDENTIFIED

1 DRUG RESISTANT STRAIN FOUND

#	JURISDICTION	DRUG(S)
1	MONTGOMERY	STREPTOMYCIN

^A TWO ISOLATES FROM THE SAME PATIENT

^B PROBABLE FOR M. BOVIS

^C MEETS CASE DEFINITION OF MULTI-DRUG TUBERCULOSIS (MDRTB)

Mycobacterium tuberculosis complex

consists of:

<i>M. tuberculosis</i>	<i>M. africanum</i>
<i>M. bovis</i>	<i>M. microti</i>
<i>M. bovis, BCG</i>	<i>M. canettii</i>

PARASITOLOGY

GENUS/SPECIES	#	JURISDICTION
BLASTOCYSTIS HOMINIS		
	2	MONTGOMERY
	1	PRINCE GEORGE'S
	2	HOWARD
	3	PRINCE GEORGE'S
	1	MONTGOMERY
	1	HOWARD
	1	PRINCE GEORGE'S
	2	HOWARD
DIENTAMOEBIA FRAGILIS		
	4	MONTGOMERY
ENDOLIMAX NANA		
	3	PRINCE GEORGE'S
	1	HOWARD
	1	MONTGOMERY
	1	PRINCE GEORGE'S
	1	MONTGOMERY
	1	PRINCE GEORGE'S
	1	HOWARD
	3	MONTGOMERY
	2	HOWARD
	2	PRINCE GEORGE'S
	1	MONTGOMERY
ENTAMOEBIA COLI		
	1	HOWARD
	3	PRINCE GEORGE'S
	2	HOWARD
	3	PRINCE GEORGE'S
	6	MONTGOMERY
ENTAMOEBIA HARTMANNI		
	1	PRINCE GEORGE'S
	1	MONTGOMERY
	1	HOWARD
GIARDIA LAMBLIA		
	4	PRINCE GEORGE'S
	1	HOWARD
	1	PRINCE GEORGE'S
HYMENOLEPIS NANA		
	2	MONTGOMERY
IODAMOEBIA BÜTSCHLI		
	1	BALTIMORE CITY
	1	OUT OF STATE
PLASMODIUM FALCIPARUM		
	2	HOWARD
TRICHURIS TRICHIURA		
	4	HOWARD
TOTAL	68	

WATER MICROBIOLOGY

	# TESTED	# NON-COMPLIANT
COMMUNITY	3	1
NON-COMMUNITY	429	92
TOTAL	432	93

FOOD PROTECTION

	TOTALS
FOOD	
SAMPLES TESTED*	40
NOTABLE PATHOGENS:	
<i>CAMPYLOBACTER SP.</i>	
<i>LISTERIA SPP.</i>	
<i>SALMONELLA SPP.</i>	
<i>EHEC/STEC</i>	
OTHER	

CRABMEAT	
SAMPLES TESTED	2
EXCEEDING STANDARDS ¹	0
NOTABLE PATHOGENS:	
<i>LISTERIA SPP.</i>	

SHELLFISH	
SAMPLES TESTED	6
EXCEEDING STANDARDS ²	0

SHELLFISH GROWING WATERS	
NUMBER OF SAMPLES	407

OTHER	
<i>CLOSTRIDIUM BOTULINUM</i>	0

*RETAIL MEAT TEST DATA NOT INCLUDED

STANDARDS

¹CRABMEAT FRESH
ESCHERICHIA COLI AT < 36 MPN/100 GRAMS
STANDARD PLATE COUNT AT < 100

²SHELLFISH
FECAL COLIFORMS AT < 230 MPN/100 GRAMS
STANDARD PLATE COUNT AT < 500,000 PER GRAM

VIRUS ISOLATION

ISOLATE	SEX	AGE	#	JURISDICTION
ECHOVIRUS 18	M	4	1	BALTIMORE
TOTAL			1	

**VIRAL POLYMERASE
CHAIN REACTION (PCR)**

ISOLATE			
SEX	AGE	#	JURISDICTION
ENTEROVIRUS			
M	16	1	BALTIMORE
HERPES SIMPLEX VIRUS TYPE 1			
F	19	1	ALLEGANY
F	28	1	ANNE ARUNDEL
F	32	1	ANNE ARUNDEL
F	31	1	BALTIMORE
U	17	1	BALTIMORE CITY
U	18	2	BALTIMORE CITY
F	17	1	BALTIMORE CITY
F	22	1	BALTIMORE CITY
M	25	1	BALTIMORE CITY
F	16	1	CALVERT
F	24	1	CALVERT
F	18	1	CHARLES
F	25	1	CHARLES
F	44	1	FREDERICK
M	24	1	FREDERICK
F	17	1	HARFORD
F	20	1	HOWARD
F	22	1	HOWARD
M	30	1	MONTGOMERY
F	18	1	PRINCE GEORGE'S
M	22	1	PRINCE GEORGE'S
F	21	1	QUEEN ANNE'S
F	15	1	WICOMICO
HERPES SIMPLEX VIRUS TYPE 1 AND TYPE 2			
F	17	1	PRINCE GEORGE'S
F	40	1	WASHINGTON
HERPES SIMPLEX VIRUS TYPE 2			
M	28	1	ANNE ARUNDEL
F	20	1	BALTIMORE
F	28	1	BALTIMORE
F	46	1	BALTIMORE
U	0	1	BALTIMORE CITY
U	20	1	BALTIMORE CITY
U	26	1	BALTIMORE CITY
U	29	1	BALTIMORE CITY
U	36	1	BALTIMORE CITY
F	0	2	BALTIMORE CITY
F	18	1	BALTIMORE CITY
F	19	2	BALTIMORE CITY
F	20	2	BALTIMORE CITY
F	21	1	BALTIMORE CITY
F	22	1	BALTIMORE CITY
F	24	1	BALTIMORE CITY
F	25	1	BALTIMORE CITY
F	28	1	BALTIMORE CITY
F	31	1	BALTIMORE CITY
F	35	1	BALTIMORE CITY
F	36	1	BALTIMORE CITY
F	46	1	BALTIMORE CITY
F	57	1	BALTIMORE CITY
M	19	2	BALTIMORE CITY
M	21	1	BALTIMORE CITY
M	24	2	BALTIMORE CITY
M	25	3	BALTIMORE CITY
M	28	2	BALTIMORE CITY
M	30	1	BALTIMORE CITY
M	37	1	BALTIMORE CITY
M	38	1	BALTIMORE CITY
M	53	1	BALTIMORE CITY

M	56	1	BALTIMORE CITY
M	61	1	BALTIMORE CITY
F	20	1	CALVERT
F	49	1	CARROLL
M	22	1	CARROLL
F	39	1	CHARLES
F	40	1	FREDERICK
F	26	1	MONTGOMERY
M	29	1	MONTGOMERY
M	40	1	MONTGOMERY
M	29	1	PRINCE GEORGE'S
M	39	1	PRINCE GEORGE'S
M	42	1	PRINCE GEORGE'S
F	47	1	QUEEN ANNE'S
F	41	1	WASHINGTON
M	20	1	WASHINGTON
F	20	2	WICOMICO
F	25	1	WICOMICO
INFLUENZA A(H3)			
M	9	1	MONTGOMERY
TOTAL 87			

VIRAL HEPATITIS

ORGANISM	# SPECIMENS	# POSITIVES	JURISDICTION
HEPATITIS A			
	2	0	BALTIMORE
	1	0	BALTIMORE CITY
	1	0	CARROLL
SUBTOTAL 4 0			
HEPATITIS B			
	52	0	ALLEGANY
	76	2	ANNE ARUNDEL
	25	0	BALTIMORE
	356	12	BALTIMORE CITY
	3	0	CALVERT
	20	1	CARROLL
	88	0	CECIL
	2	0	CHARLES
	21	0	FREDERICK
	15	0	GARRETT
	20	2	HARFORD
	17	0	HOWARD
	1	0	KENT
	321	6	MONTGOMERY
	237	5	PRINCE GEORGE'S
	19	0	SAINT MARY'S
	7	0	TALBOT
	39	0	WASHINGTON
	56	0	WICOMICO
	1	0	WORCESTER
SUBTOTAL 1,376 28			
HEPATITIS C			
	54	3	ALLEGANY
	81	13	ANNE ARUNDEL
	33	1	BALTIMORE
	167	40	BALTIMORE CITY
	6	0	CALVERT

23	2	CARROLL
43	4	CECIL
1	0	CHARLES
1	1	DORCHESTER
20	2	FREDERICK
18	1	GARRETT
55	2	HARFORD
4	1	HOWARD
1	0	KENT
101	4	MONTGOMERY
131	6	PRINCE GEORGE'S
2	0	QUEEN ANNE'S
19	1	SAINT MARY'S
1	0	SOMERSET
7	0	TALBOT
37	3	WASHINGTON
8	0	WICOMICO
1	0	WORCESTER
SUBTOTAL 814 84		
TOTALS 2,194 112		

RABIES

SOURCE	#	JURISDICTION
BAT		
	5	BALTIMORE CITY
	1	FREDERICK
	1	HARFORD
	1	HOWARD
	2	MONTGOMERY
	2	PRINCE GEORGE'S
CAT		
	1	BALTIMORE
FOX		
	1	CALVERT
	1	FREDERICK
	1	TALBOT
GROUND HOG		
	1	MONTGOMERY
RACCOON		
	1	BALTIMORE CITY
	1	CHARLES
	1	DORCHESTER
	1	FREDERICK
	1	HOWARD
SKUNK		
	1	CHARLES
TOTAL POSITIVES 23		
TOTAL SPECIMENS 419		

**CHLAMYDIOPHILIA PSITTACI
(CHLAMYDIA)**

REPORTED QUARTERLY
NO REPORT THIS MONTH

CD4 FLOW CYTOMETRY WORKLOAD

REPORTED QUARTERLY
NO REPORT THIS MONTH

**NEWBORN & CHILDHOOD SCREENING
PRESUMPTIVE POSITIVES**

DISORDERS	#
PHENYLKETONURIA (PKU)	24
MAPLE SYRUP URINE DISEASE (MSUD)	7
HOMOCYSTINURIA	14
TYROSINEMIA	5
ARGININEMIA	7
CITRULLINEMIA	2
GALACTOSEMIA	0
BIOTINIDASE DEFICIENCY	6
HYPOTHYROIDISM	58
HEMOGLOBIN -DISEASE	14
HEMOGLOBIN -BENIGN	487
CONGENITAL ADRENAL HYPERPLASIA (CAH)	12
CYSTIC FIBROSIS	2
FATTY ACID OXIDATIONS	29
ORGANIC ACIDEMIAS	29
ACYLCARNITINE - BORDERLINE	7
ACYLCARNITINE - OTHERS	0

MONTHLY TOTALS

# OF SPECIMENS SCREENED	13,007
NUMBER OF TESTS	886,635
% UNSATISFACTORY SPECIMENS	1.8

2011 YEAR-TO-DATE CONFIRMED CASES

CONDITIONS	# CONFIRMED
2-METHYLBUTYRUL-CoA DEHYDROGENASE DEFICIENCY (2MBCD)	1
3-METHYLCROTONYL-CoA CARBOXYLASE DEFICIENCY (3-MCC)	1
MEDIUM CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (MCAD)	2
SHORT CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (SCAD)	5
VERY LONG-CHAIN ACY-Co-A DEHYDROGENASE DEFICIENCY (VLCAD) - CARRIER	3
CARNITINE DEFICIENCY (MATERNAL)	1
CARNITINE UPTAKE DEFICIENCY (CUD)	1
PROPIONIC ACIDEMIA (PA)	1
CITRULLINEMIA (CIT)	1
TYROSINEMIA III	1
CLASSICAL PHENYLKETONURIA (PKU)	2
HYPERPHENYLALANINEMIA	1
HYPOTHYROIDISM - PRIMARY	25
OTHER HYPOTHYROIDISM	5
TBG DEFICIENCY	4
CONGENITAL ADRENAL HYPERPLASIA-SALT WASTING	1
CONGENITAL ADRENAL HYPERPLASIA-SIMPLE VIRILIZATION	1
BIOTINIDASE DEFICIENCY - CARRIER	3
BIOTINIDASE DEFICIENCY - PARTIAL	2
BIOTINIDASE DEFICIENCY	1
PROBABLE BIOTINIDASE CARRIER	3
PROBABLE GN	1
CYSTIC FIBROSIS	7
GALACTOSEMIA - VARIANT -DG	1
GALACTOSEMIA - VARIANT -DN	1
SICKLE CELL DISEASE -SS	14
SICKLE CELL DISEASE -SC	11
SICKLE CELL DISEASE -SV	1
SICKLE CELL TRAIT - FAS	2
SICKLE CELL TRAIT - FV	1
SICKLE CELL TRAIT - FC	2

ENVIRONMENTAL CHEMISTRY

SAMPLE TYPES	# NON-COMPLIANT	# TESTED
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ASBESTOS

AIR	0	0
BULK	0	0

AIR QUALITY

PM _{2.5}	0	366
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RADIATION

AIR/CHARCOAL FILTERS	0	64
MILK	0	3
WIPES	0	103
RAW WATER	0	28
VEGETATION	0	0
OTHER	0	2

DRINKING WATER

METALS

COMMUNITY	5	11
NON-COMMUNITY	4	41
PRIVATE WELLS	17	147

PESTICIDES & PCBs

COMMUNITY	1	86
NON-COMMUNITY	0	81
PRIVATE WELLS	0	4

VOLATILE ORGANIC COMPOUNDS

COMMUNITY	4	116
NON-COMMUNITY	0	82
PRIVATE WELLS	1	49

RADIATION

COMMUNITY	0	37
NON-COMMUNITY	0	0
PRIVATE WELLS	0	27

INORGANICS

COMMUNITY	0	6
NON-COMMUNITY	11	84
PRIVATE WELLS	1	127

FOOD CHEMISTRY

SUSPECTED TAMPERING	0	0
MICROSCOPIC FILTH	0	0
LABELING	0	0
SURVEILLANCE	3	18
CHEMICAL CONTAMINATION	0	0

TOTAL	47	1,482
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VIRAL LOAD SPECIMENS					
HIV-1 RNA COPIES/ML	<10 ³	10 ³ —10 ⁴	10 ⁴ —10 ⁵	>10 ⁵	TOTALS
ALLEGANY	8	1	0	0	9
CARROLL	2	0	0	0	2
FREDERICK	0	0	0	1	1
MONTGOMERY	62	5	1	0	68
PRINCE GEORGE'S	128	11	9	6	154
WASHINGTON	2	1	0	0	3
WICOMICO	1	0	1	0	2
SUBTOTALS	203	18	11	7	239
DEPT. OF CORRECTIONS	8	2	1	0	11
TOTALS	211	20	12	7	250

HIV ANTIBODY SCREENING					
SUBMITTER	TOTAL SPECIMENS	# EIA POSITIVE	% EIA POSITIVE	# WB POSITIVE	% WB POSITIVE
CORRECTION FACILITY JUVENILE	127	0	0.00%	0	0.00%
CORRECTIONAL INSTITUTIONS	211	0	0.00%	0	0.00%
FAMILY PLANNING (NON-GOVERNMENT)	23	1	4.35%	1	100.00%
HEALTH CENTERS (NON-GOVERNMENT)	339	28	8.26%	25	89.29%
HLTH DEPT, NON-STD, FAMILY PLAN	348	0	0.00%	0	0.00%
HLTH DEPT, NON-STD, OB/GYN	14	0	0.00%	0	0.00%
HLTH DEPT, NON-STD, OTHER	529	59	11.15%	59	100.00%
HLTH DEPT, STD CLINICS	1,090	25	2.29%	22	88.00%
HOSPITAL, OTHER	114	8	7.02%	7	87.50%
HOSPITAL, PUBLIC	35	1	2.86%	1	100.00%
LABORATORIES (NON-HOSPITAL)	356	13	3.65%	8	61.54%
PEDIATRIC - CHILD HEALTH	7	0	0.00%	0	0.00%
PRIVATE STUDENT HEALTH CTRS	12	0	0.00%	0	0.00%
PUBLIC STUDENT HEALTH CTRS	13	0	0.00%	0	0.00%
UNKNOWN, NOT SPECIFIED	3	0	0.00%	0	0.00%
TOTALS	3,221	135	4.19%	123	91.11%



MAILING LABEL

Critical Link
 c/o Georgia Corso, Room L-15
 J. Mehsen Joseph Public Health Laboratory
 Department of Health & Mental Hygiene
 201 West Preston Street
 Baltimore, Maryland 21201

