



Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Escherichia coli Catalog Number: 0483 Lot Number: 483-611 Reference Number: ATCC® 8739™* Purity: > 99.9% of Total Pellet CFU Mean Assay Value: 7.2E+07 CFU per pellet Passage from Reference: 3	Expiration Date: 2018/10/31 Release Information: Quality Control Technologist: Caitlyn J Laudenbach Release Date: 2016/12/2
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Performance	
Macroscopic Features: Medium to large, gray, mucoid, convex. Microscopic Features: Gram negative straight rod.	Medium: SBAP Method: Gram Stain (1)
ID System: MALDI-TOF See attached ID System results document.	Other Features/ Challenges: Results (1) Oxidase (Kovacs): negative Beta-glucuronidase (E. coli Broth w/MUG): positive  Brad Goskowicz, President AUTHORIZED SIGNATURE

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TESTING CERT #2655.01

Bruker Daltonik MALDI Biotyper Classification Results



Meaning of Score Values

Range	Description	Symbols	Color
2.300 ... 3.000	highly probable species identification	(+++)	green
2.000 ... 2.299	secure genus identification, probable species identification	(++)	green
1.700 ... 1.999	probable genus identification	(+)	yellow
0.000 ... 1.699	not reliable identification	(-)	red

Meaning of Consistency Categories (A – C)

Category	Description
A	Species Consistency: The best match was classified as 'green' (see above). Further 'green' matches are of the same species as the first one. Further 'yellow' matches are at least of the same genus as the first one.
B	Genus Consistency: The best match was classified as 'green' or 'yellow' (see above). Further 'green' or 'yellow' matches have at least the same genus as the first one. The conditions of species consistency are not fulfilled.
C	No Consistency: Neither species nor genus consistency (Please check for synonyms of names or microbial mixture).

Analyte Name: Escherichia coli

Analyte Description: 0483

Analyte ID: 483-611

Analyte Creation Date/Time: 2016-11-30T15:40:17.608 MW/CL

Applied MSP Library(ies): BDAL, Mycobacteria Library (bead method), Filamentous Fungi Library 1.0, IVD, Listeria

Applied Taxonomy Tree:

Analyte Name	Analyte ID	Organism (best match)	Score Value
D5(+++) (A)	483-611	Escherichia coli	2.371

Comments:

closely related to Shigella and not definitely distinguishable at the moment



Statistical Analysis Certificate

Microorganism Name: Escherichia coli

Reference #: ATCC® 8739™*

Catalog #: 0483

Lot #: 483-611

Expiration Date: 2018/10/31

Mean Assay Value: 7.2E+07 CFU per pellet

Standard Deviation: 1.2E+07

Coefficient of Variation: 17%

99% Confidence Interval of 6.6E+07 to 7.8E+07 CFU

95% Confidence Interval of 6.7E+07 to 7.7E+07 CFU

Method used to determine Mean Assay Value: Spiral Biotech Test Method

Medium Employed: TSA

Incubation Time and Temp: 24 hrs at 34-38 degrees C

A handwritten signature in blue ink that reads "Amanda Kypers".

Quality Control Manager

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Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Pseudomonas aeruginosa Catalog Number: 0484 Lot Number: 484-760 Reference Number: ATCC® 9027™* Purity: > 99.9% of Total Pellet CFU Mean Assay Value: 4.6E+07 CFU per pellet Passage from Reference: 3	Expiration Date: 2018/8/31 Release Information: Quality Control Technologist: Megan C McClure Release Date: 2016/12/16
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Performance	
Macroscopic Features: Large, flat, circular to irregular shaped, gray with silver sheen. A second colony type may also be present as small, round, shiny colonies.	Medium: SBAP
Microscopic Features: Straight or slightly curved gram negative rod.	Method: Gram Stain (1)
ID System: MALDI-TOF See attached ID System results document.	Other Features/ Challenges: Results (1) Oxidase (Kovacs): positive (1) Motility B Medium: positive Pseudomonas P Agar: positive (blue-green color diffusing into the agar) Growth at 42 C: positive  Brad Goskowicz, President AUTHORIZED SIGNATURE

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Bruker Daltonik MALDI Biotyper Classification Results



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B	Genus Consistency: The best match was classified as 'green' or 'yellow' (see above). Further 'green' or 'yellow' matches have at least the same genus as the first one. The conditions of species consistency are not fulfilled.
C	No Consistency: Neither species nor genus consistency (Please check for synonyms of names or microbial mixture).

Analyte Name: Pseudomonas aeruginosa
 Analyte Description: 0484
 Analyte ID: 484-760
 Analyte Creation Date/Time: 2016-12-14T13:41:21.671 MCM
 Applied MSP Library(ies): BDAL, Mycobacteria Library (bead method), Filamentous Fungi Library 1.0, IVD, Listeria
 Applied Taxonomy Tree:

Analyte Name	Analyte ID	Organism (best match)	Score Value
E4 (+++)(A)	484-760	Pseudomonas aeruginosa	2.369

Comments:

N/A



Statistical Analysis Certificate

Microorganism Name: *Pseudomonas aeruginosa*

Reference #: ATCC® 9027™*

Catalog #: 0484

Lot #: 484-760

Expiration Date: 2018/8/31

Mean Assay Value: 4.6E+07 CFU per pellet

Standard Deviation: 5.7E+06

Coefficient of Variation: 12%

99% Confidence Interval of 4.3E+07 to 4.9E+07 CFU

95% Confidence Interval of 4.4E+07 to 4.8E+07 CFU

Method used to determine Mean Assay Value: Spiral Biotech Test Method

Medium Employed: TSA

Incubation Time and Temp: 24 hrs at 34-38 degrees C

A handwritten signature in blue ink that reads "Amanda Kypers". The signature is fluid and cursive, with the first name "Amanda" and last name "Kypers" clearly distinguishable.

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Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Bacillus thuringiensis Catalog Number: 0270 Lot Number: 270-21 Reference Number: ATCC® 10792™* Purity: > 99.9% of Total Pellet CFU Recovery: > 1000 CFUs per Pellet Passage from Reference: 4	Expiration Date: 2017/11/30 Release Information: Quality Control Technologist: Tracy A Blenker Release Date: 2016/1/21
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Performance	
Macroscopic Features: Large, circular to irregular, flat, entire to erose edge, dull ground-glass appearance, beta hemolytic	Medium: SBAP
Microscopic Features: Gram positive rods with rounded ends, occurring singly and in chains; spores may be present.	Method: Gram Stain (1)
ID System: Vitek BCL (1) See attached ID System results document.	Other Features/ Challenges: Results (1) Catalase (3% Hydrogen Peroxide): positive Parasporal crystals (Phase Contrast Microscopy): present  Brad Goskowicz, President AUTHORIZED SIGNATURE

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TESTING CERT #2655.01

Microbiologics

bioMerieux Customer: 05871
System #: C21105

Laboratory Report

Printed Jan 18, 2016 08:07 CST
Printed by: tab
Report Version: 2 of 2

Isolate Group: 270 21-1
Last Updated: Jan 18, 2016 08:07 CST
Card Type: BCL Testing Instrument: 00000A6D6328 (1116)

By: tab

Bench: TB

Bionumber: 0224011054456661
Organism Quantity:

Comments:	

Identification Information	Card: BCL	Lot Number: 239364920	Expires: Dec 10, 2016 12:00 CST
	Completed: Jan 14, 2016 23:58 CST	Status: Final	Analysis Time: 14.00 hours
Selected Organism	94% Probability Bacillus thuringiensis Bionumber: 0224011054456661 Confidence: Very good identification		
SRF Organism			
Analysis Organisms and Tests to Separate: Bacillus cereus/thuringiensis/mycoides Bacillus cereus TOX.CRYST.(0),RHIZOIDcol(0), Bacillus mycoides TOX.CRYST.(0),RHIZOIDcol(100), Bacillus thuringiensis TOX.CRYST.(100),RHIZOIDcol(0),			
Analysis Messages:			
Contraindicating Typical Biopattern(s) Bacillus cereus/thuringiensis/mycoides dMNE(18),AlaA(86),TyrA(94),			

bioMerieux Customer: 05871
System #: C21105

Laboratory Report

Printed Jan 18, 2016 08:07 CST
Printed by: tab
Report Version: 2 of 2

Isolate Group: 270 21-1
Last Updated: Jan 18, 2016 08:07 CST
Card Type: BCL Testing Instrument: 00000A6D6328 (1116)

By: tab

Bench: TB

Bionumber: 0224011054456661
Organism Quantity:

Biochemical Details

1	BXYL	-	3	LysA	-	4	AspA	-	5	LeuA	-	7	PheA	+	8	ProA	-
9	BGAL	-	10	PyrA	+	11	AGAL	-	12	AlaA	-	13	TyrA	-	14	BNAG	+
15	APPA	-	18	CDEX	-	19	dGAL	-	21	GLYG	+	22	INO	-	24	MdG	-
25	ELLM	+	26	MdX	-	27	AMAN	-	29	MTE	(-)	30	GlyA	-	31	dMAN	-
32	dMNE	+	34	dMLZ	-	36	NAG	+	37	PLE	-	39	IRHA	-	41	BGLU	+
43	BMAN	-	44	PHC	-	45	PVATE	(+)	46	AGLU	+	47	dTAG	-	48	dTRE	+
50	INU	-	53	dGLU	+	54	dRIB	+	56	PSCNa	-	58	NaCl 6.5%	+	59	KAN	+
60	OLD	-	61	ESC	+	62	TTZ	+	63	POLYB_R	+						

Installed VITEK 2 Systems Version: 07.01
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:



Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Staphylococcus aureus subsp. aureus Catalog Number: 0365 Lot Number: 365-87 Reference Number: ATCC® 29213™* Purity: > 99.9% of Total Pellet CFU Recovery: > 1000 CFUs per Pellet Passage from Reference: 4	Expiration Date: 2018/4/30 Release Information: Quality Control Technologist: Tanner E Rothstein Release Date: 2016/5/6
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Performance	
Macroscopic Features: Medium to large, convex, white-yellow, creamy opaque, beta hemolytic Microscopic Features: Gram positive cocci occurring singly, in pairs and in irregular clusters	Medium: SBAP Method: Gram Stain (1)
ID System: MALDI-TOF See attached ID System results document.	Other Features/ Challenges: Results (1) Catalase (3% Hydrogen Peroxide): positive (1) Coagulase (rabbit plasma-tube): positive (1) Beta Lactamase (Cefinase Disk): positive (1) Ampicillin (10 mcg - Disk Susceptibility): <= 28 mm (1) Penicillin (10 units - Disk Susceptibility): <= 28 mm Urea Agar Slant: positive  Brad Goskowicz, President AUTHORIZED SIGNATURE

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Meaning of Score Values

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2.000 ... 2.299	secure genus identification, probable species identification	(++)	green
1.700 ... 1.999	probable genus identification	(+)	yellow
0.000 ... 1.699	not reliable identification	(-)	red

Meaning of Consistency Categories (A – C)

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B	Genus Consistency: The best match was classified as 'green' or 'yellow' (see above). Further 'green' or 'yellow' matches have at least the same genus as the first one. The conditions of species consistency are not fulfilled.
C	No Consistency: Neither species nor genus consistency (Please check for synonyms of names or microbial mixture).

Analyte Name: Staphylococcus aureus subsp. aureus
 Analyte Description: 0365
 Analyte ID: 365-87
 Analyte Creation Date/Time: 2016-05-04T12:42:20.579 TR
 Applied MSP Library(ies): BDAL, Mycobacteria Library (bead method), Filamentous Fungi Library 1.0, IVD, Listeria
 Applied Taxonomy Tree:

Rank (Quality)	Matched Pattern	Score Value	NCBI Identifier
1 (+++)	Staphylococcus aureus ssp aureus DSM 799 DSM	2.369	46170
2 (+++)	Staphylococcus aureus ATCC 29213 THL	2.366	1280
3 (+++)	Staphylococcus aureus ssp aureus DSM 4910 DSM	2.343	46170
4 (+++)	Staphylococcus aureus ssp aureus DSM 346 DSM	2.326	46170
5 (+++)	Staphylococcus aureus ssp aureus DSM 20231T DSM	2.323	46170
6 (++)	Staphylococcus aureus ssp aureus DSM 20232 DSM	2.293	46170
7 (++)	Staphylococcus aureus ATCC 33862 THL	2.27	1280
8 (++)	Staphylococcus aureus ATCC 33591 THL	2.248	1280
9 (++)	Staphylococcus aureus ssp aureus DSM 3463 DSM	2.227	46170
10 (++)	Staphylococcus aureus ATCC 25923 THL	2.21	1280

Comments:

N/A



Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Citrobacter freundii Catalog Number: 0315 Lot Number: 315-120 Reference Number: ATCC® 8090™* Purity: < 0.1% Total Pellet CFU Recovery: > 1000 CFUs per Pellet Passage from Reference: 3	Expiration Date: 2018/8/31 Release Information: Quality Control Technologist: Mary L Bowman Release Date: 2016/10/20
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Performance	
Macroscopic Features: Medium to large gray circular, convex, entire, translucent, glistening colonies Microscopic Features: Straight gram negative rods	Medium: SBAP Method: Gram Stain (1)
ID System: Vitek GN (1) See attached ID System results document.	Other Features/ Challenges: Results (1) Oxidase (Kovacs): negative  Brad Goskowicz, President AUTHORIZED SIGNATURE

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TESTING CERT #2655.01

Microbiologics

bioMerieux Customer: 1012555
System #: 521711

Laboratory Report

Printed Oct 19, 2016 12:17 CDT
Printed by: mlb

Isolate Group: 315 120-1

Bench: MB

Card Type: GN Testing Instrument: 000017919CE3 (15220)

Bionumber: 4617614555561211

Organism Quantity:

Comments:	

Identification Information	Card:	GN	Lot Number:	241370540	Expires:	Feb 4, 2017 12:00 CST
	Completed:	Oct 18, 2016 18:16 CDT	Status:	Final	Analysis Time:	5.00 hours
Selected Organism	95% Probability Citrobacter freundii Bionumber: 4617614555561211 Confidence: Very good identification					
SRF Organism						
Analysis Organisms and Tests to Separate:						
Analysis Messages:						
Contraindicating Typical Biopattern(s)						
Citrobacter freundii PLE(9),dCEL(7),						

Biochemical Details

2	APPA	-	3	ADO	-	4	PyrA	+	5	IARL	-	7	dCEL	+	9	BGAL	+
10	H2S	+	11	BNAG	-	12	AGLTp	-	13	dGLU	+	14	GGT	+	15	OFF	+
17	BGLU	-	18	dMAL	+	19	dMAN	+	20	dMNE	+	21	BXYL	-	22	BAlap	-
23	ProA	-	26	LIP	-	27	PLE	+	29	TyrA	+	31	URE	-	32	dSOR	+
33	SAC	+	34	dTAG	-	35	dTRE	+	36	CIT	+	37	MNT	-	39	5KG	+
40	ILATk	+	41	AGLU	-	42	SUCT	+	43	NAGA	-	44	AGAL	+	45	PHOS	+
46	GlyA	+	47	ODC	-	48	LDC	-	53	IHISa	-	56	CMT	+	57	BGUR	-
58	O129R	+	59	GGAA	-	61	IMLTa	-	62	ELLM	+	64	ILATa	-			

Installed VITEK 2 Systems Version: 07.01
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:



Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Candida parapsilosis Catalog Number: 0726 Lot Number: 726-42 Reference Number: ATCC® 22019™* Purity: > 99.9% of Total Pellet CFU Recovery: > 1000 CFUs per Pellet Passage from Reference: 2	Expiration Date: 2018/5/31 Release Information: Quality Control Technologist: Jennifer Holub Release Date: 2016/7/18
Performance	
Macroscopic Features: Small, white, convex, circular colonies. Microscopic Features: Gram positive yeast cells.	Medium: Nutrient Method: Gram Stain (1)
ID System: Vitek YST (1) See attached ID System results document.	Other Features/ Challenges: Results (1) Germ Tube Test: negative (1) Chlamydospore production: negative  Brad Goskowicz, President AUTHORIZED SIGNATURE
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Microbiologics

bioMerieux Customer: 1012555
System #: 521711

Laboratory Report

Printed Jul 13, 2016 15:54 CDT
Printed by: jrh

Isolate Group: 72642-1

Bench: JH

Card Type: YST Testing Instrument: 000017919CE3 (15220)

Bionumber: 6512544245133371

Organism Quantity:

Comments:	

Identification Information	Card:	YST	Lot Number:	243385220	Expires:	Jul 1, 2017 13:00 CDT
	Completed:	Jul 13, 2016 06:51 CDT	Status:	Final	Analysis Time:	18.50 hours
Selected Organism		98% Probability Candida parapsilosis Bionumber: 6512544245133371 Confidence: Excellent identification				
SRF Organism						
Analysis Organisms and Tests to Separate:						
Analysis Messages:						
Contraindicating Typical Biopattern(s) Candida parapsilosis IMLTa(17),						

Biochemical Details																	
3	LysA	-	4	IMLTa	+	5	LeuA	+	7	ARG	+	10	ERYa	-	12	GLYLa	+
13	TyrA	+	14	BNAG	-	15	ARBa	-	18	AMYa	-	19	dGALa	+	20	GENa	-
21	dGLUa	+	23	LACa	-	24	MAdGa	+	26	dCELa	-	27	GGT	-	28	dMALa	+
29	dRAFa	-	30	NAGA1	-	32	dMNEa	+	33	dMELa	-	34	dMLZa	+	38	ISBEa	-
39	IRHAa	-	40	XLTa	-	42	dSORa	+	44	SACa	+	45	URE	-	46	AGLU	+
47	dTURa	+	48	dTREa	-	49	NO3a	-	51	IARAa	+	52	dGATa	+	53	ESC	-
54	IGLTa	+	55	dXYLa	+	56	LATa	-	58	ACEa	+	59	CITa	+	60	GRTas	(-)
61	IPROa	+	62	2KGa	+	63	NAGa	+	64	dGNTa	+						

Installed VITEK 2 Systems Version: 07.01
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:



Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Saccharomyces cerevisiae Catalog Number: 0900 Lot Number: 900-31 Reference Number: ATCC® 9080™* Purity: > 99.9% of Total Pellet CFU Recovery: > 1000 CFUs per Pellet Passage from Reference: 3	Expiration Date: 2018/7/31 Release Information: Quality Control Technologist: Kieshia L Negen Release Date: 2016/8/15
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Performance	
Macroscopic Features: Large, circular, convex, entire edge, cream, smooth, opaque.	Medium: SAB DEX EMMONS
Microscopic Features: Gram positive, ovoid, budding yeast cells.	Method: Gram Stain (1)

ID System: MALDI-TOF

See attached ID System results document.

Brad Goskowicz, President
AUTHORIZED SIGNATURE

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1.700 ... 1.999	probable genus identification	(+)	yellow
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B	Genus Consistency: The best match was classified as 'green' or 'yellow' (see above). Further 'green' or 'yellow' matches have at least the same genus as the first one. The conditions of species consistency are not fulfilled.
C	No Consistency: Neither species nor genus consistency (Please check for synonyms of names or microbial mixture).

Analyte Name: Saccharomyces cerevisiae
 Analyte Description: 0900
 Analyte ID: 900-31
 Analyte Creation Date/Time: 2016-08-04T12:40:24.130kn
 Applied MSP Library(ies): Listeria, BDAL, Mycobacteria Library (bead method), Filamentous Fungi Library 1.0, IVD
 Applied Taxonomy Tree:

Rank (Quality)	Matched Pattern	Score Value	NCBI Identifier
1 (++)	Saccharomyces cerevisiae BJ2168 BRL	2.288	4932
2 (++)	Saccharomyces cerevisiae DTY3 BRL	2.26	4932
3 (++)	Saccharomyces cerevisiae INVSc1 BRL	2.237	4932
4 (++)	Saccharomyces cerevisiae DSM 70868 DSM	2.088	4932
5 (+)	Saccharomyces cerevisiae CBS 1171NT CBS	1.972	4932
6 (+)	Saccharomyces cerevisiae DSM 3798 DSM	1.921	4932
7 (+)	Saccharomyces cerevisiae Isolat LGL Muenchen	1.905	4932
8 (+)	Saccharomyces cerevisiae DSM 70463 DSM	1.849	4932
9 (+)	Saccharomyces cerevisiae WS LLH	1.78	4932
10 (+)	Saccharomyces cerevisiae DSM 1334 DSM	1.754	4932

Comments:

N/A



Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Mycobacterium fortuitum subsp. fortuitum Catalog Number: 0513 Lot Number: 513-17 Reference Number: ATCC® 6841™* Purity: < 0.1% Total Pellet CFU Recovery: > 1000 CFUs per Pellet Passage from Reference: 2	Expiration Date: 2018/3/31 Release Information: Quality Control Technologist: Jennifer Holub Release Date: 2016/7/14
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Performance	
Macroscopic Features: Large, circular, raised, erose edge, very pale yellow, rough. Microscopic Features: Moderate to long Gram positive rods.	Medium: Middlebrook 7H11 Method: Gram Stain (1)
ID System: MEI None See attached ID System results document.	Other Features/ Challenges: Results (1) Catalase (3% Hydrogen Peroxide): positive (1) Kinyoun Acid Fast Stain: positive  Brad Goskowicz, President AUTHORIZED SIGNATURE

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Note for Vitek®: Although the Vitek® panel uses many conventional tests, the unique environment of the card, combined with the short incubation period, may produce results that differ from published results obtained by other methods.

 Refer to the enclosed product insert for instructions, intended use and hazard/safety information.

Individual products are traceable to a recognized culture collection.



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(1) These tests are accredited to ISO/IEC 17025:2005.

TESTING CERT #2655.01



Molecular Epidemiology, Inc.

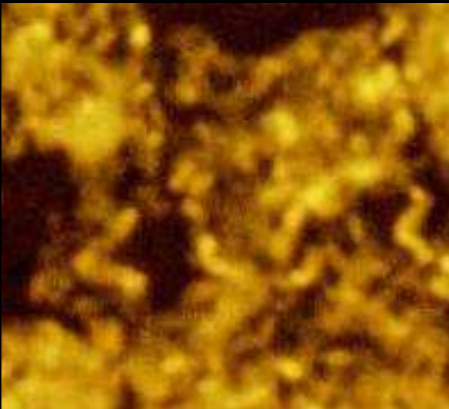
Sample Analysis Report



F09/MB450/09

Customer ID Number	4081-3201	Sample Received	06/17/2016	MEI Report #	R16070827269-01	Date Reported	07/08/2016
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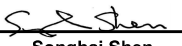
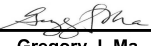
Customer Sample #	513-17	Job ID	100413-4081-3201
Sample Type	Agar plate	Requested Service(s)	Phenotypic and Genetic Identification
Sample Source	N/A	Test Method(s)	MB450, MB457, MB473
Customer Comments	None		
MEI Sample #	95980-1		

Test	Test Results	
Basic ID	Bacterium	
Acid fast/Rhodamine	Positive	

Genetic ID	Comparisons to genetically similar microorganisms		Notes: None
Genetic Distance	Genus	Species	
0.0000	<i>Mycobacterium</i>	<i>fortuitum</i>	
0.0031	<i>Mycobacterium</i>	<i>mucogenicum</i>	
0.0031	<i>Mycobacterium</i>	<i>phocaicum</i>	
0.0060	<i>Mycobacterium</i>	<i>conceptionense</i>	
0.0060	<i>Mycobacterium</i>	<i>farcinogenes</i>	
0.0060	<i>Mycobacterium</i>	<i>houstonense</i>	
0.0060	<i>Mycobacterium</i>	<i>senegalense</i>	
0.0104	<i>Mycobacterium</i>	<i>boenickei</i>	

Deviations	None
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Microbial ID Conclusion	<i>Mycobacterium sp.</i>
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Microbiology Review	 Ali Fazeli	Date: 07/08/2016
Genetics Review	 Songhai Shen	Date: 07/08/2016
QC Approval	 Gregory J. Ma	Date: 07/08/2016
QA Approval	 Jonathan Collins	Date: 07/08/2016

Reported By:	Gregory J. Ma, SM(AAM), MSPH	Molecular Epidemiology, Inc.
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	Fax: 206-306-8883	Lake Forest Park, WA 98155
	e-Mail: gregory@molecularepi.com	www.molecularepi.com

This laboratory report relates only to the portion of the sample which was tested in this report. Interpretation of these results is the sole responsibility of the Customer.

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Certificate of Analysis: Lyophilized Microorganism Specification and Performance Upon Release

Specifications Microorganism Name: Escherichia coli Catalog Number: 0483 Lot Number: 483-558 Reference Number: ATCC® 8739™* Purity: > 99.9% of Total Pellet CFU Recovery: > 1000 CFUs per Pellet Passage from Reference: 4	Expiration Date: 2018/4/30 Release Information: Quality Control Technologist: Christine Condon Release Date: 2016/5/31
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Performance	
Macroscopic Features: Medium to large, gray, mucoid, convex. Microscopic Features: Gram negative straight rod.	Medium: SBAP Method: Gram Stain (1)
ID System: MALDI-TOF See attached ID System results document.	Other Features/ Challenges: Results (1) Oxidase (Kovacs): negative Beta-glucuronidase (E. coli Broth w/MUG): positive  Brad Goskowicz, President AUTHORIZED SIGNATURE

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Bruker Daltonik MALDI Biotyper Classification Results



Meaning of Score Values

Range	Description	Symbols	Color
2.300 ... 3.000	highly probable species identification	(+++)	green
2.000 ... 2.299	secure genus identification, probable species identification	(++)	green
1.700 ... 1.999	probable genus identification	(+)	yellow
0.000 ... 1.699	not reliable identification	(-)	red

Meaning of Consistency Categories (A – C)

Category	Description
A	Species Consistency: The best match was classified as 'green' (see above). Further 'green' matches are of the same species as the first one. Further 'yellow' matches are at least of the same genus as the first one.
B	Genus Consistency: The best match was classified as 'green' or 'yellow' (see above). Further 'green' or 'yellow' matches have at least the same genus as the first one. The conditions of species consistency are not fulfilled.
C	No Consistency: Neither species nor genus consistency (Please check for synonyms of names or microbial mixture).

Analyte Name: Escherichia coli

Analyte Description: 0483

Analyte ID: 483-558

Analyte Creation Date/Time: 2016-05-26T13:48:53.288 CC

Applied MSP Library(ies): BDAL, Mycobacteria Library (bead method), Filamentous Fungi Library 1.0, IVD, Listeria

Applied Taxonomy Tree:

Rank(Quality)	Matched Pattern	ScoreValue	NCBIIdentifier
1(+++)	Escherichia coli DSM 1576 DSM	2.607	562
2(+++)	Escherichia coli DSM 682 DSM	2.415	562
3(+++)	Escherichia coli RV412_A1_2010_06a LBK	2.399	562
4(+++)	Escherichia coli DH5alpha BRL	2.309	562
5(++)	Escherichia coli MB11464_1 CHB	2.266	562
6(++)	Escherichia coli DSM 1103 QC DSM	2.262	562
7(++)	Escherichia coli ESBL_EA_RSS_1528T CHB	2.22	562
8(++)	Escherichia coli Nissl VML	2.2	562
9(++)	Escherichia coli ATCC 25922 THL	2.191	562
10(++)	Escherichia coli ATCC 25922 CHB	2.176	562

Comments:

closely related to Shigella and not definitely distinguishable at the moment