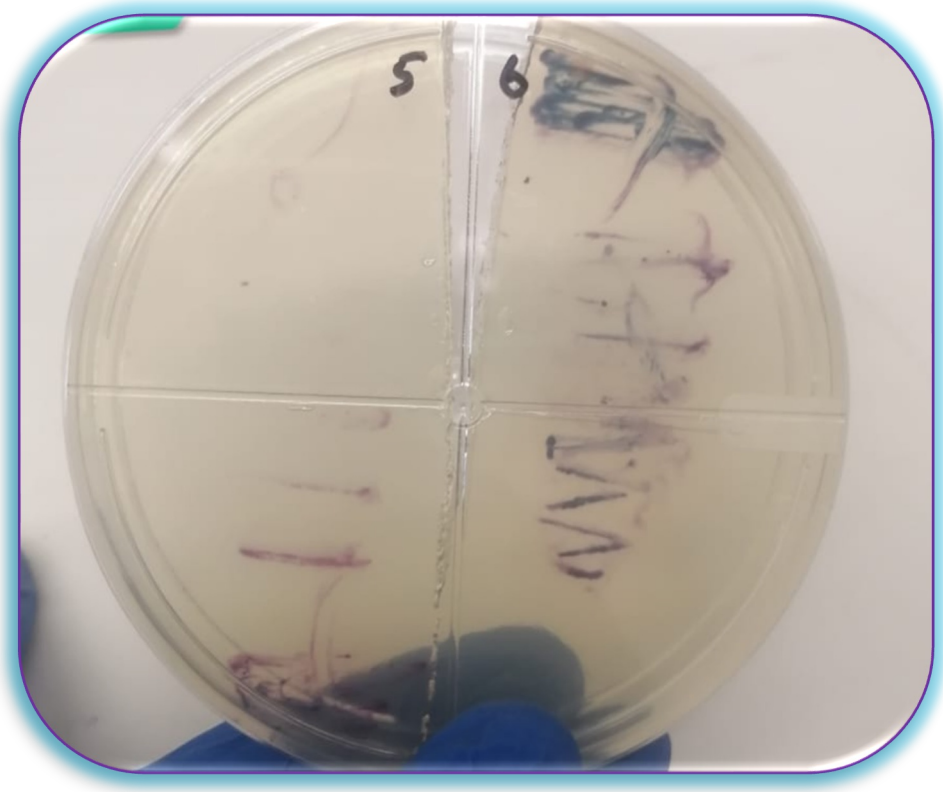
UTPL

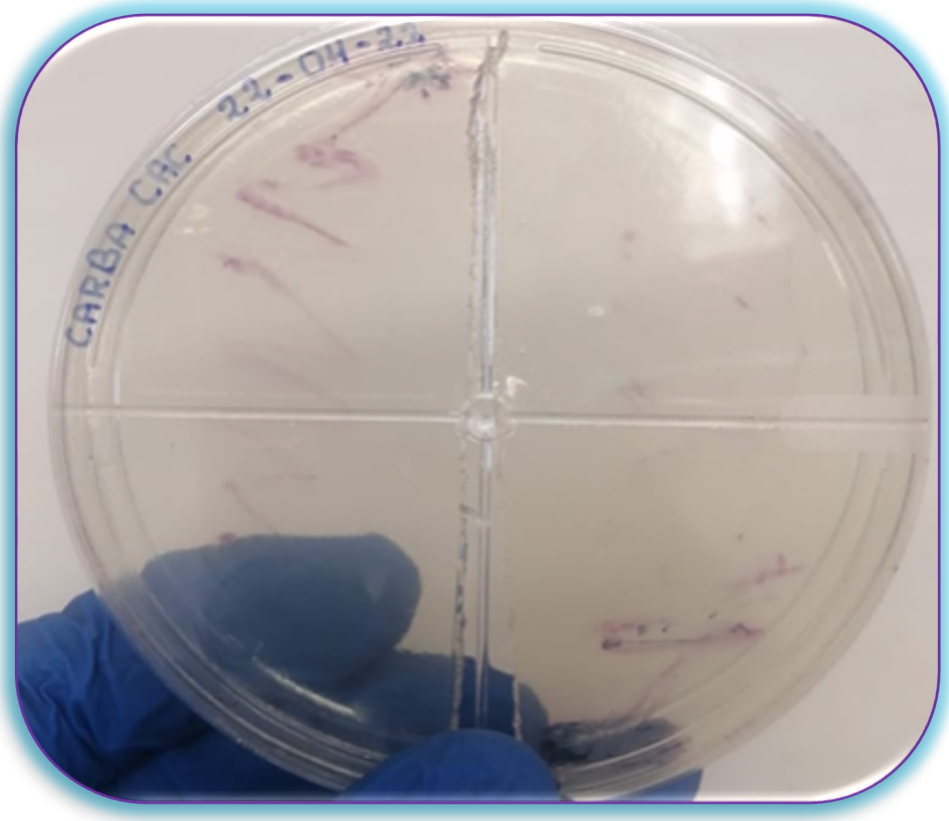
UNIVERSIDAD TÉCNICA PARTICULAR DE LOJA

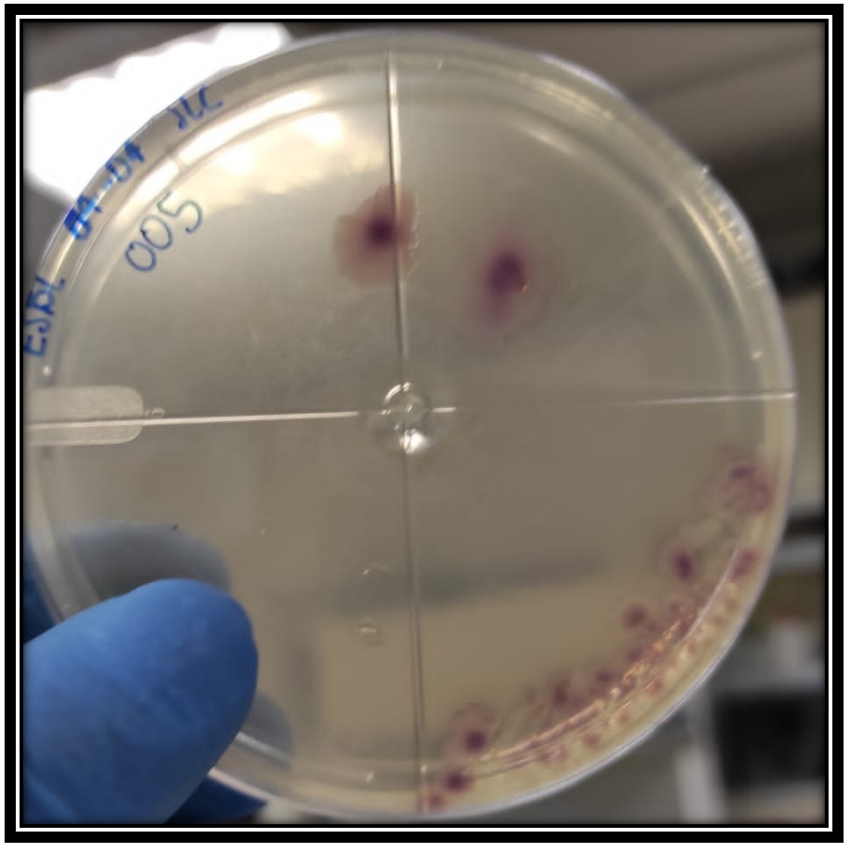
CARBAPENEMASAS Y BLEE

PROCESO QUE SE REALIZÓ

1) Siembra en agares cromogénicos



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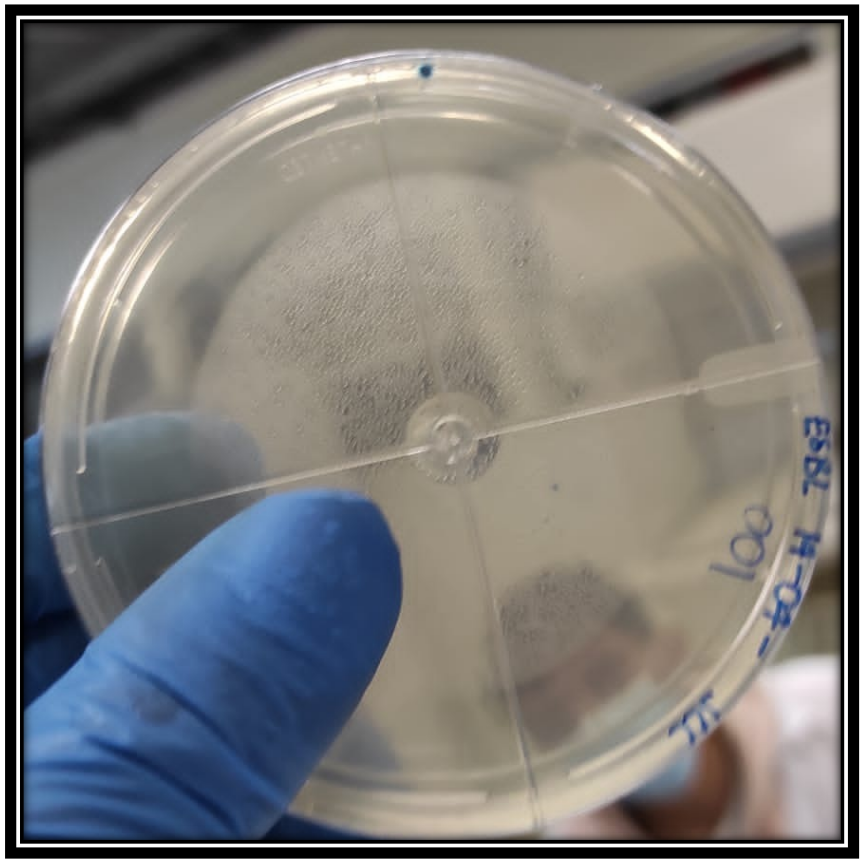
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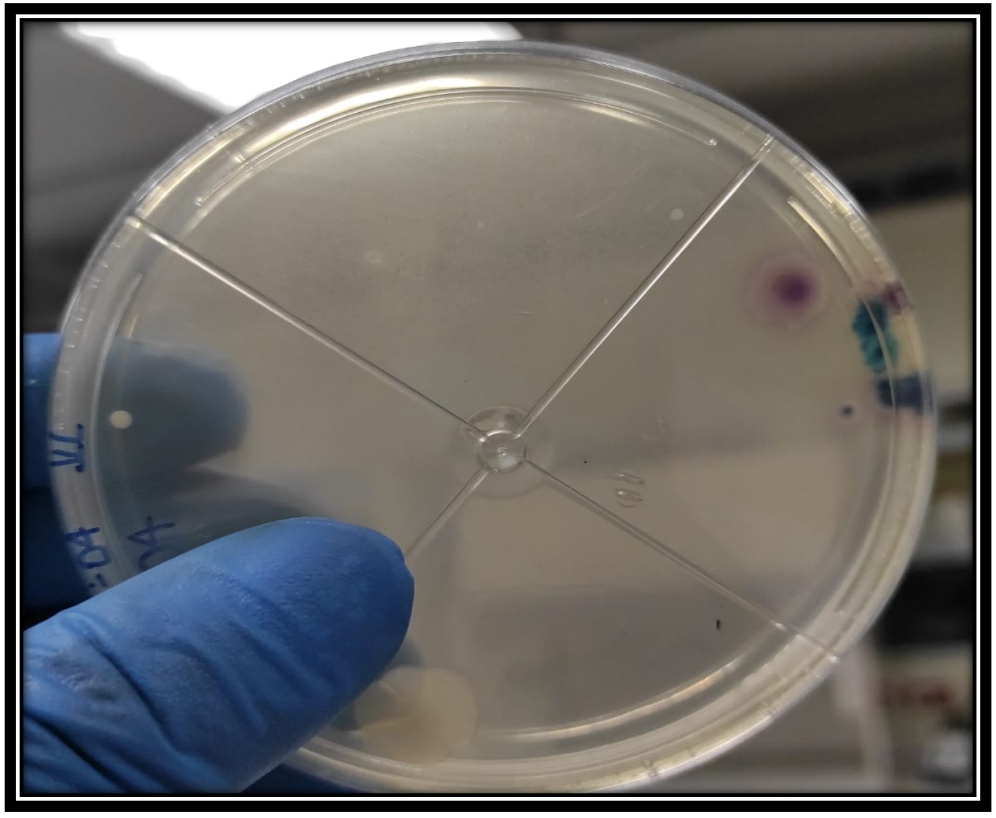
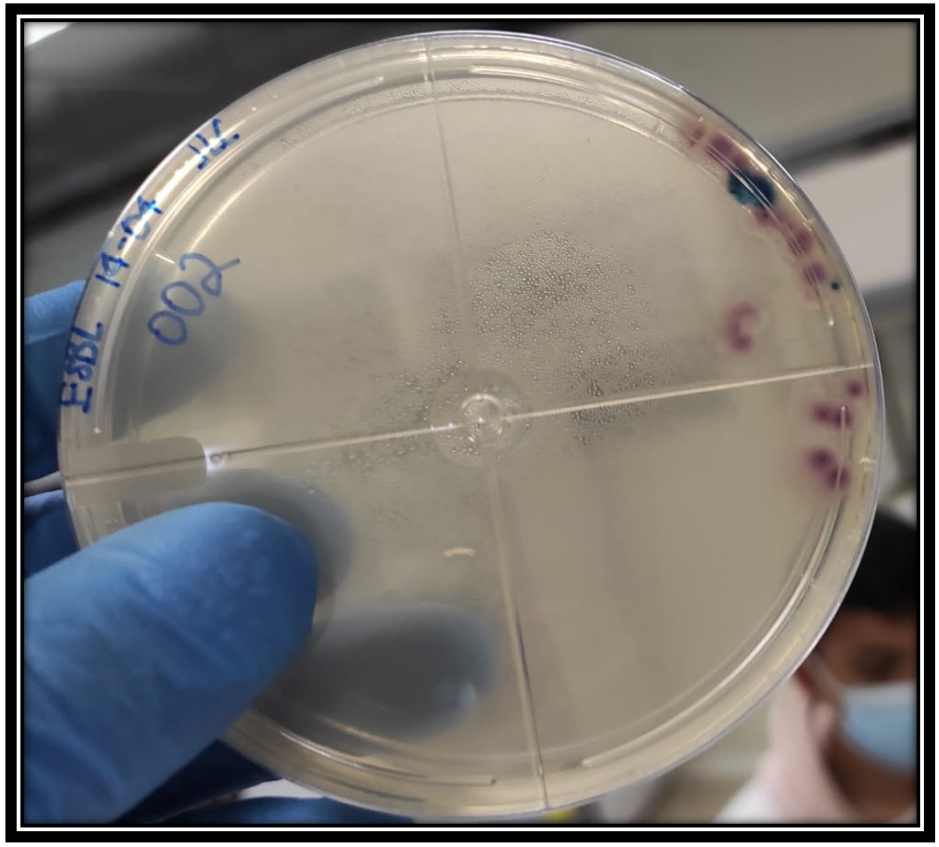



ESBL 14-04
002

Consultas

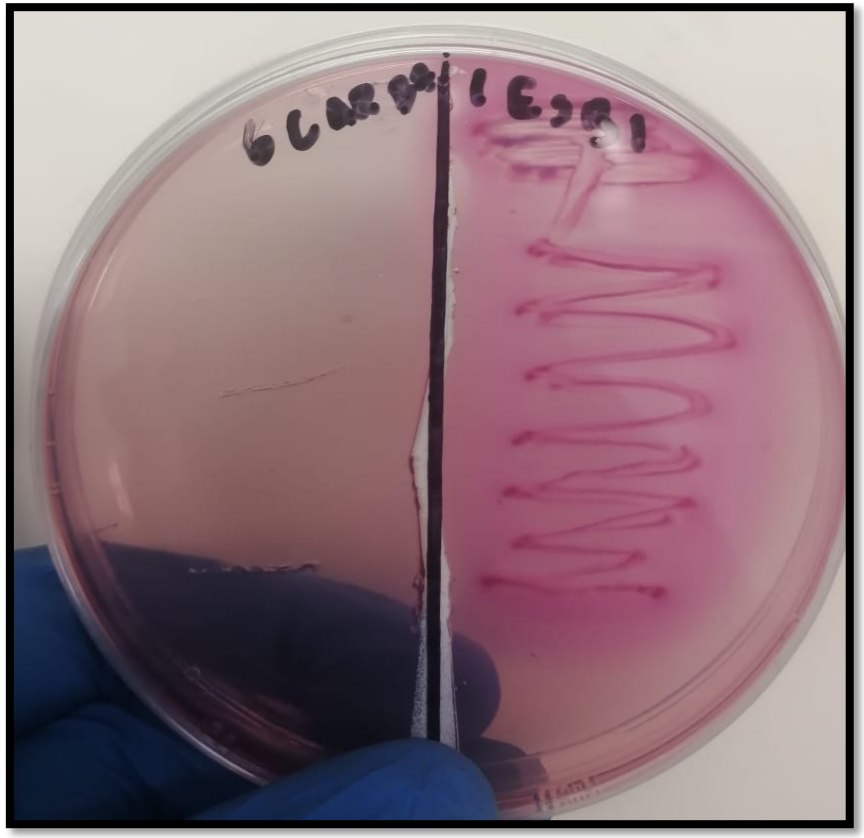
¿Por qué se pigmenta carba, como si hubiera crecido colonias, y al sembrar en un medio diferencial no crece?

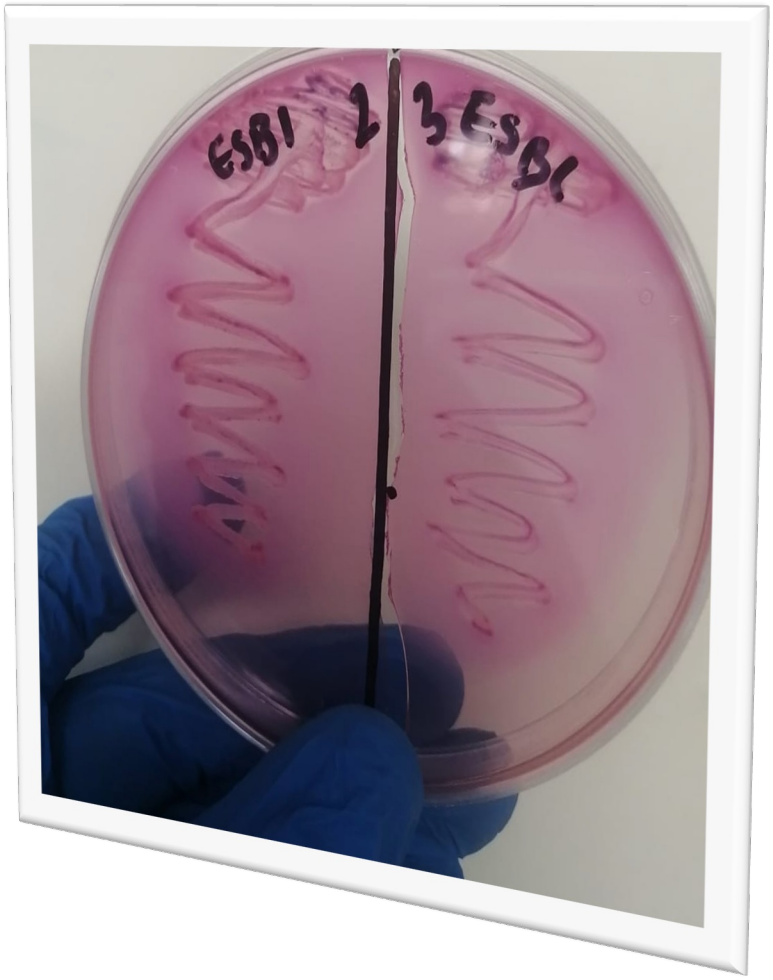
1. ¿Es mejor sembrar directo o en dilución?
2. ¿Crecen específicamente Enterobacterales productores de Blee y Carba en estos agares cromogénicos?

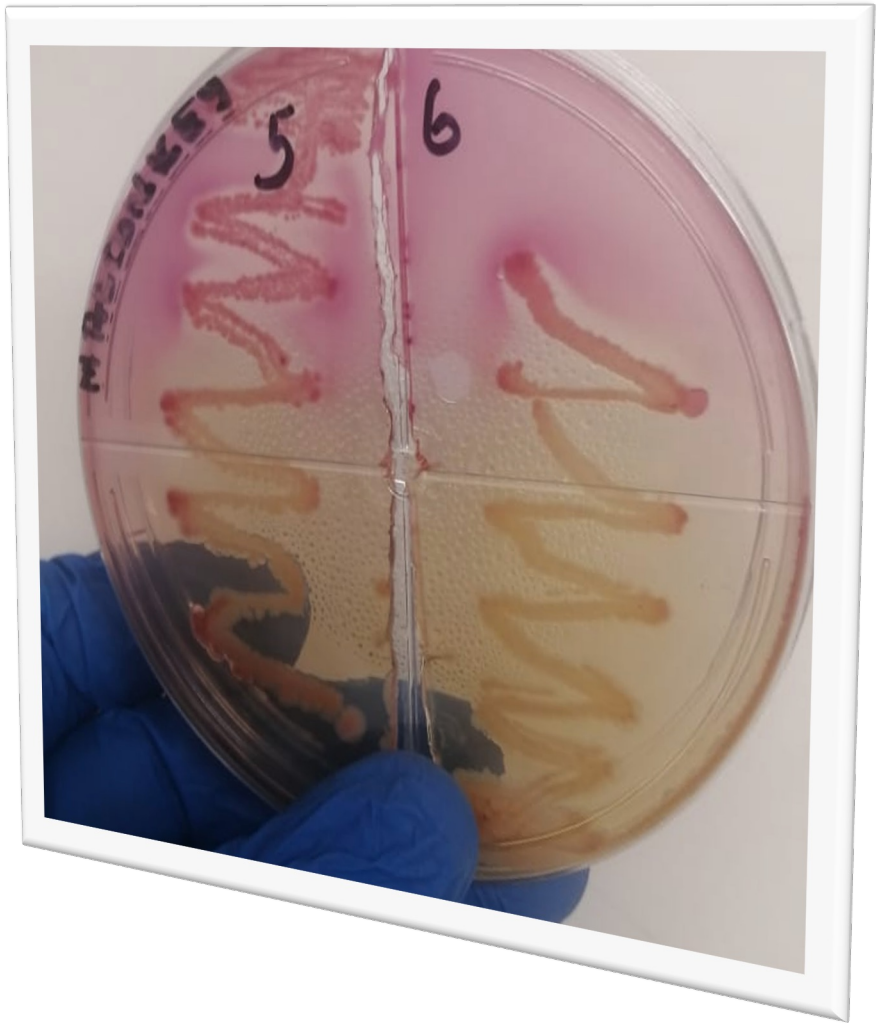
¿Cómo se adiciona el suplemento B al agar Carba.?
¿Interfiere sembrar en un agar cromogénico de una caja bipetri a sembrar en una monopetri? ?

2) SIEMBRA EN MEDIO DIFERENCIAL

Agar MaCconkey




ESBL 2
3 ESBL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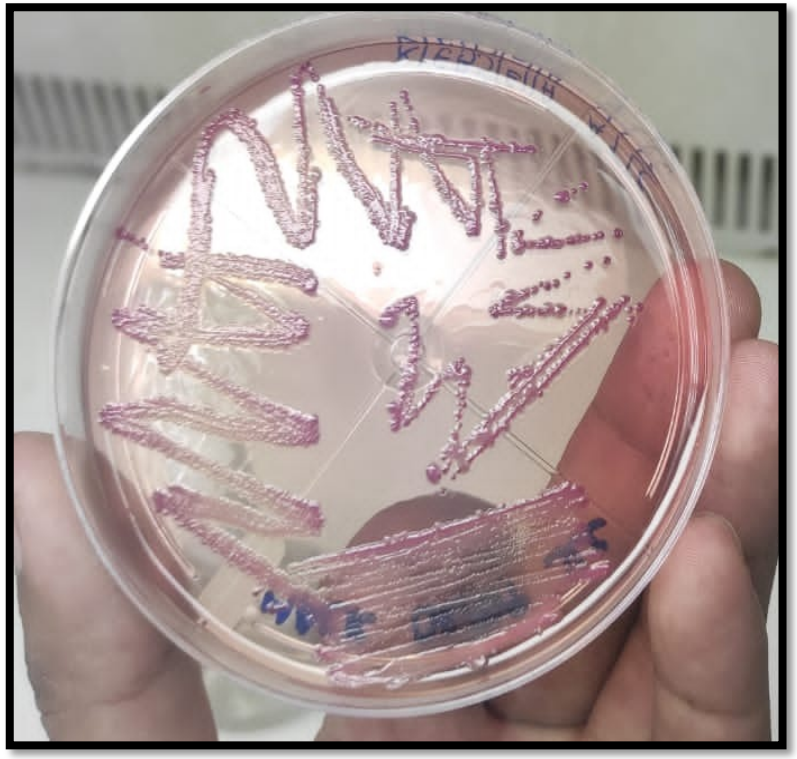
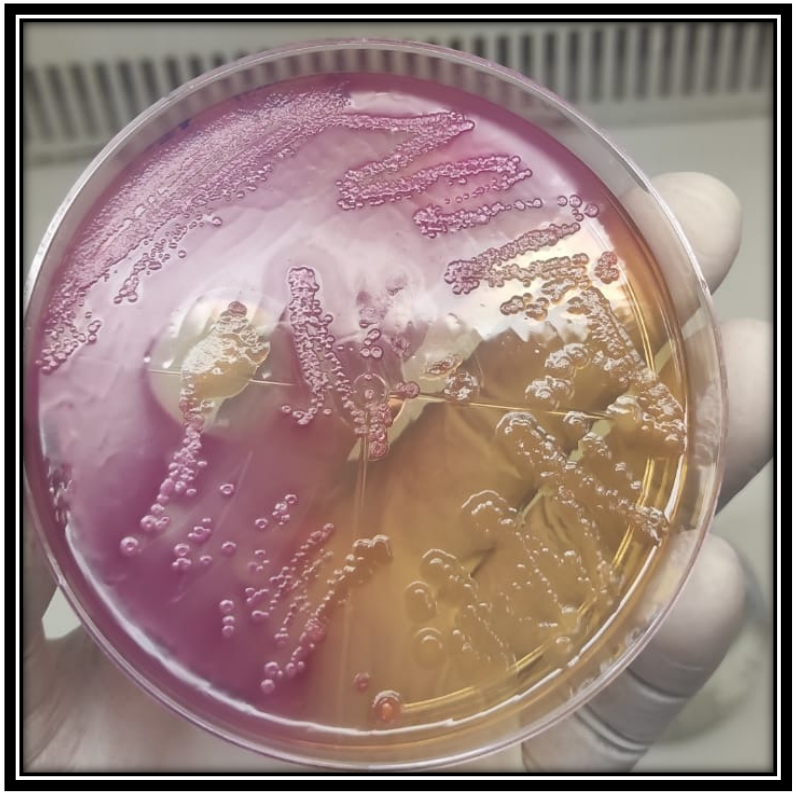
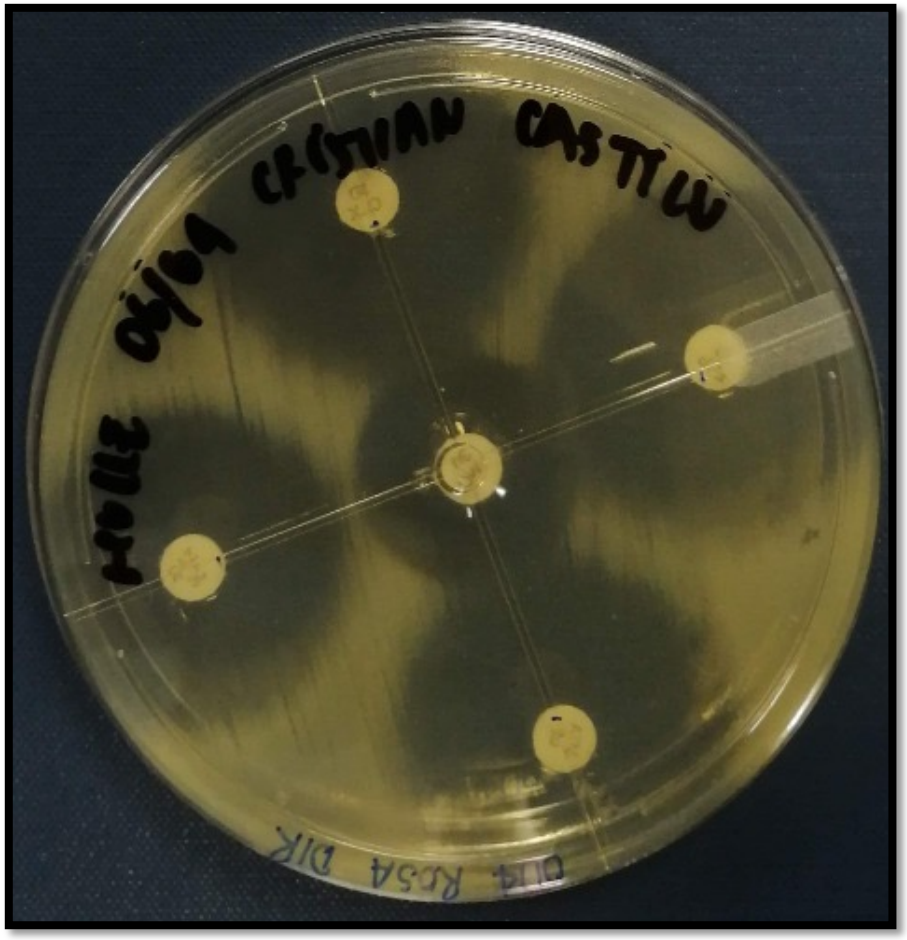
2) SEMBRAR LAS MUESTRAS ATCC

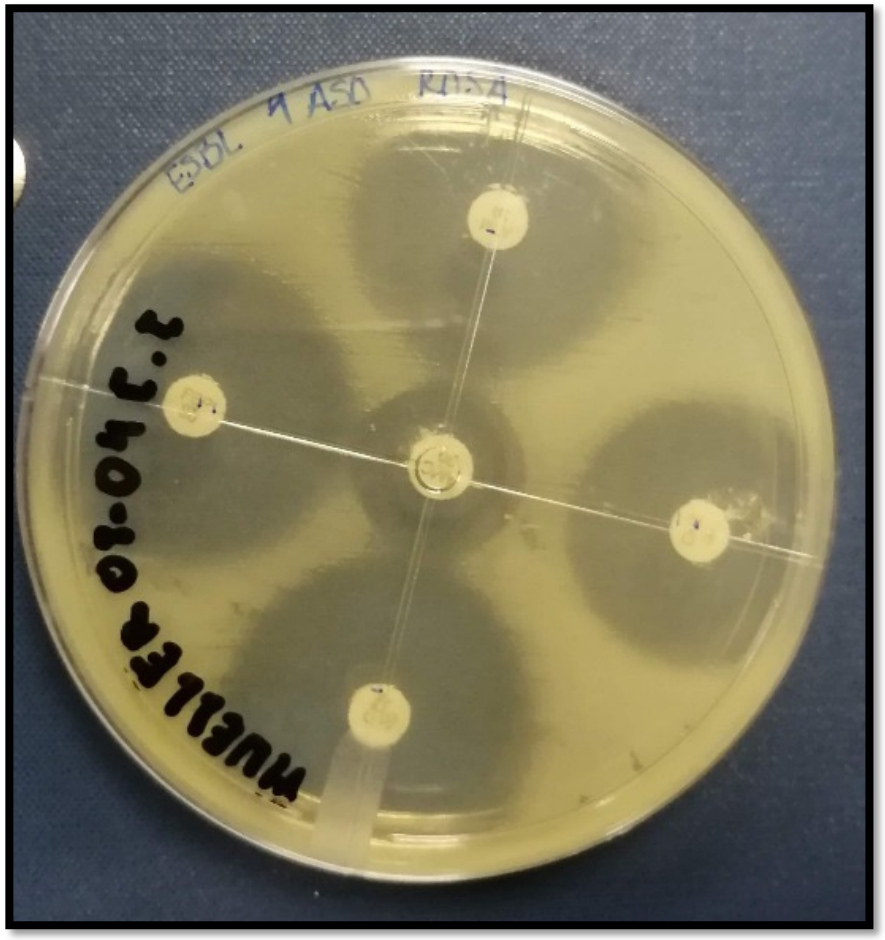
Sembrar las cepas control para realizar Hodge

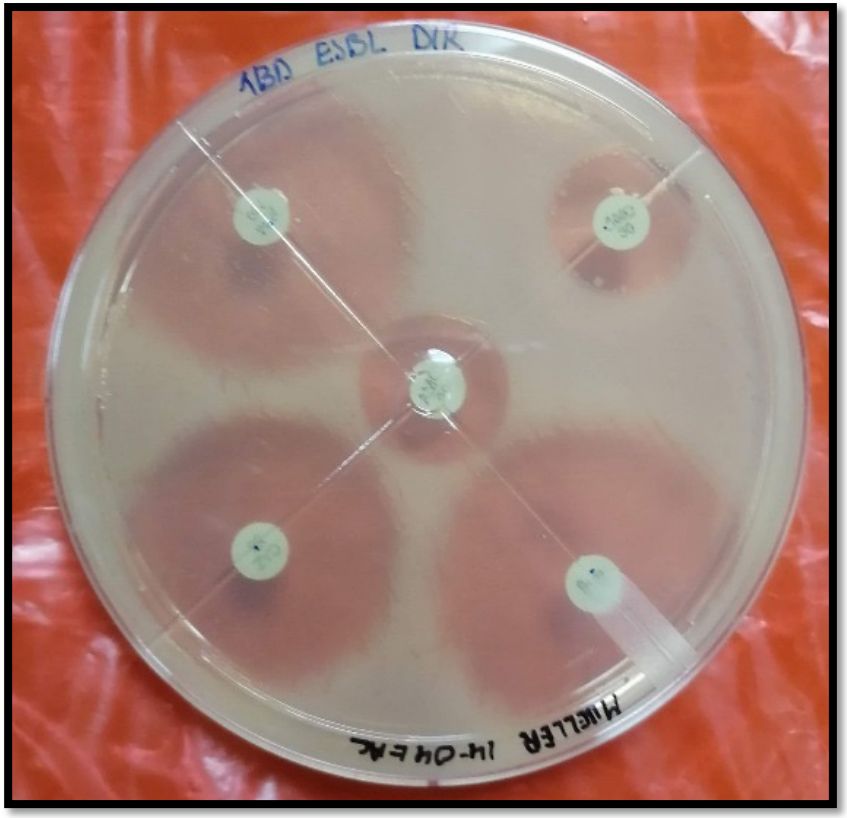


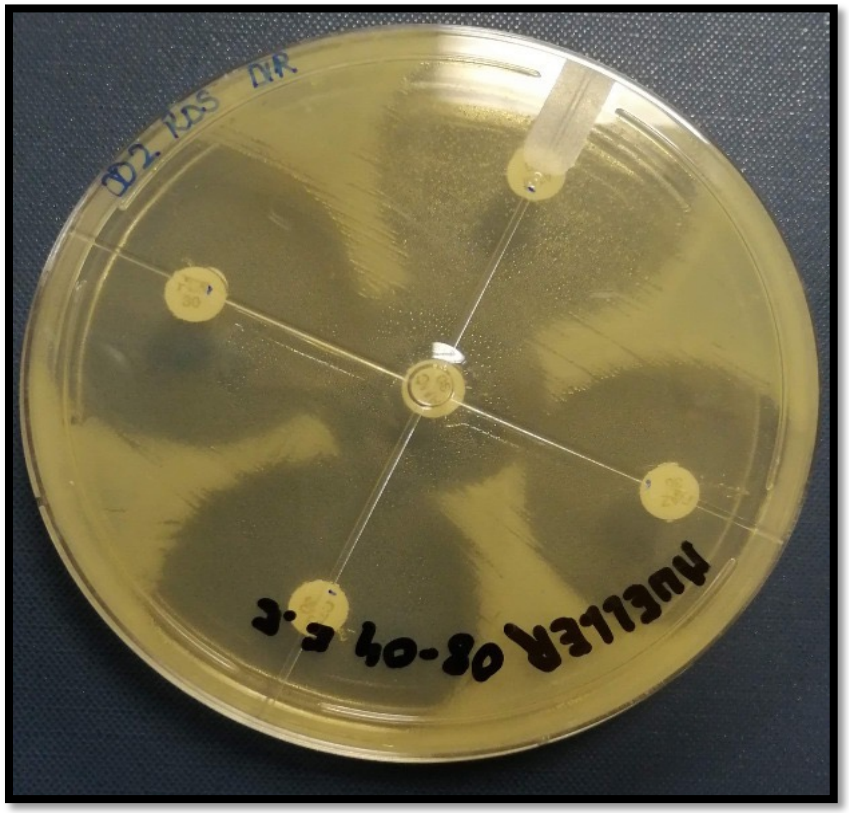


ANTIBIOGRAMAS

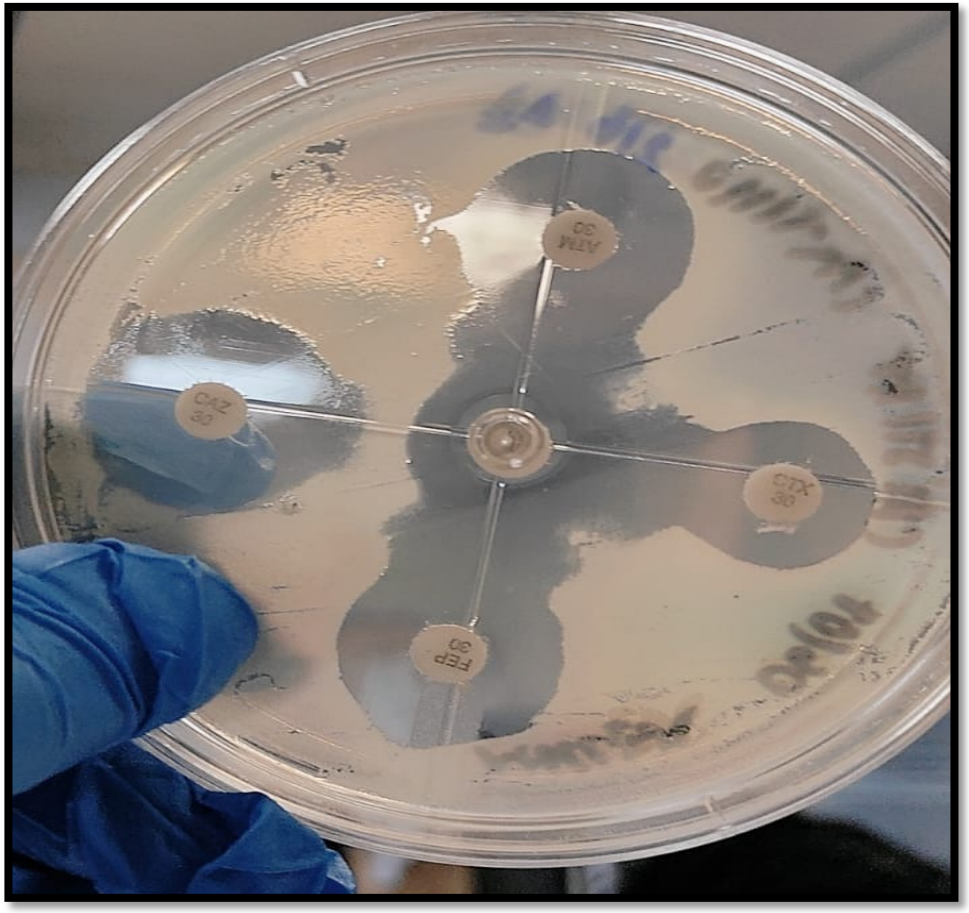


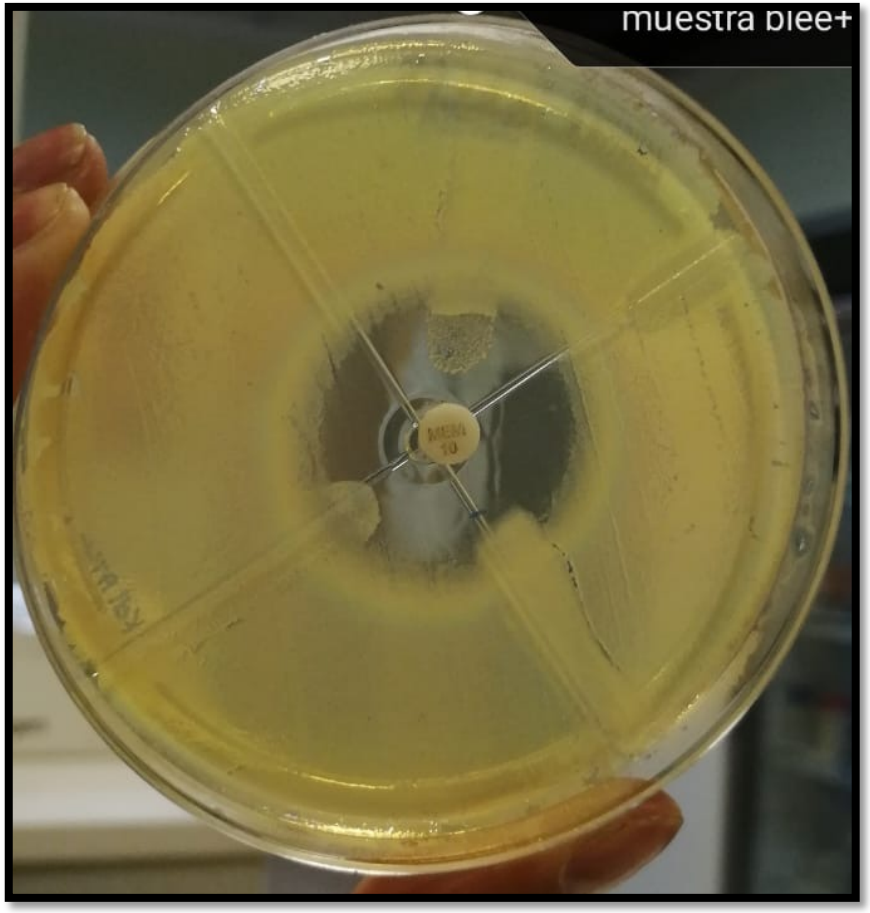



ABD ESBL DVK


MUELLER 08-04 E.C

Prueba de doble disco extendido y Hodge





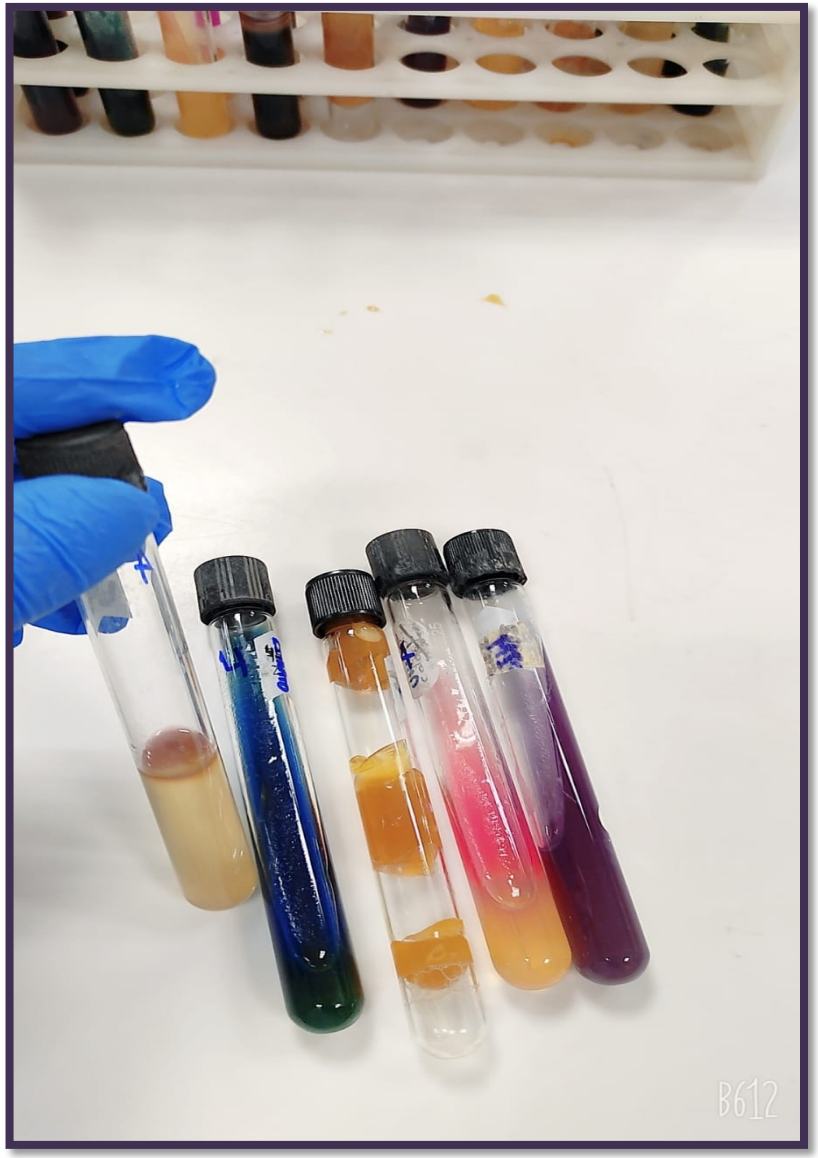
Consultas

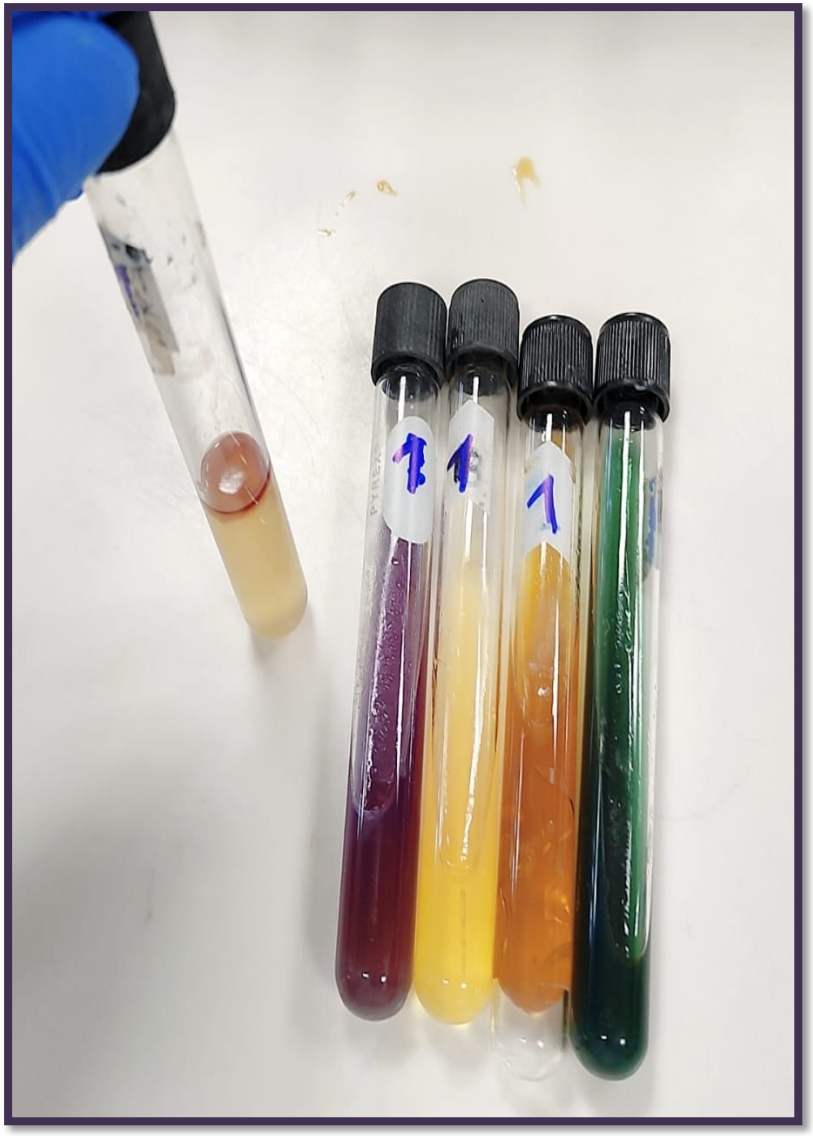
¿En el caso de no contar con un antibiótico para una prueba de determinación fenotípica de BLEE se puede reemplazar con otro del mismo grupo?

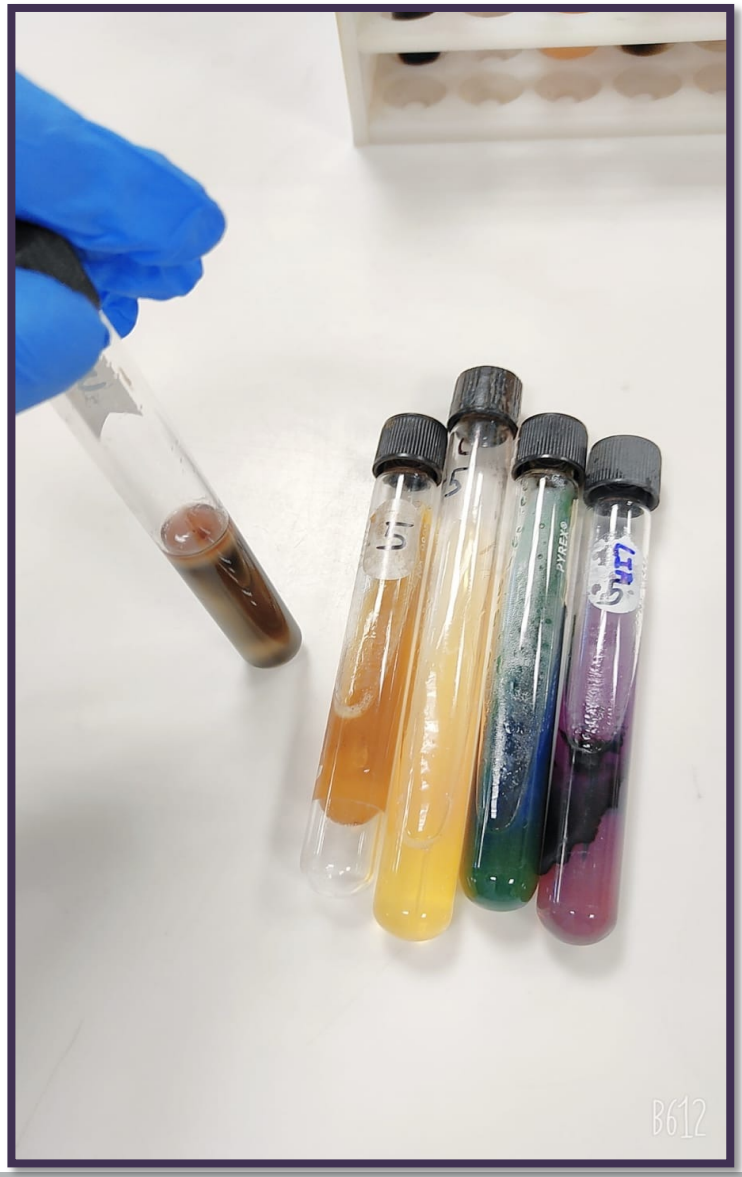
1. ¿Por qué al sembrar una muestra de heces recién obtenida y luego de una semana, en el antibiograma nos sale un halo de inhibición mas pequeño luego de una semana de haber obtenido la muestra?

Para hacer Hodge. ¿Se debe trabajar únicamente con KPC (+), *S. aureus* (-), *E. coli* ATCC?

Pruebas Bioquimicas







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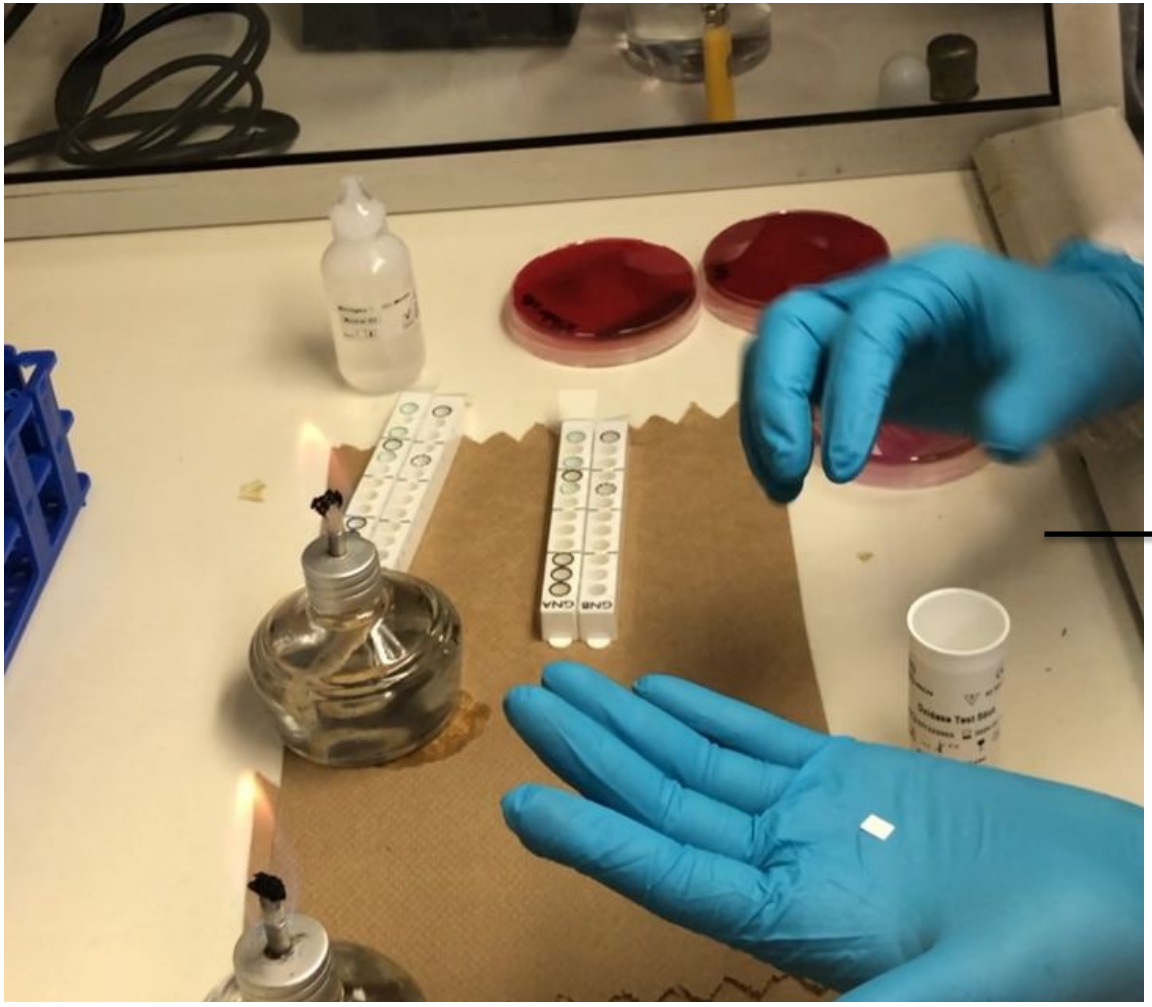
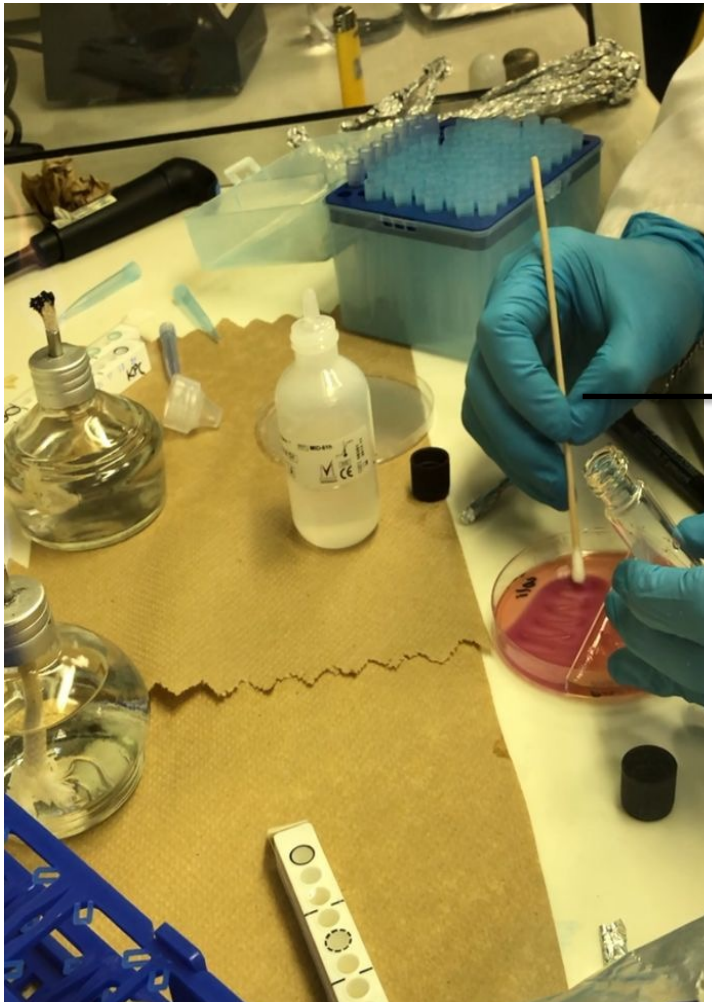


Test de oxidasa aplicada a las muestras

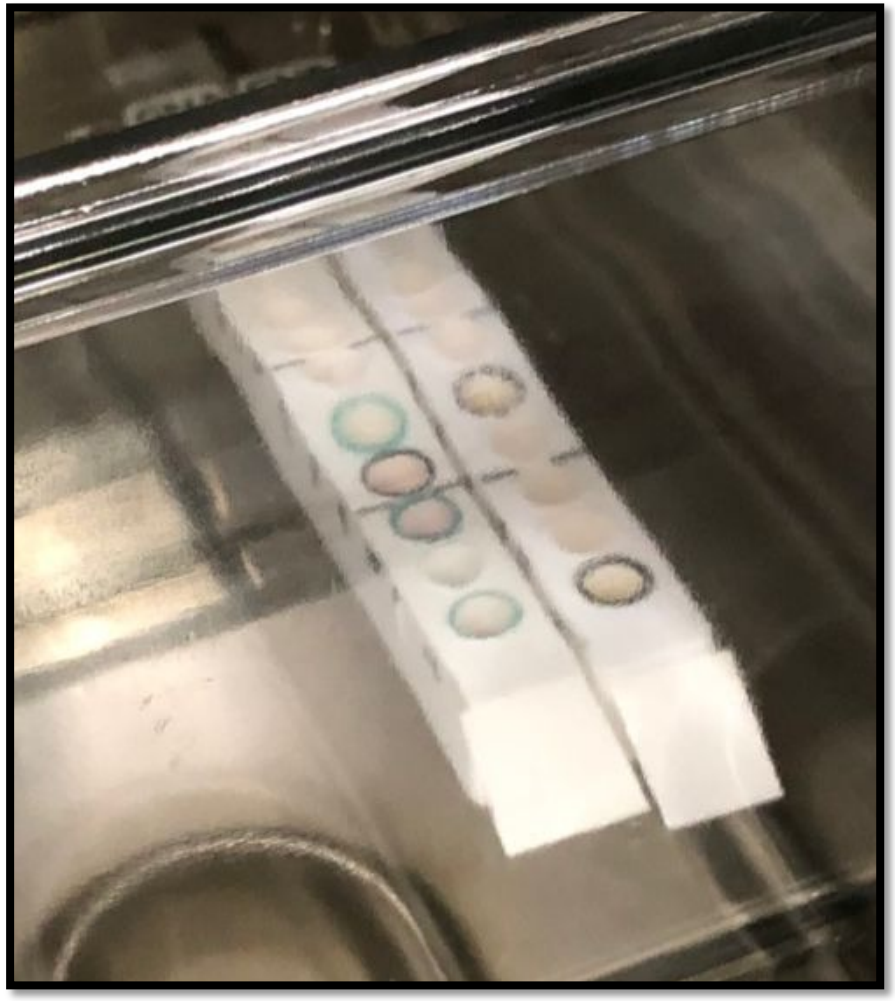
API



Dilución de la cepa

Agregar a los pocillos 100 ul de la dilución

Incubar a 37° por 20 horas



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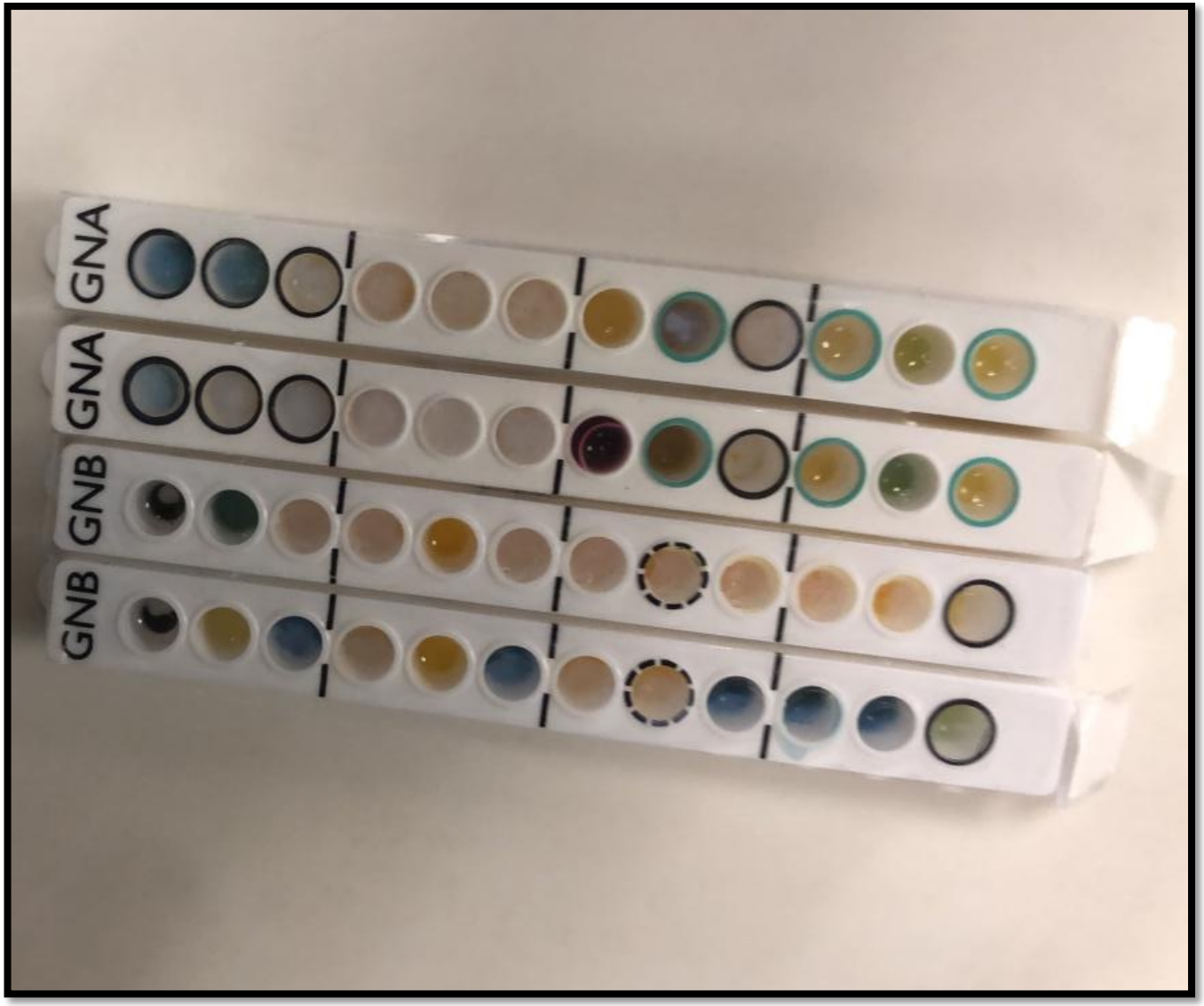
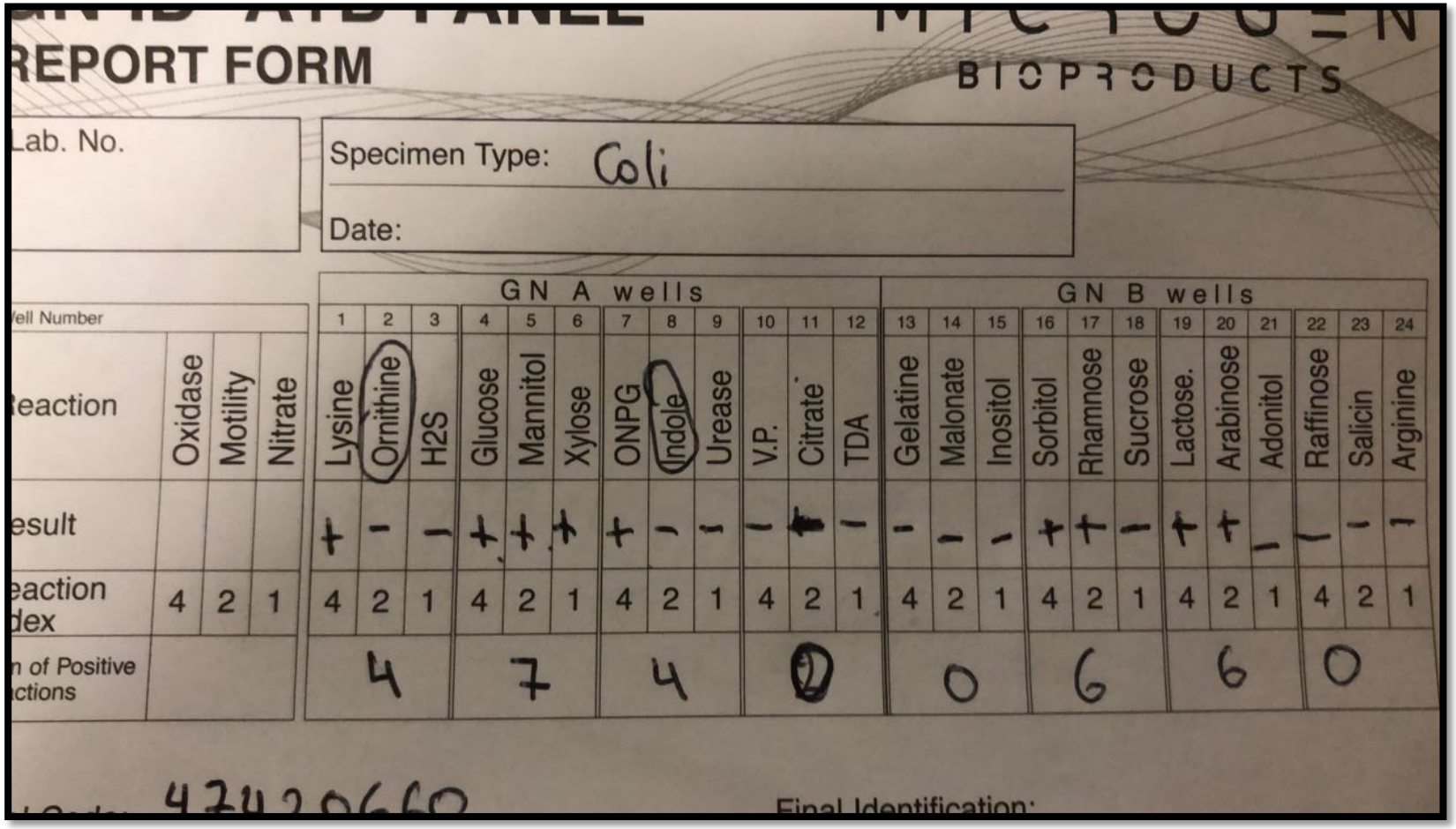


CARTILLA DE LECTURA API



REPORT FORM

BIOPRODUCTS

Lab. No.

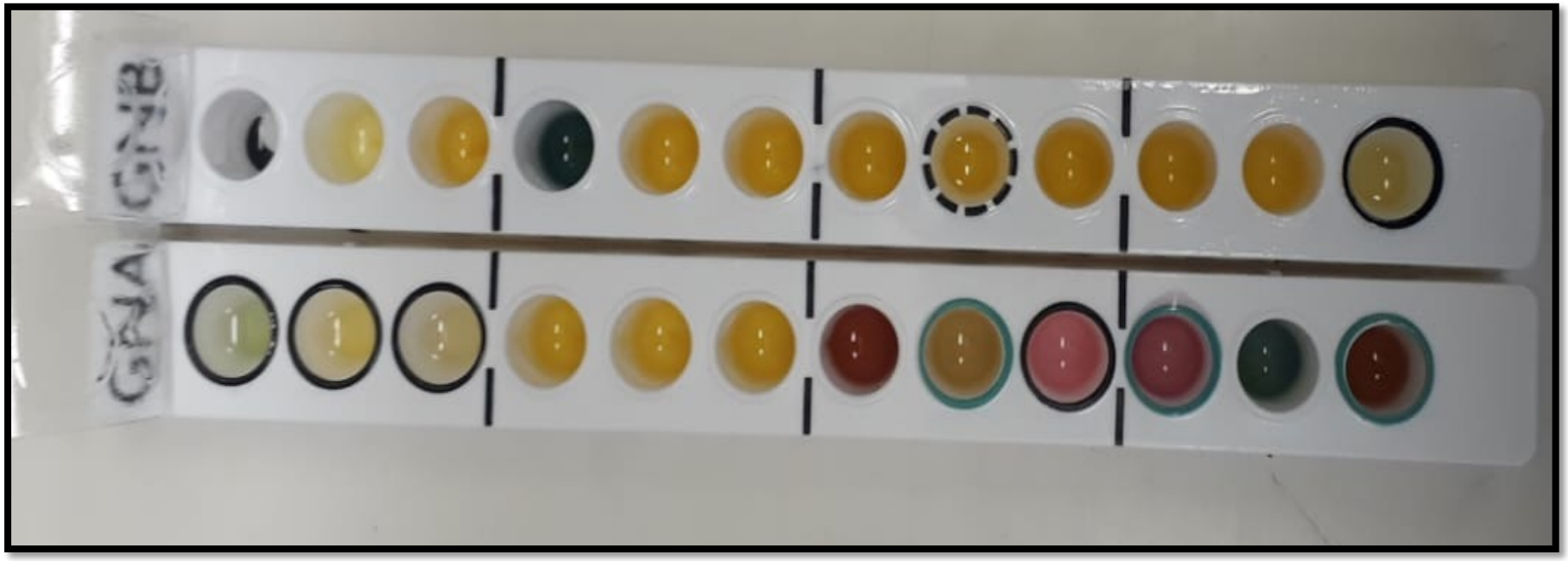
Specimen Type: Coli

Date:

Well Number				GN A wells										GN B wells									
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Reaction	Oxidase	Motility	Nitrate	Lysine	Ornithine	H2S	Glucose	Mannitol	Xylose	ONPG	Indole	Urease	V.P.	Citrate	TDA	Gelatine	Malonate	Inositol	Sorbitol	Rhamnose	Sucrose	Lactose.	Arabinose	Adonitol	Raffinose	Salicin	Arginine
Result				+	-	-	+	+	+	+	-	-	-	+	-	-	-	-	+	+	-	+	+	-	-	-	1
Reaction Index	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1
n of Positive ctions				4			7			4			0			0			6			6			0		

Code: 4742060

Final Identification:


GNB
GNA

CARTA DE LECTURA

GN-ID A+B PANEL
REPORT FORM

MICROGEN
BIOPRODUCTS

Lab. No.

Specimen Type: k. ozanae 99%

Date:

Well Number				GN A wells												GN B wells											
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Reaction	Oxidase	Motility	Nitrate	Lysine	Ornithine	H2S	Glucose	Mannitol	Xylose	ONPG	Indole	Urease	V.P.	Citrate	TDA	Gelatine	Malonate	Inositol	Sorbitol	Rhamnose	Sucrose	Lactose.	Arabinose	Adonitol	Raffinose	Salicin	Arginine
Result	-		+	+	-	-	+	+	+	-	-	+	+	-	-	-	-	+	-	+	+	+	+	+	+	+	-
Reaction Index	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1
Sum of Positive Reactions				4			7			1			0			1			3			7			6		

Octal Code:

Final Identification:

WF6125/2017,Rev.02

Microgen GNA + B Oxidase Negative

Specimen Details

Notes

Date	14/7/2022
Lab Ref.	
Name	
Specimen Type	
Specimen Source	

Results Entry

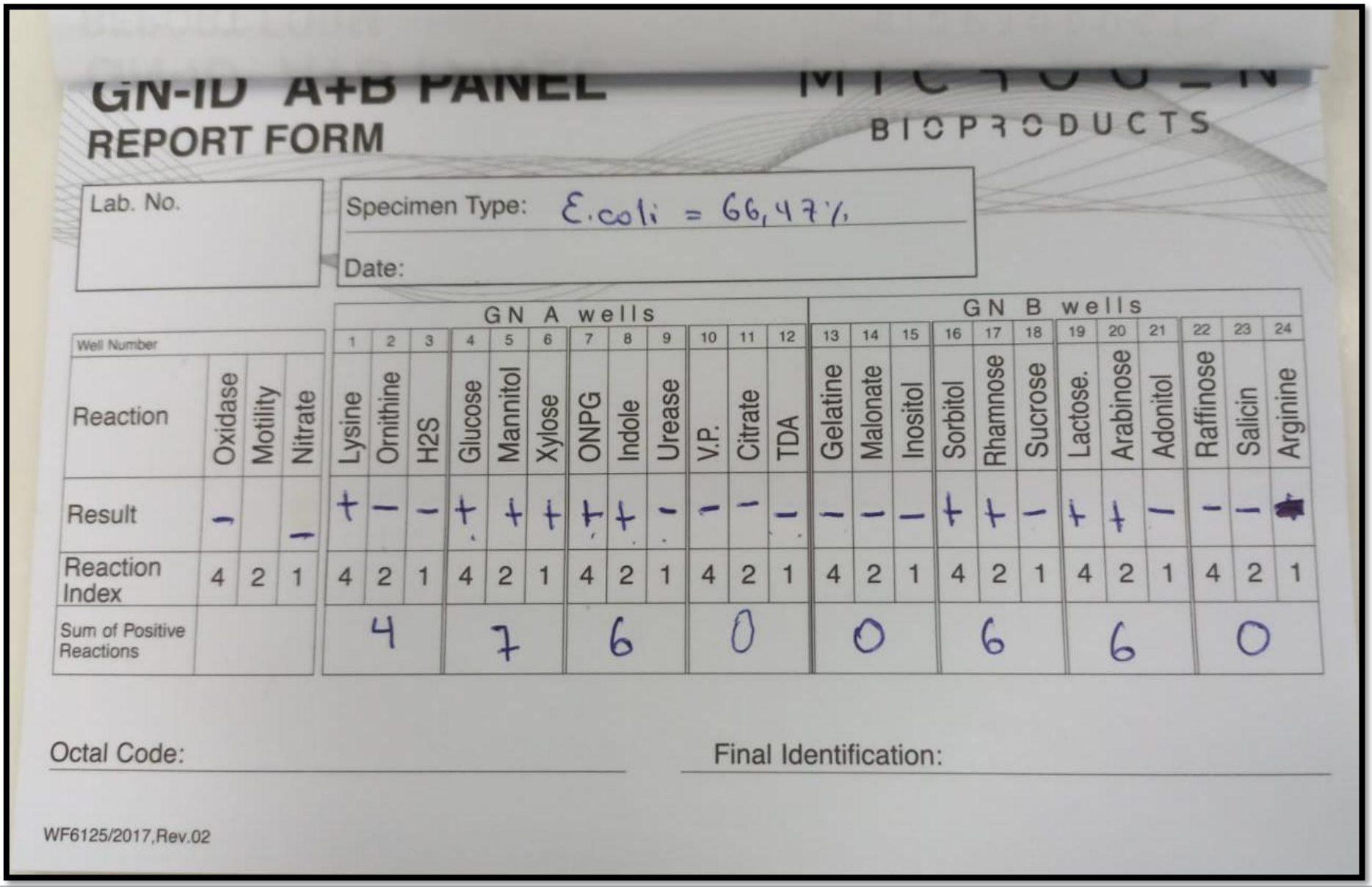
Octal Code 47101376

+	LYS	Lysine Decarboxylase	−	ORN	Ornithine Decarboxylase	−	H2S	H2S Production
+	GLU	Acid from Glucose	+	MAN	Acid from Mannitol	+	XYL	Acid from Xylose
−	ONP	ONPG	−	IND	Indole	+	UR	Urea Hydrolysis
−	VP	Voges Proskauer	−	CIT	Citrate Utilization	−	TDA	Tryptophan Deaminase
−	GEL	Gelatin Liquefaction	−	MAL	Malonate Utilization	+	INO	Acid from Inositol
−	SOR	Acid from Sorbitol	+	RHA	Acid from Rhamnose	+	SUC	Acid from Sucrose
+	LAC	Acid from Lactose	+	ARA	Acid from Arabinose	+	ADO	Acid from Adonitol
+	RAF	Acid from Raffinose	+	SAL	Acid from Salicin	−	ARG	Arginine Dihydrolase

Identification Analysis

	Klebsiella ozaenae	Klebsiella pneumoniae	Pantoea agglomerans	Escherichia coli - inactive	Klebsiella oxytoca
Selected ID Choice	Yes	No	No	No	No
Probability	1/40.598	<1/10,000,000	<1/10,000,000	<1/10,000,000	<1/10,000,000
Percent Probability	99,99%	<0.01%	<0.01%	<0.01%	<0.01%
Likelihood	0,11%	<0.01%	<0.01%	<0.01%	<0.01%
Human Isolate	Yes	Yes	Yes	Yes	Yes
Tests Against					
Test 1	UR(10%)	ONP(99%)	LYS(0,1%)	UR(1%)	ONP(99,9%)
Test 2	ONP(80%)	SOR(99%)	ADO(7%)	INO(1%)	IND(99%)
Test 3	SUC(20%)	VP(98%)	ONP(90%)	ADO(3%)	SOR(99%)
Additional Tests	Yes	Yes	Yes	Yes	Yes
Motility (37C)	0,1%	0,1%	85%	5%	0,1%
Methyl Red	98%	10%	50%	95%	20%
Acid from Cellobiose	92%	98%	55%	2%	99,9%
Acetate Utilization	2%	75%	30%	40%	90%
Additional Comments			63	21	

E. coli



GN-ID A+B PANEL
REPORT FORM
BIOPRODUCTS

Lab. No.

Specimen Type: E.coli = 66,47%

Date:

Well Number				GN A wells												GN B wells											
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Reaction	Oxidase	Motility	Nitrate	Lysine	Ornithine	H2S	Glucose	Mannitol	Xylose	ONPG	Indole	Urease	V.P.	Citrate	TDA	Gelatine	Malonate	Inositol	Sorbitol	Rhamnose	Sucrose	Lactose.	Arabinose	Adonitol	Raffinose	Salicin	Arginine
Result	-		-	+	-	-	+	+	+	+	+	-	-	-	-	-	-	-	+	+	-	+	+	-	-	-	+
Reaction Index	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1
Sum of Positive Reactions				4			7			6			0			0			6			6			0		

Octal Code:

Final Identification:

WF6125/2017,Rev.02

Microgen GNA + B Oxidase Negative

Specimen Details

Notes

Date	14/7/2022
Lab Ref.	
Name	
Specimen Type	
Specimen Source	

Results Entry

Octal Code 47600660

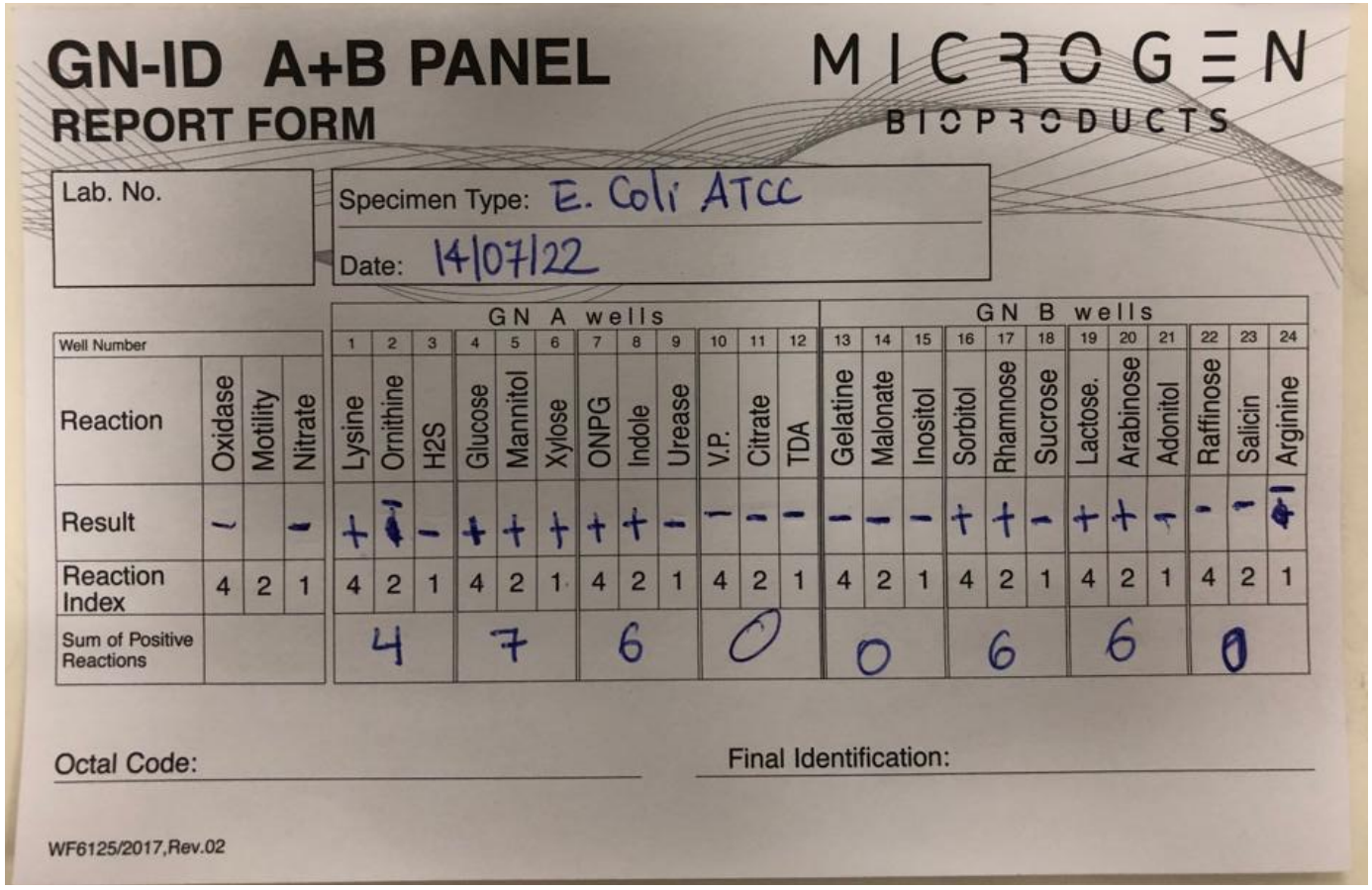
+	LYS	Lysine Decarboxylase	–	ORN	Ornithine Decarboxylase	–	H2S	H2S Production
+	GLU	Acid from Glucose	+	MAN	Acid from Mannitol	+	XYL	Acid from Xylose
+	ONP	ONPG	+	IND	Indole	–	UR	Urea Hydrolysis
–	VP	Voges Proskauer	–	CIT	Citrate Utilization	–	TDA	Tryptophan Deaminase
–	GEL	Gelatin Liquefaction	–	MAL	Malonate Utilization	–	INO	Acid from Inositol
+	SOR	Acid from Sorbitol	+	RHA	Acid from Rhamnose	–	SUC	Acid from Sucrose
+	LAC	Acid from Lactose	+	ARA	Acid from Arabinose	–	ADO	Acid from Adonitol
–	RAF	Acid from Raffinose	–	SAL	Acid from Salicin	–	ARG	Arginine Dihydrolase

Identification Analysis

	Escherichia coli	Escherichia coli - inactive	Citrobacter youngae	Citrobacter freundii	Citrobacter braakii
Selected ID Choice	Yes	No	No	No	No
Probability	1/111	1/220	1/6.156.267	<1/10,000,000	<1/10,000,000
Percent Probability	66,47%	33,53%	<0.01%	<0.01%	<0.01%
Likelihood	17,65%	18,18%	<0.01%	<0.01%	<0.01%
Human Isolate	Yes	Yes	No	Yes	No
Tests Against					
Test 1	ORN(85%)		LYS(0,1%)	LYS(0,1%)	LYS(0,1%)
Test 2			IND(15%)	SUC(89%)	ORN(93%)
Test 3			UR(80%)	H2S(78%)	CIT(87%)
Additional Tests	Yes	Yes	Yes	Yes	Yes
KCN Inhibition	3%	1%	95%	89%	99,9%
Acid from Melibiose	75%	40%	10%	99,9%	80%
Motility (37C)	95%	5%	95%	89%	87%
Acid from Dulcitol	60%	40%	85%	11%	33%
Alpha Methyl D Gluc	0,1%	0,1%	0,1%	11%	33%
Additional Comments		21			

E.coli

Carta de lectura



GN-ID A+B PANEL
REPORT FORM

MICROGEN
BIOPRODUCTS

Lab. No.

Specimen Type: E. Coli ATCC

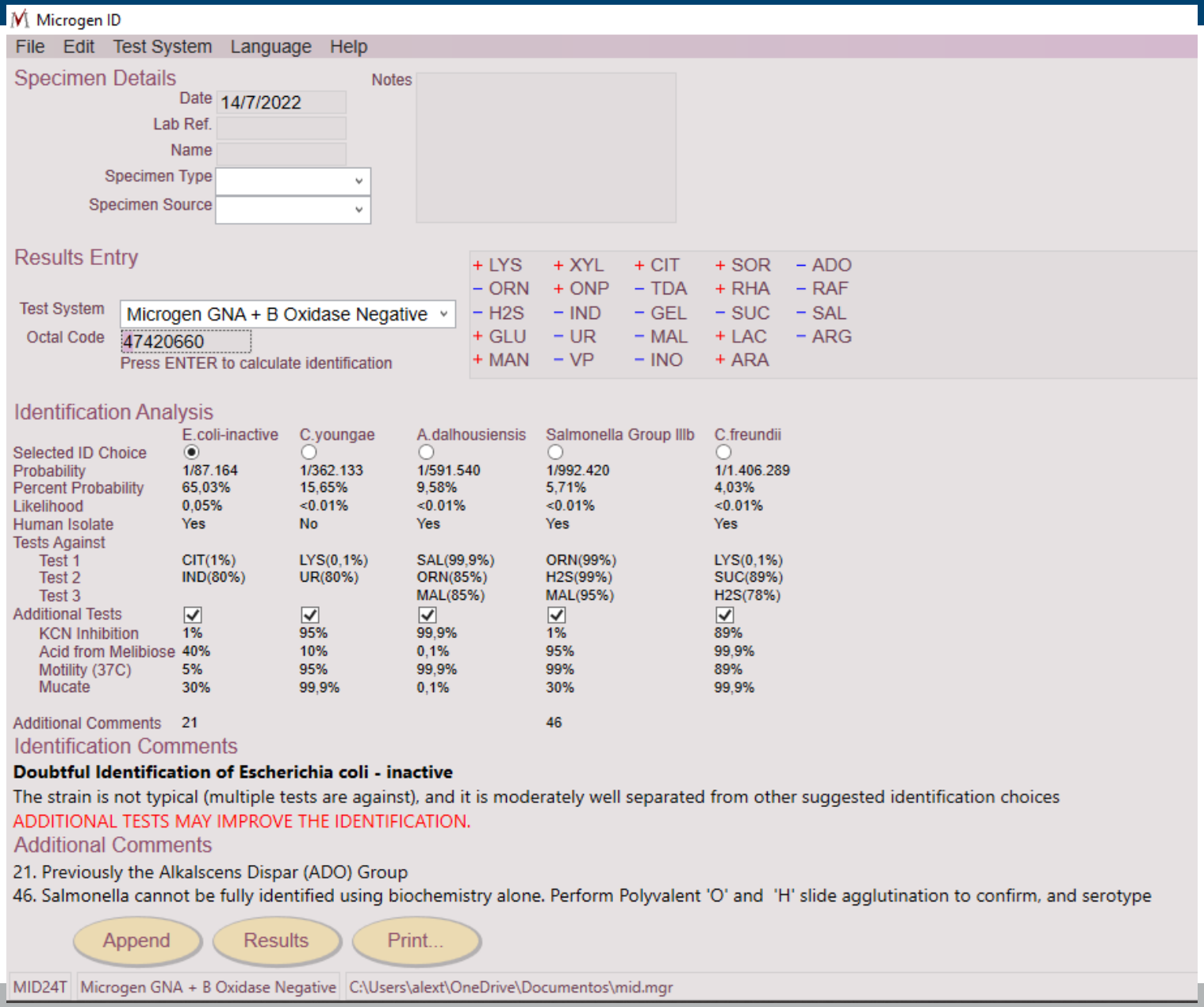
Date: 14/07/22

				GN A wells												GN B wells											
Well Number				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Reaction	Oxidase	Motility	Nitrate	Lysine	Ornithine	H2S	Glucose	Mannitol	Xylose	ONPG	Indole	Urease	V.P.	Citrate	TDA	Gelatine	Malonate	Inositol	Sorbitol	Rhamnose	Sucrose	Lactose.	Arabinose	Adonitol	Raffinose	Salicin	Arginine
Result	-		-	+	+	-	+	+	+	+	+	-	-	-	-	-	-	-	+	+	-	+	+	-	-	-	+
Reaction Index	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1
Sum of Positive Reactions				4			7			6			0			0			6			6			0		

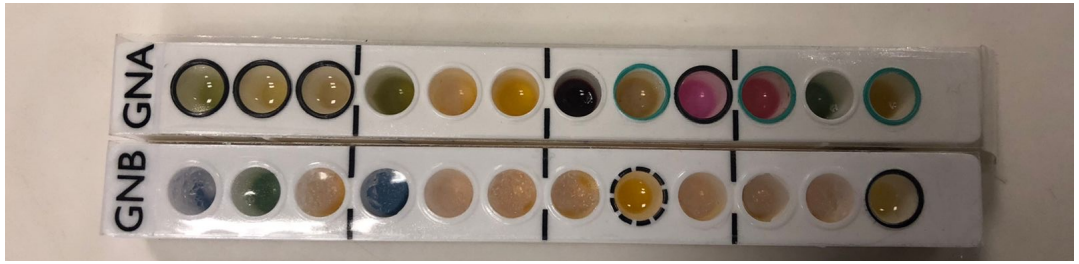
Octal Code:

Final Identification:

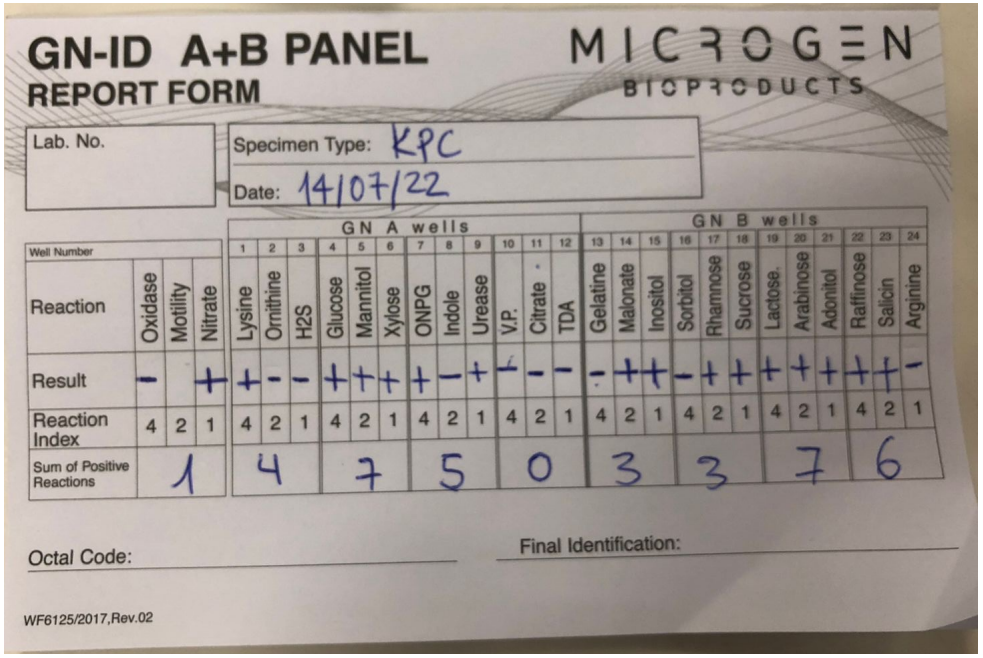
WF6125/2017,Rev.02


Microgen ID
File Edit Test System Language Help
Specimen Details
Date 14/7/2022
Lab Ref.
Name
Specimen Type
Specimen Source
Notes
Results Entry
Test System Microgen GNA + B Oxidase Negative
Octal Code 47420660
Press ENTER to calculate identification
+ LYS + XYL + CIT + SOR − ADO
− ORN + ONP − TDA + RHA − RAF
− H2S − IND − GEL − SUC − SAL
+ GLU − UR − MAL + LAC − ARG
+ MAN − VP − INO + ARA
Identification Analysis
E.coli-inactive C.youngae A.dalhousiensis Salmonella Group IIIb C.freundii
Selected ID Choice
Probability 1/87.164 1/362.133 1/591.540 1/992.420 1/1.406.289
Percent Probability 65,03% 15,65% 9,58% 5,71% 4,03%
Likelihood 0,05% <0.01% <0.01% <0.01% <0.01%
Human Isolate Yes No Yes Yes Yes
Tests Against
Test 1 CIT(1%) LYS(0,1%) SAL(99,9%) ORN(99%) LYS(0,1%)
Test 2 IND(80%) UR(80%) ORN(85%) H2S(99%) SUC(89%)
Test 3 MAL(85%) MAL(95%) H2S(78%)
Additional Tests
KCN Inhibition 1% 95% 99,9% 1% 89%
Acid from Melibiose 40% 10% 0,1% 95% 99,9%
Motility (37C) 5% 95% 99,9% 99% 89%
Mucate 30% 99,9% 0,1% 30% 99,9%
Additional Comments 21 46
Identification Comments
Doubtful Identification of Escherichia coli - inactive
The strain is not typical (multiple tests are against), and it is moderately well separated from other suggested identification choices
ADDITIONAL TESTS MAY IMPROVE THE IDENTIFICATION.
Additional Comments
21. Previously the Alkalscens Dispar (ADO) Group
46. Salmonella cannot be fully identified using biochemistry alone. Perform Polyvalent 'O' and 'H' slide agglutination to confirm, and serotype
Append Results Print...
MID24T Microgen GNA + B Oxidase Negative C:\Users\alext\OneDrive\Documentos\mid.mgr

KPC



Carta de lectura



GN-ID A+B PANEL
REPORT FORM

MICROGEN BIOPRODUCTS

Lab. No.

Specimen Type: KPC

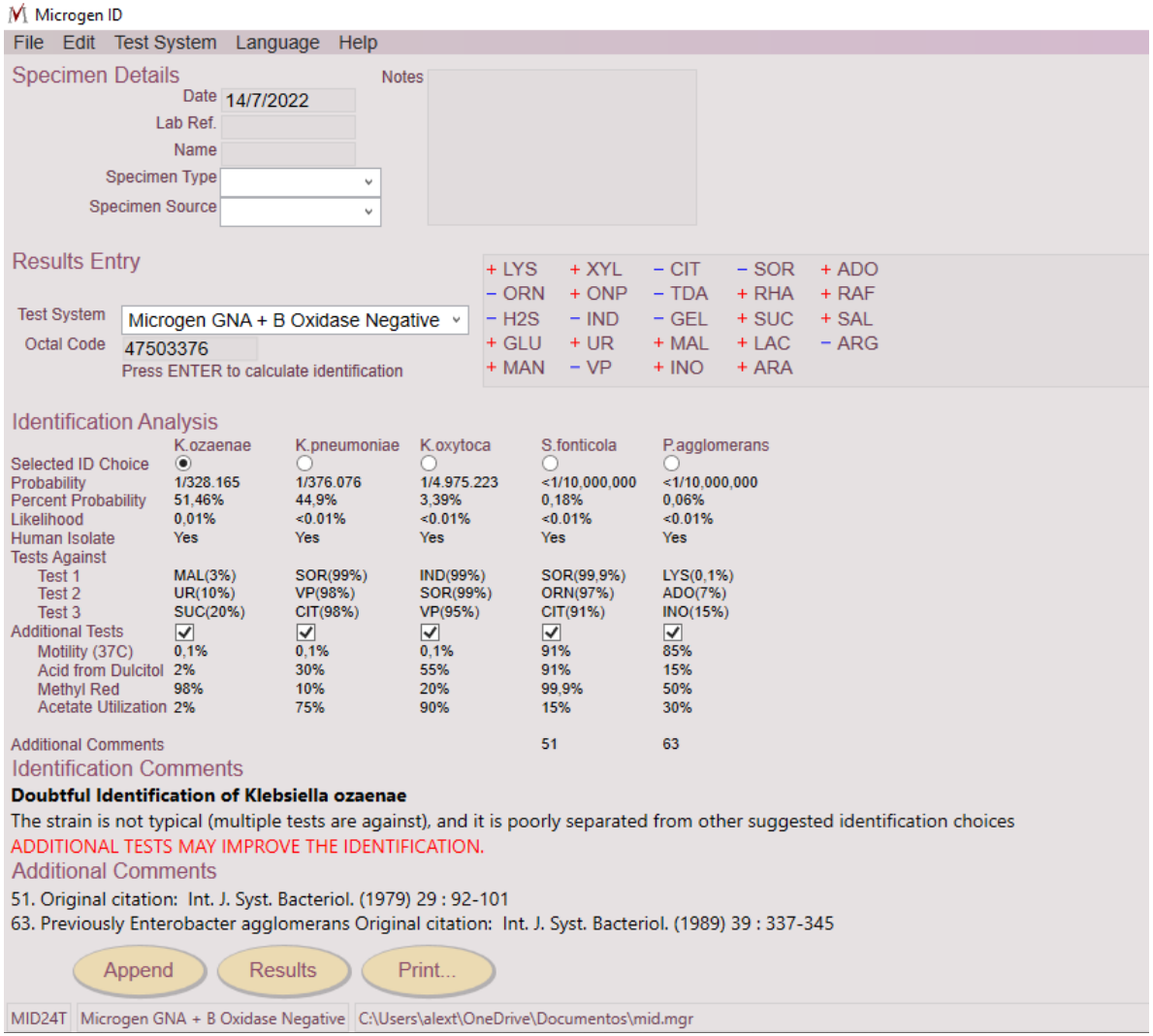
Date: 14/07/22

Well Number				GN A wells												GN B wells											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Reaction	Oxidase	Motility	Nitrate	Lysine	Ornithine	H2S	Glucose	Mannitol	Xylose	ONPG	Indole	Urease	V.P.	Citrate	TDA	Gelatine	Malonate	Inositol	Sorbitol	Rhamnose	Sucrose	Lactose.	Arabinose	Adonitol	Raffinose	Salicin	Arginine
Result	−		+	+	−	−	+	+	+	+	−	+	−	−	−	−	+	+	−	+	+	+	+	+	+	+	−
Reaction Index	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	2	1
Sum of Positive Reactions		1			4			7			5			0			3			3			7			6	

Octal Code:

Final Identification:

WF6125/2017,Rev.02


Microgen ID
File Edit Test System Language Help
Specimen Details
Date 14/7/2022
Lab Ref.
Name
Specimen Type
Specimen Source
Notes
Results Entry
Test System Microgen GNA + B Oxidase Negative
Octal Code 47503376
Press ENTER to calculate identification
+ LYS + XYL − CIT − SOR + ADO
− ORN + ONP − TDA + RHA + RAF
− H2S − IND − GEL + SUC + SAL
+ GLU + UR + MAL + LAC − ARG
+ MAN − VP + INO + ARA
Identification Analysis
K.ozaenae K.pneumoniae K.oxytoca S.fonticola P.agglomerans
Selected ID Choice
Probability 1/328.165 1/376.076 1/4.975.223 <1/10,000,000 <1/10,000,000
Percent Probability 51,46% 44,9% 3,39% 0,18% 0,06%
Likelihood 0,01% <0.01% <0.01% <0.01% <0.01%
Human Isolate Yes Yes Yes Yes Yes
Tests Against
Test 1 MAL(3%) SOR(99%) IND(99%) SOR(99,9%) LYS(0,1%)
Test 2 UR(10%) VP(98%) SOR(99%) ORN(97%) ADO(7%)
Test 3 SUC(20%) CIT(98%) VP(95%) CIT(91%) INO(15%)
Additional Tests
Motility (37C) 0,1% 0,1% 0,1% 91% 85%
Acid from Dulcitol 2% 30% 55% 91% 15%
Methyl Red 98% 10% 20% 99,9% 50%
Acetate Utilization 2% 75% 90% 15% 30%
Additional Comments 51 63
Identification Comments
Doubtful Identification of Klebsiella ozaenae
The strain is not typical (multiple tests are against), and it is poorly separated from other suggested identification choices
ADDITIONAL TESTS MAY IMPROVE THE IDENTIFICATION.
Additional Comments
51. Original citation: Int. J. Syst. Bacteriol. (1979) 29 : 92-101
63. Previously Enterobacter agglomerans Original citation: Int. J. Syst. Bacteriol. (1989) 39 : 337-345
Append Results Print...
MID24T Microgen GNA + B Oxidase Negative C:\Users\alext\OneDrive\Documentos\mid.mgr

Consultas

¿Si se hace el test de oxidasa y sale positivo, ¿se debe realizar la prueba de API?

¿Es indispensable el uso de zinc en pruebas de API y por qué?

¿Para realizar api, únicamente se toma colonias de MacConkey?

Gracias