

# WGS Quality Control Report

Batch Name: 2024-07-04

Experiment Name: 24ARS\_EMR\_LG788

Isolate No.	Sample ID	Description	ARSRL	WGS
1	23ARS_VSM0511	SAL68	Salmonella species	Salmonella enterica subsp. enterica serovar Enteritidis
2	24ARS_BRH0014	EMR142_2	Pseudomonas aeruginosa	Pseudomonas aeruginosa
3	24ARS_BRT0017	EMR141_2	Pseudomonas aeruginosa	Pseudomonas aeruginosa
4	24ARS_CRH0017	EMR146	Escherichia coli	Escherichia coli
5	24ARS_CRH0030	EMR148	Klebsiella pneumoniae	Klebsiella quasipneumoniae
6	24ARS_DMC0098	EMR149	Klebsiella pneumoniae	Klebsiella pneumoniae
7	24ARS_DMC0102	EMR157	Pseudomonas aeruginosa	Pseudomonas aeruginosa
8	24ARS_EVR0011	EMR155	Pseudomonas aeruginosa	Pseudomonas aeruginosa
9	24ARS_EVR0017	EMR158	Pseudomonas aeruginosa	Pseudomonas aeruginosa
10	24ARS_GMH0029	EMR145	Klebsiella pneumoniae	Klebsiella pneumoniae
11	24ARS_JLM0018	EMR143	Klebsiella pneumoniae	Klebsiella pneumoniae
12	24ARS_JLM0020	EMR144	Klebsiella pneumoniae	Klebsiella quasipneumoniae
13	24ARS_NKI0048	EMR147	Escherichia coli	Escherichia coli
14	24ARS_NKI0050	EMR150	Klebsiella pneumoniae	Klebsiella pneumoniae
15	24ARS_NKI0051	EMR151	Klebsiella pneumoniae	Klebsiella pneumoniae
16	24ARS_SLH0030	EMR154	Pseudomonas aeruginosa	Pseudomonas aeruginosa
17	24ARS_STU0024	EMR152	Klebsiella pneumoniae	Klebsiella pneumoniae
18	24ARS_STU0027	EMR153	Acinetobacter baumannii	Acinetobacter pittii
19	24ARS_ZMC0002	EMR156	Pseudomonas aeruginosa	Pseudomonas aeruginosa
20	UTP_BL_006	tricycle	Escherichia coli	Escherichia coli
21	UTP_ST_031	tricycle	Escherichia coli	Escherichia coli

Legend:

PASS	WARNING	FAILURE	EXCEEDS THRESHOLD METRIC/S	NON-CONCORDANT
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## Sample excluded in the analysis

Sample ID	Description	Index reads	Remarks
24ARS_NKI0053	EMR159	0.8429	low read count

Isolate No.	Sample ID	Contamination	Contigs	GC Percent	N50	Total Length
1	23ARS_VSM0511	0	24	52.13	478941	4700439
2	24ARS_BRH0014	0	84	65.97	247991	6878546
3	24ARS_BRT0017	0	122	65.33	220628	7348540
4	24ARS_CRH0017	0	127	50.53	136602	5373741
5	24ARS_CRH0030	0	39	57.75	801312	5379490
6	24ARS_DMC0098	0	44	57.19	479099	5405179
7	24ARS_DMC0102	0	51	66.32	488628	6482852
8	24ARS_EVR0011	0	47	66.47	407140	6291421
9	24ARS_EVR0017	0	131	66.36	151006	6423637
10	24ARS_GMH0029	0	110	56.65	172819	5772594
11	24ARS_JLM0018	0	95	56.79	394359	5742923
12	24ARS_JLM0020	0	77	57.65	229344	5512178
13	24ARS_NKI0048	0	93	50.83	320376	5148168
14	24ARS_NKI0050	0	55	57.20	236088	5425644
15	24ARS_NKI0051	0	81	56.82	238924	5595191
16	24ARS_SLH0030	0	99	65.94	361062	6937344
17	24ARS_STU0024	0	55	57.13	303929	5493891
18	24ARS_STU0027	0	17	38.58	519454	3995354
19	24ARS_ZMC0002	0	89	66.46	197528	6319285
20	UTP_BL_006	0	44	50.61	279880	4940847
21	UTP_ST_031	0	109	50.42	166206	5380880

Legend:

PASS

WARNING

FAILURE

EXCEEDS THRESHOLD METRIC/S

\*Isolates were tagged with warning due to uncertain results of species identification using bactinspector or sequence identification levels.

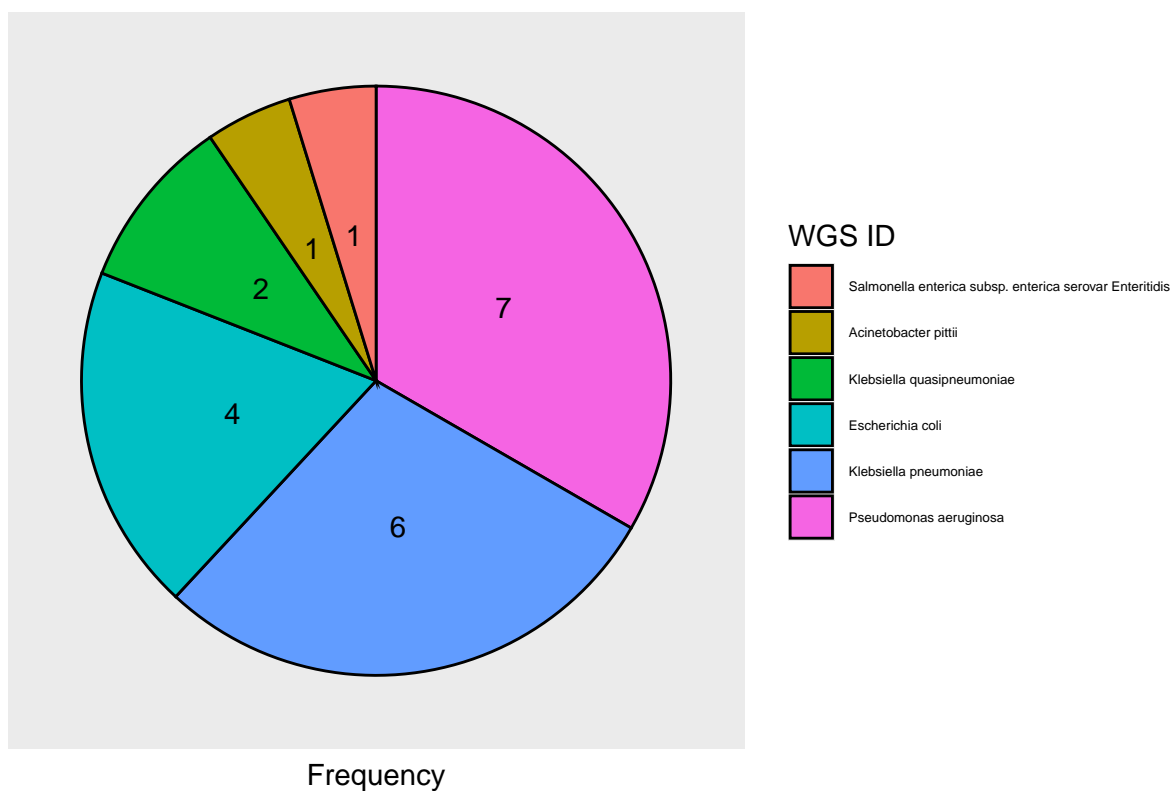
## List of samples above/below QC threshold metrics

Sample ID	Remarks
No QC failures found.	

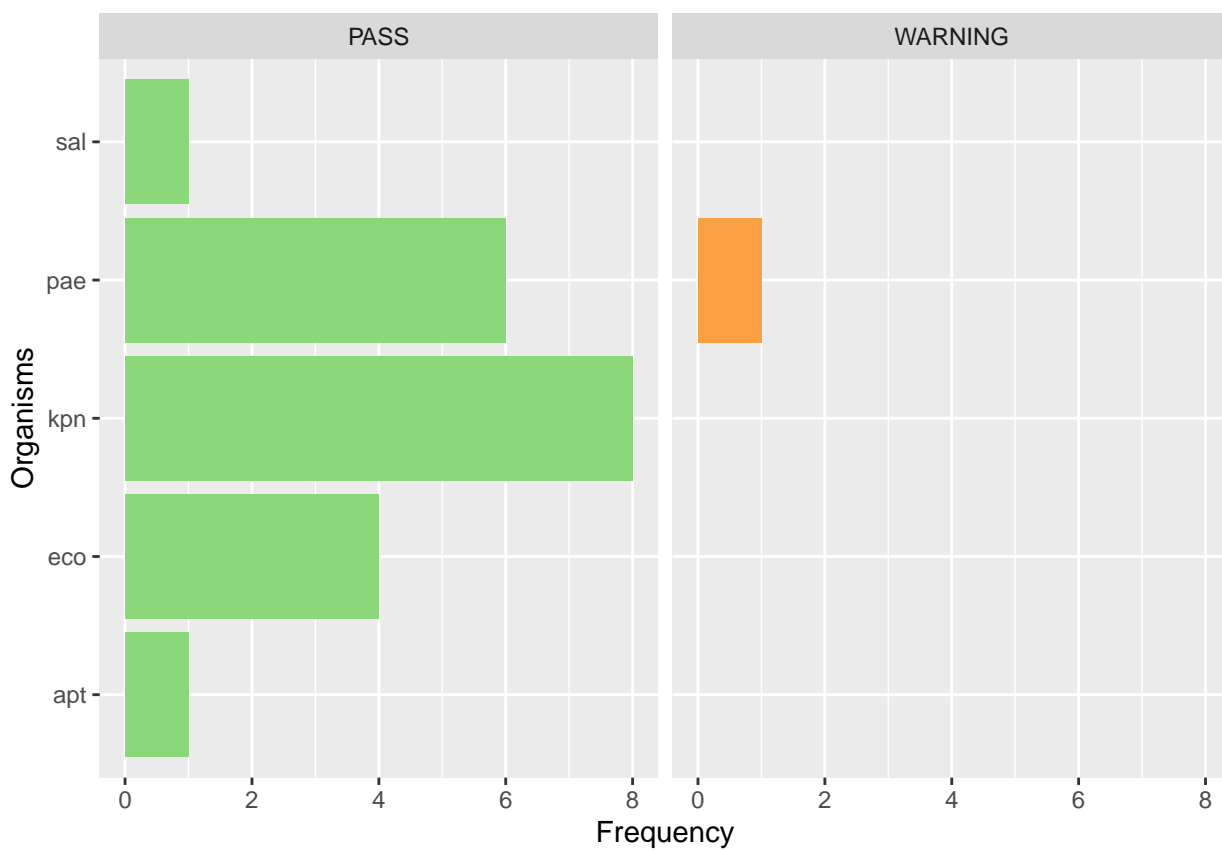
WGS_ID	Number
Pseudomonas aeruginosa	7
Klebsiella pneumoniae	6
Escherichia coli	4
Klebsiella quasipneumoniae	2
Acinetobacter pittii	1
Salmonella enterica subsp. enterica serovar Enteritidis	1

- 6 distinct species were identified among 21 isolates.
- 95.24 % (n=20) of the isolates passed the QC, while 4.76 % (n=1) were tagged with warning.
- Concordance between ARSRL and WGS species report was 100.00 %.

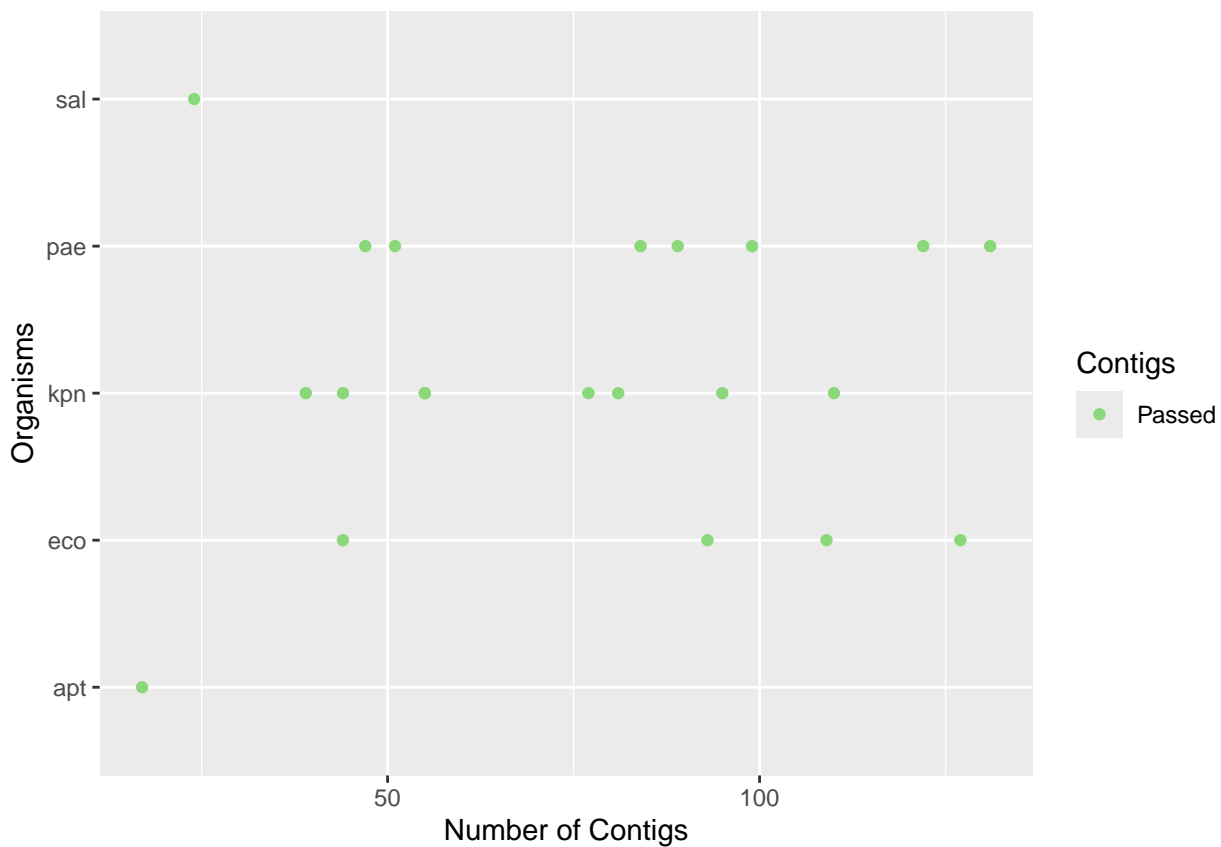
## GRAPHS



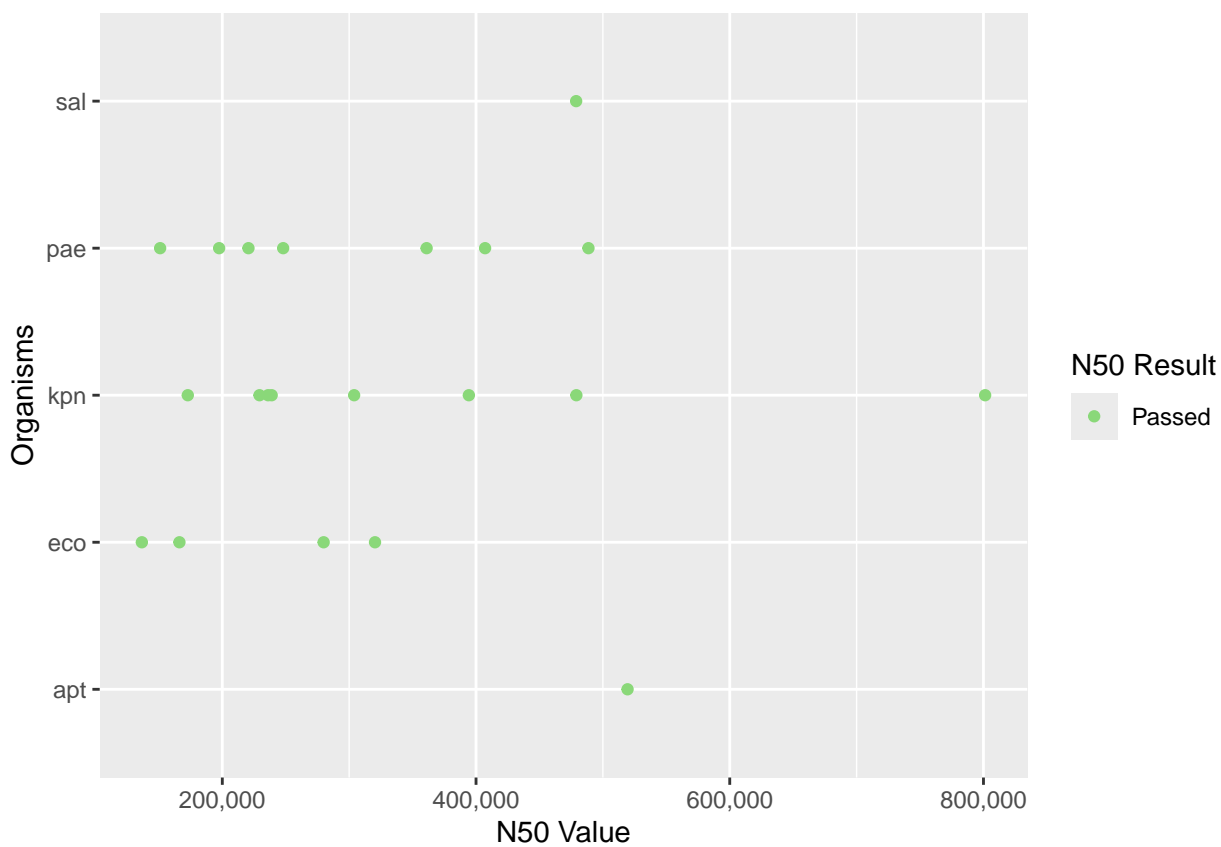
## Result Classification



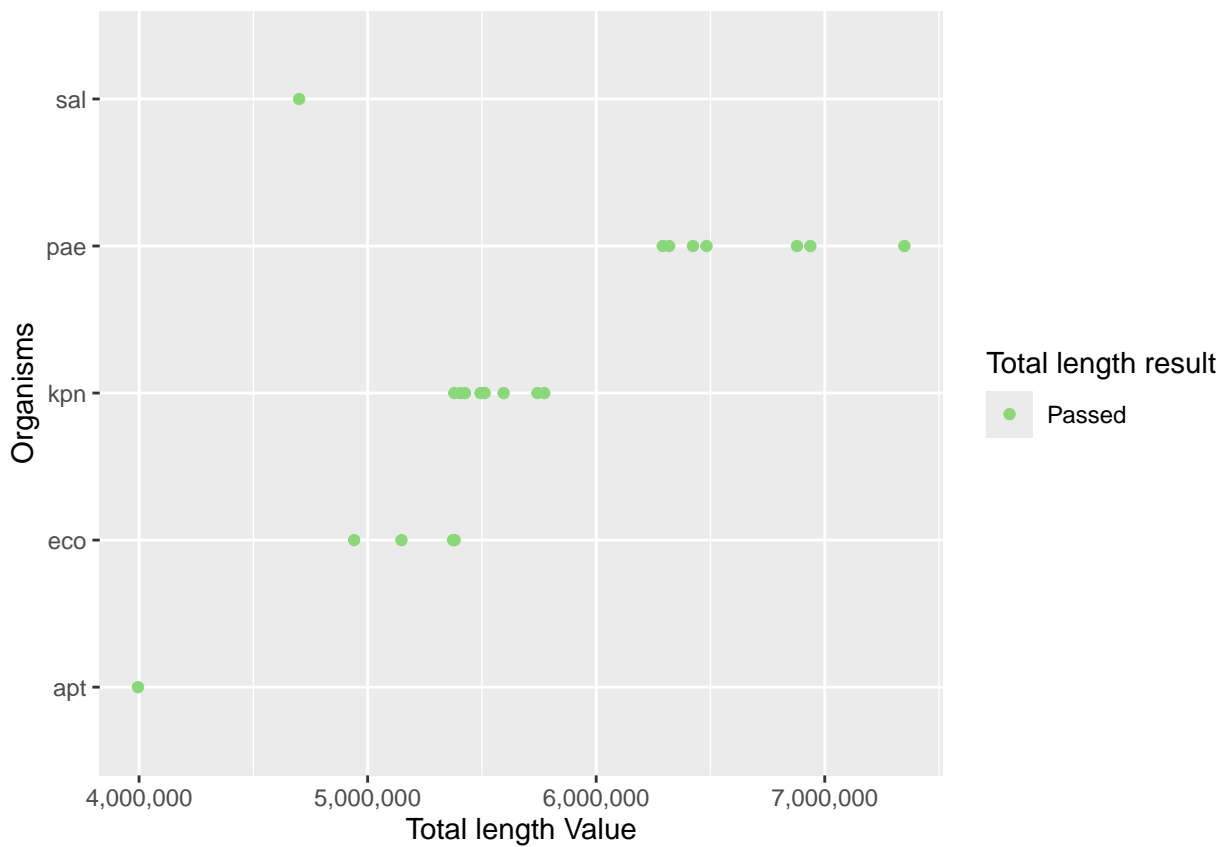
## Number of contigs



## N50 Value



## Total Length



## RECOMMENDATION:

Sample ID	Action	Reason
No further action required for this batch.		

## MLST RESULTS:

sample_id	species	MLST	aroC	dnaN	hemD	hisD	purE	sucA	thrA
23ARS_VSM0511	Salmonella enterica subsp. enterica serovar Enteritidis	-	5,638	2	3	7	6	6	11

sample_id	species	MLST	aroC	dnaN	hemD	hisD	purE	sucA	thrA
24ARS_BRH0014	Pseudomonas aeruginosa	639	11	19	19	3	4	4	7
24ARS_BRT0017	Pseudomonas aeruginosa	-	28,347	5	36	3	3	13	7
24ARS_DMC0102	Pseudomonas aeruginosa	2617	84	3	20	71	4	7	1
24ARS_EVR0011	Pseudomonas aeruginosa	-	15,345	5	11	3	15	42	9
24ARS_EVR0017	Pseudomonas aeruginosa	641	6	5	6	5	4	4	7
24ARS_SLH0030	Pseudomonas aeruginosa	-	11,345	20	1	65	4	4	10
24ARS_ZMC0002	Pseudomonas aeruginosa	3014	16	5	12	3	3	1	18

sample_id	species	MLST	aroC	dnaN	hemD	hisD	purE	sucA	thrA
24ARS_CRH0017	Escherichia coli	2083	6	322	5	16	11	8	7
24ARS_NKI0048	Escherichia coli	131	53	40	47	13	36	28	29
UTP_ST_031	Escherichia coli	38	4	26	2	25	5	5	19

sample_id	species	MLST	aroC	dnaN	hemD	hisD	purE	sucA	thrA
24ARS_CRH0030	Klebsiella quasipneumoniae	-	18	22	74	22	123	20	99
24ARS_DMC0098	Klebsiella pneumoniae	17	2	1	1	1	4	4	4
24ARS_GMH0029	Klebsiella pneumoniae	147	3	4	6	1	7	4	38
24ARS_JLM0018	Klebsiella pneumoniae	39	2	1	2	4	9	1	14
24ARS_JLM0020	Klebsiella quasipneumoniae	6403	18	22	26	59	92	13	192
24ARS_NKI0050	Klebsiella pneumoniae	2050	2	3	2	37	10	1	15
24ARS_NKI0051	Klebsiella pneumoniae	15	1	1	1	1	1	1	1
24ARS_STU0024	Klebsiella pneumoniae	39	2	1	2	4	9	1	14

sample_id	species	MLST	aroC	dnaN	hemD	hisD	purE	sucA	thrA
24ARS_STU0027	Acinetobacter pittii	-	~101	~233	46	29	~124	~59	119

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sample_id	species	AMR EFFLUX	STRESS COPPER/ GOLD	STRESS GOLD	STRESS NA	VIRULENCE NA
23ARS_VSM0511	Salmonella enterica subsp. enterica serovar Enteritidis	mdsA, mdsB	golT	golS	fieF	sodC1, iroC, iroB, sinH

sample_id	species	AMR AMIKACIN/ KANAMYCIN	AMR BETA-LACTAM	AMR CARBAPENEM	AMR CEPHALOSPORIN	AMR CHLORAM- PHENICOL	AMR EFFLUX	AMR FOSFOMYCIN	AMR KANAMYCIN	AMR QUINOLONE	AMR STREPTOMYCIN	AMR SULFONAMIDE	AMR TIGECYCLINE	STRESS CHROMATE	STRESS MERCURY	STRESS NA
24ARS_BRH0014	<i>Pseudomonas aeruginosa</i>	NA	blaOXA-486	NA	blaPDC-3	catB7	mexA, mexE, mexX	fosA	aph(3')-IIB	NA	NA	NA	NA	NA	NA	NA
24ARS_BRT0017	<i>Pseudomonas aeruginosa</i>	aph(3')-Vla	blaOXA-396	blaIMP-26, blaVIM-2	blaPDC-5, blaOXA-10	catB7, catB3	mexA, mexX, mexE	fosA	aph(3')-IIB	qnrVC1	aadA1, aph(3')-Ib, aph(3')-Ib	sul1	tmexC3, tmexD3, topRJ1	chrA	merE, merD, merA, merP, merT, merR	clpK
24ARS_DMC0102	<i>Pseudomonas aeruginosa</i>	NA	blaOXA-486	NA	blaPDC-5	catB7	mexA, mexE, mexX	fosA	aph(3')-IIB	NA	NA	NA	NA	NA	NA	NA
24ARS_EVR0011	<i>Pseudomonas aeruginosa</i>	NA	blaOXA-50	NA	blaPDC-3	catB7	mexA, mexE, mexX	fosA	aph(3')-IIB	NA	NA	NA	NA	NA	NA	NA
24ARS_EVR0017	<i>Pseudomonas aeruginosa</i>	NA	blaOXA-50	NA	blaPDC-5	catB7	mexA, mexX, mexE	fosA	aph(3')-IIB	NA	NA	NA	NA	NA	NA	NA
24ARS_SLH0030	<i>Pseudomonas aeruginosa</i>	NA	blaOXA-50	NA	blaPDC-14	catB7	mexE, mexA, mexX	fosA	aph(3')-IIB	NA	NA	NA	NA	NA	NA	NA
24ARS_ZMC0002	<i>Pseudomonas aeruginosa</i>	NA	blaOXA-1023	NA	blaPDC-3	catB7	mexA, mexE, mexX	fosA	aph(3')-IIB	NA	NA	NA	NA	NA	NA	NA

sample_id	species	AMR AKMICIN/ QUINOLONE/ TOBRAMYCIN	AMR AZITHROMYCIN/ ERYTHROMYCIN/ SPRIFYMICIN/ TELITHROMYCIN	AMR BETA-LACTAM	AMR BLEOMYCIN	AMR CARBAPENEM	AMR CEPHALOSPORIN	AMR CHLORAM- PHENICOL	AMR CLINDAMYCIN/ ERYTHROMYCIN	AMR COLISTIN	AMR EFFLUX	AMR GENTAMICIN	AMR KANAMYCIN	AMR STREPTOMYCIN	AMR SULFONAMIDE	AMR TETRACYCLINE	AMR TRIMETHOPHRIM	STRESS ARSENATE	STRESS ARSENIC	STRESS EFFLUX	STRESS NA	STRESS QUATERNARY AMMONIUM	VIROLENCE NA
24ARS_CRH0017	<i>Escherichia coli</i>	aac(6)-Ib-cr5	NA	blaEC, blaTEM-1	bla	blaNDM-7	blaCMY-42	catA2	erm(42)	mcr-1.1	acrF, mdtM, emrD	aac(3)-IId	aph(3)-Ia	aph(6)-Ic, aph(3)-Ib	su2	tet(B)	NA	arsC	arsR	NA	arR, arf, tetF	NA	tacC, ynfA-O113, asaA, espX1
24ARS_NK00048	<i>Escherichia coli</i>	aac(6)-Ib-cr5	nph(A)	blaEC	NA	NA	blaCTX-M-15, blaCXA-1	NA	NA	NA	acrF, mdtM, emrD	NA	NA	aadA5	su1	tet(A)	dtA17	arsC	NA	emrE	arR, tetF, arf	qacEDelta1	hbc, tse, ynfP, ynfQ, atdC, rnaE, pagA, ucaA, lucB, uacC, uacD, hda, sat, rfa
UTP_ST_031	<i>Escherichia coli</i>	NA	nph(A)	blaEC, blaTEM-1	NA	NA	blaCTX-M-14	NA	NA	NA	acrF, emrD	NA	NA	aadA5	su1	NA	dtA17	arsC	arsR	NA	ar, tetF, arR	qacEDelta1	espX1, tacC, ynfQ, ynfP, sfsC, rnaE, eia, sap, estA, asa

Sample ID	species	AMR AKMICIN/ KANAMYCIN/ GUSUNONE/ TETRACYCLIN	AMR ANIMOLY- COSIDE	AMR AZITHROMY- CIN/ ERYTHROMY- CIN/ SPRIFYMYCIN/ TELITHROMY- CIN	AMR BETA-LACTAM	AMR BLEOMY- CIN/ CARBAPENEM	AMR CEPHALOSPORIN	AMR EFFLUX	AMR FOSFO- MYCIN	AMR GENTAMICIN	AMR KANAMYCIN	AMR PHENICO- L/GUINOLONE	AMR GUINOLONE	AMR RIFAMYCIN	AMR STREPTOMY- CIN	AMR SULFONAMIDE	AMR TETRACYCLINE	AMR TRIMETHOPRIM	STRESS COPPER	STRESS COPPER SILVER	STRESS MERCURY	STRESS NA	STRESS ORGANOMER- CURY	STRESS QUATERNARY AMR	STRESS SILVER	STRESS TELLURUM	VIOLENCE NA	
24ARS_CPH0000	Klebsiella pneumoniae	NA	NA	mp(A)	blaCOP-8	NA	blaCTX-M-15	kdsA, emrD	fosA	NA	NA	copA, copB	qnrS1	NA	aac(2), aph(6)-Id, aph(7)-Ib	su1, su2	tsf(A)	dhA12	copA, copB, copC, copD, copE, copF, copG, copH, copI, copJ, copK, copL, copM, copN, copO, copP, copQ, copR, copS, copT, copU, copV, copW, copX, copY, copZ	sfr, sfrC, sfrE, sfrF, sfrG, sfrH, sfrI, sfrJ, sfrK, sfrL, sfrM, sfrN, sfrO, sfrP, sfrQ, sfrR, sfrS, sfrT, sfrU, sfrV, sfrW, sfrX, sfrY, sfrZ	NA	sfH	NA	qacGda1a1	sfr, sfrP	tsrB, tsrC, tsrD, tsrE	NA	
24ARS_DM0009	Klebsiella pneumoniae	aac(7)-Ib-c5	NA	mp(A)	NA	NA	blaCTX-M-15	kdsA, emrD	fosA	aac(3)-IId	NA	copA, copB	qnrB25	am-3	aph(7)-Ib	su1	tsf(A)	NA	copA, copB, copC, copD, copE, copF, copG, copH, copI, copJ, copK, copL, copM, copN, copO, copP, copQ, copR, copS, copT, copU, copV, copW, copX, copY, copZ	sfr, sfrC, sfrE, sfrF, sfrG, sfrH, sfrI, sfrJ, sfrK, sfrL, sfrM, sfrN, sfrO, sfrP, sfrQ, sfrR, sfrS, sfrT, sfrU, sfrV, sfrW, sfrX, sfrY, sfrZ	NA	sfH	NA	qacGda1a1	sfr, sfrP	tsrB, tsrC, tsrD, tsrE	NA	
24ARS_GAM0003	Klebsiella pneumoniae	aac(7)-Ib-c5	mtb1	mp(A)	blaNDM-7	NA	blaCTX-M-15, blaOXA-1	kdsA, emrD	fosA	aac(3)-IId	NA	copA, copB	qnrB6	am-3	aph(7)-Ib	su1	tsf(A)	NA	copA, copB, copC, copD, copE, copF, copG, copH, copI, copJ, copK, copL, copM, copN, copO, copP, copQ, copR, copS, copT, copU, copV, copW, copX, copY, copZ	sfr, sfrC, sfrE, sfrF, sfrG, sfrH, sfrI, sfrJ, sfrK, sfrL, sfrM, sfrN, sfrO, sfrP, sfrQ, sfrR, sfrS, sfrT, sfrU, sfrV, sfrW, sfrX, sfrY, sfrZ	NA	sfH	NA	qacGda1a1	sfr, sfrP	tsrB, tsrC, tsrD, tsrE	NA	
24ARS_LJM0016	Klebsiella pneumoniae	aac(7)-Ib-c5	NA	mp(A)	blaSHV-11	NA	blaCTX-M-15, blaOXA-1	kdsA, emrD	fosA	aac(3)-IId	NA	copA, copB	qnrB32	qnrS1, qnrB6	am-3	aac(4), aph(2), aph(7)-Ib	su1, su2	tsf(A)	dhA12	copA, copB, copC, copD, copE, copF, copG, copH, copI, copJ, copK, copL, copM, copN, copO, copP, copQ, copR, copS, copT, copU, copV, copW, copX, copY, copZ	sfr, sfrC, sfrE, sfrF, sfrG, sfrH, sfrI, sfrJ, sfrK, sfrL, sfrM, sfrN, sfrO, sfrP, sfrQ, sfrR, sfrS, sfrT, sfrU, sfrV, sfrW, sfrX, sfrY, sfrZ	merP, merT, merS	sfH	merC	NA	qacGda1a1	tsrE	yopP, yopJ
24ARS_LJM0020	Klebsiella pneumoniae	NA	NA	mp(A)	blaCOP-8	NA	blaCTX-M-15	emrD, kdsA	fosA	NA	NA	copA, copB	qnrS1	NA	aph(7)-Ib	su1, su2	tsf(A)	dhA12	copA, copB, copC, copD, copE, copF, copG, copH, copI, copJ, copK, copL, copM, copN, copO, copP, copQ, copR, copS, copT, copU, copV, copW, copX, copY, copZ	sfr, sfrC, sfrE, sfrF, sfrG, sfrH, sfrI, sfrJ, sfrK, sfrL, sfrM, sfrN, sfrO, sfrP, sfrQ, sfrR, sfrS, sfrT, sfrU, sfrV, sfrW, sfrX, sfrY, sfrZ	NA	sfH	NA	qacGda1a1	sfr, sfrP	tsrE, tsrF, tsrG, tsrH, tsrI, tsrJ, tsrK, tsrL, tsrM, tsrN, tsrO, tsrP, tsrQ, tsrR, tsrS, tsrT, tsrU, tsrV, tsrW, tsrX, tsrY, tsrZ	yopD, yopE, yopF, yopG, yopH, yopI, yopJ, yopK, yopL, yopM, yopN, yopO, yopP, yopQ, yopR, yopS, yopT, yopU, yopV, yopW, yopX, yopY, yopZ	
24ARS_NK00050	Klebsiella pneumoniae	NA	NA	NA	blaSHV-1	NA	NA	emrD, kdsA	fosA	NA	NA	NA	NA	NA	aph(7)-Ib	NA	NA	NA	copA, copB, copC, copD, copE, copF, copG, copH, copI, copJ, copK, copL, copM, copN, copO, copP, copQ, copR, copS, copT, copU, copV, copW, copX, copY, copZ	sfr, sfrC, sfrE, sfrF, sfrG, sfrH, sfrI, sfrJ, sfrK, sfrL, sfrM, sfrN, sfrO, sfrP, sfrQ, sfrR, sfrS, sfrT, sfrU, sfrV, sfrW, sfrX, sfrY, sfrZ	NA	sfH	NA	qacGda1a1	sfr, sfrP	tsrE, tsrF, tsrG, tsrH, tsrI, tsrJ, tsrK, tsrL, tsrM, tsrN, tsrO, tsrP, tsrQ, tsrR, tsrS, tsrT, tsrU, tsrV, tsrW, tsrX, tsrY, tsrZ	NA	
24ARS_NK00051	Klebsiella pneumoniae	aac(7)-Ib-c5	NA	mp(A)	blaSHV-28	NA	blaNDM-5, blaOXA-1	emrD, kdsA	fosA	aac(3)-IId	NA	copA, copB	qnrS1, qnrB1	NA	aac(2), aph(6)-Id, aph(7)-Ib	su1, su2	tsf(A)	dhA12	copA, copB, copC, copD, copE, copF, copG, copH, copI, copJ, copK, copL, copM, copN, copO, copP, copQ, copR, copS, copT, copU, copV, copW, copX, copY, copZ	sfr, sfrC, sfrE, sfrF, sfrG, sfrH, sfrI, sfrJ, sfrK, sfrL, sfrM, sfrN, sfrO, sfrP, sfrQ, sfrR, sfrS, sfrT, sfrU, sfrV, sfrW, sfrX, sfrY, sfrZ	NA	sfH	NA	qacGda1a1	sfr, sfrP	tsrB, tsrC, tsrD, tsrE	NA	
24ARS_ST00024	Klebsiella pneumoniae	NA	NA	NA	blaSHV-11	NA	blaCTX-M-15, blaOXA-1	kdsA, emrD	fosA	NA	aph(7)-Ia	copA, copB	qnrB32	qnrS1	aph(7)-Ib	su1, su2	tsf(A)	dhA7	copA, copB, copC, copD, copE, copF, copG, copH, copI, copJ, copK, copL, copM, copN, copO, copP, copQ, copR, copS, copT, copU, copV, copW, copX, copY, copZ	sfr, sfrC, sfrE, sfrF, sfrG, sfrH, sfrI, sfrJ, sfrK, sfrL, sfrM, sfrN, sfrO, sfrP, sfrQ, sfrR, sfrS, sfrT, sfrU, sfrV, sfrW, sfrX, sfrY, sfrZ	NA	sfH	NA	qacGda1a1	sfr, sfrP	tsrB, tsrC, tsrD, tsrE	yopD, yopE	

sample_id	species	AMR CARBAPENEM	AMR CEPHALOSPORIN	AMR EFFLUX	AMR FOSFOMYCIN	AMR SPECTINO- MYCIN/ STREPTOMYCIN	STRESS NICKEL
24ARS_STU0027	Acinetobacter pittii	blaOXA	blaADC	amvA, adeE, adeD	abaF	ant(3'')-IIa	nreB