

WGS Quality Control Report

Batch Name: 2024-04-07

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.

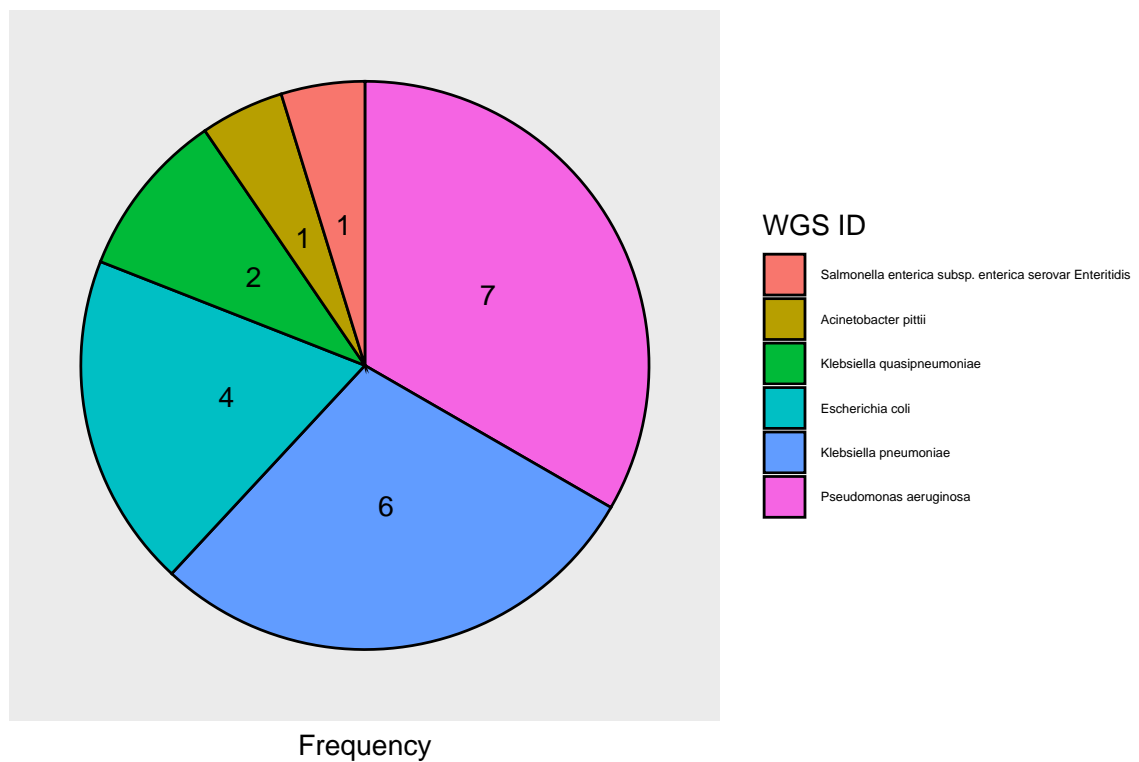
List of samples above/below QC threshold metrics

Sample ID	Remarks
No QC failures found.	

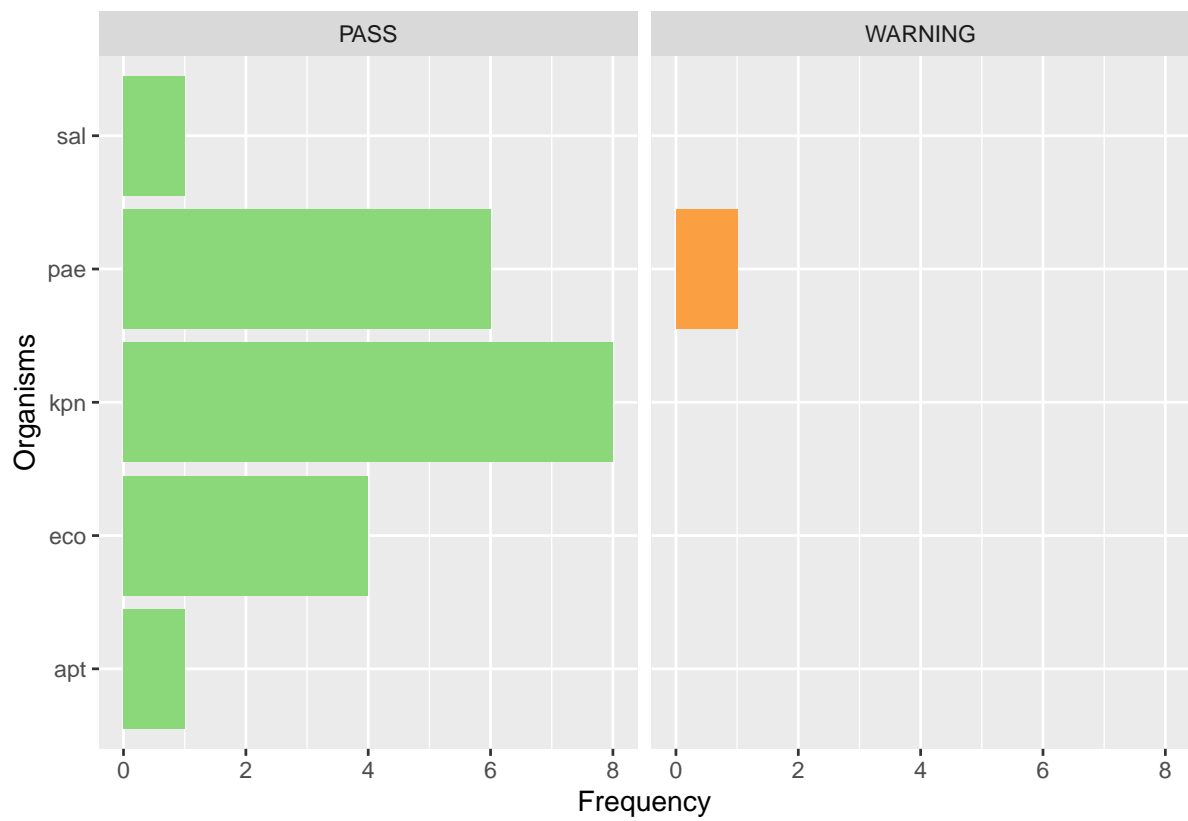
WGS_ID	Number
<i>Pseudomonas aeruginosa</i>	7
<i>Klebsiella pneumoniae</i>	6
<i>Escherichia coli</i>	4
<i>Klebsiella quasipneumoniae</i>	2
<i>Acinetobacter pittii</i>	1
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Enteritidis</i>	1

- 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 %.

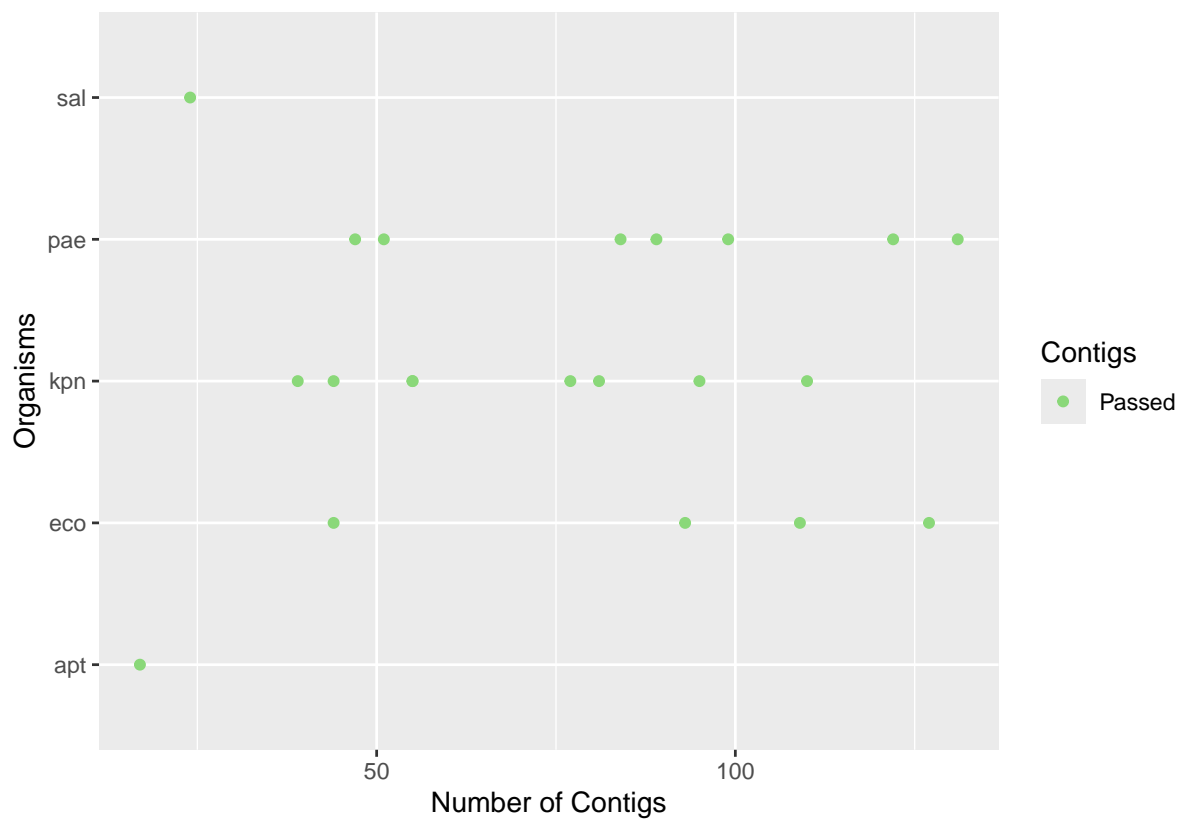
GRAPHS



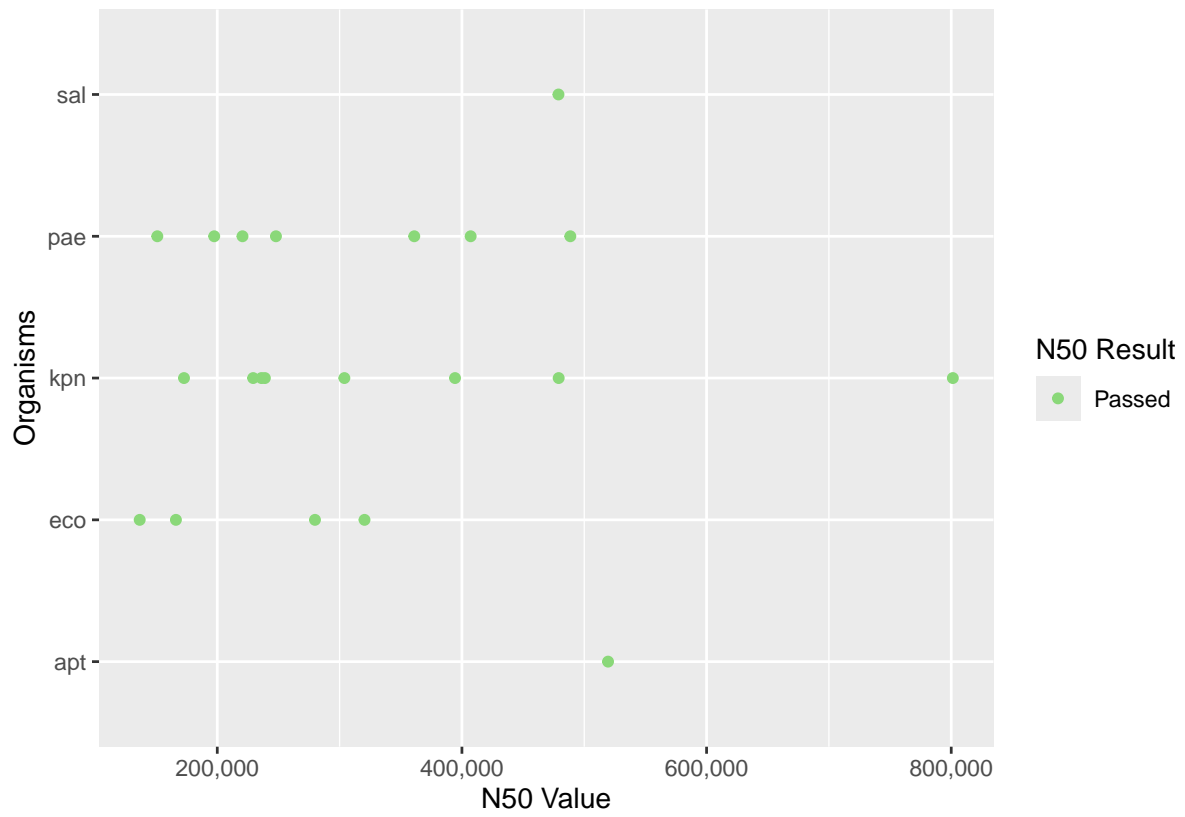
Result Classification



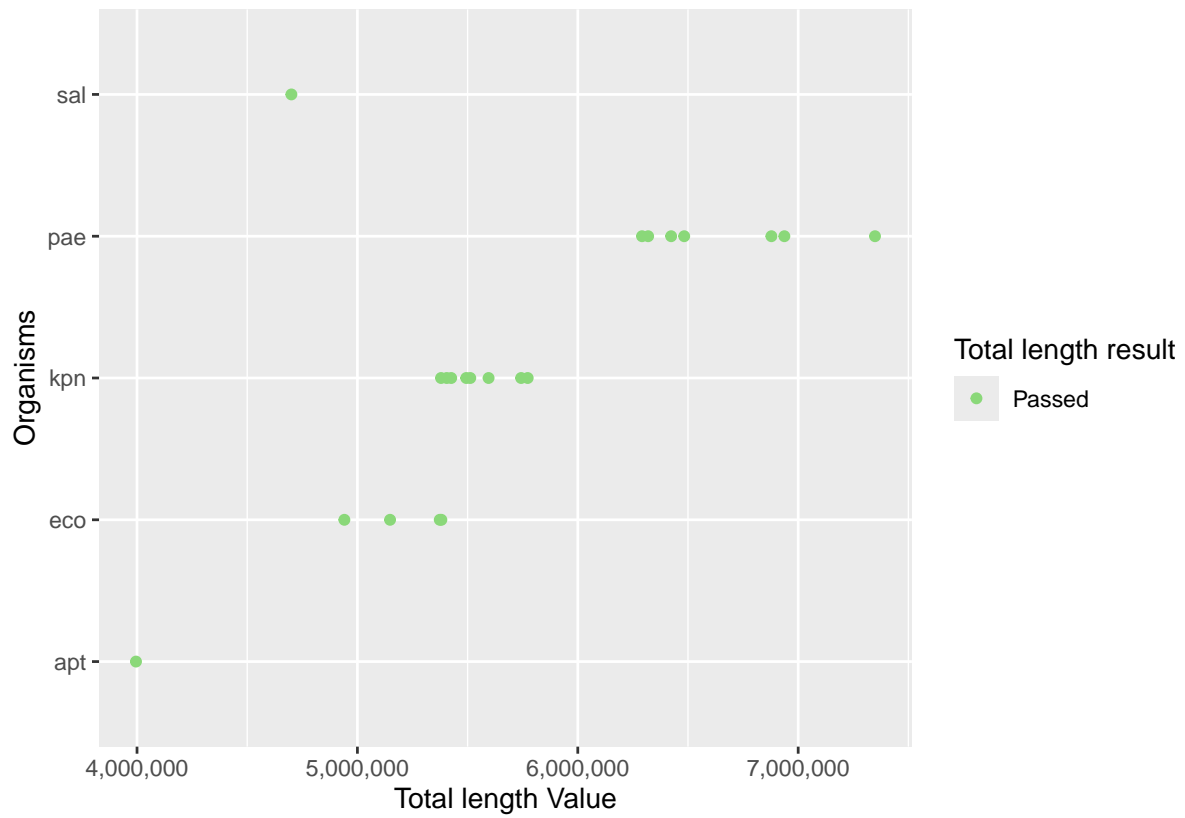
Number of contigs



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
2	24ARS_BRH0014	Pseudomonas aeruginosa	639	11	19	19	3	4	4	7
3	24ARS_BRT0017	Pseudomonas aeruginosa	-	28,347	5	36	3	3	13	7
7	24ARS_DMC0102	Pseudomonas aeruginosa	2617	84	3	20	71	4	7	1
8	24ARS_EVR0011	Pseudomonas aeruginosa	-	15,345	5	11	3	15	42	9
9	24ARS_EVR0017	Pseudomonas aeruginosa	641	6	5	6	5	4	4	7
16	24ARS_SLH0030	Pseudomonas aeruginosa	-	11,345	20	1	65	4	4	10
19	24ARS_ZMC0002	Pseudomonas aeruginosa	3014	16	5	12	3	3	1	18

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

	sample_id	species	MLST	aroC	dnaN	hemD	hisD	purE	sucA	thrA
5	24ARS_CRH0030	Klebsiella quasipneumoniae	-	18	22	74	22	123	20	99
6	24ARS_DMC0098	Klebsiella pneumoniae	17	2	1	1	1	4	4	4
10	24ARS_GMH0029	Klebsiella pneumoniae	147	3	4	6	1	7	4	38
11	24ARS_JLM0018	Klebsiella pneumoniae	39	2	1	2	4	9	1	14
12	24ARS_JLM0020	Klebsiella quasipneumoniae	6403	18	22	26	59	92	13	192
14	24ARS_NKI0050	Klebsiella pneumoniae	2050	2	3	2	37	10	1	15
15	24ARS_NKI0051	Klebsiella pneumoniae	15	1	1	1	1	1	1	1
17	24ARS_STU0024	Klebsiella pneumoniae	39	2	1	2	4	9	1	14

	sample_id	species	MLST	aroC	dnaN	hemD	hisD	purE	sucA	thrA
18	24ARS_STU0027	Acinetobacter pittii	-	~101	~233	46	29	~124	~59	119

AMR PREDICTION RESULTS:

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

sample_id	species	AMR AMIKACIN/KANAMYCIN	AMR BETA-LACTAM	AMR CARBAPENEM	AMR CEPHALOSPORIN
24ARS_BRH0014	Pseudomonas aeruginosa	NA	blaOXA-486	NA	blaPDC-3
24ARS_BRT0017	Pseudomonas aeruginosa	aph(3')-VIa	blaOXA-396	blaIMP-26, blaVIM-2	blaPDC-5, blaOXA-10
24ARS_DMC0102	Pseudomonas aeruginosa	NA	blaOXA-486	NA	blaPDC-5
24ARS_EVR0011	Pseudomonas aeruginosa	NA	blaOXA-50	NA	blaPDC-3
24ARS_EVR0017	Pseudomonas aeruginosa	NA	blaOXA-50	NA	blaPDC-5
24ARS_SLH0030	Pseudomonas aeruginosa	NA	blaOXA-50	NA	blaPDC-14
24ARS_ZMC0002	Pseudomonas aeruginosa	NA	blaOXA-1023	NA	blaPDC-3

sample_id	species	AMR AMIKACIN/KANAMYCIN/QUINOLONE/TOBRAMYCIN	AMR AZITHROMYCIN/ERYTHROMYCIN/SPIRAMYCIN/TE
24ARS_CRH0017	Escherichia coli	aac(6')-Ib-cr5	NA
24ARS_NKI0048	Escherichia coli	aac(6')-Ib-cr5	mph(A)
UTP_ST_031	Escherichia coli	NA	mph(A)

sample_id	species	AMR AMIKACIN/KANAMYCIN/QUINOLONE/TOBRAMYCIN	AMR AMINOGLYCOSIDE	AMR AZITHROMYCIN
24ARS_CRH0030	Klebsiella quasipneumoniae	NA	NA	
24ARS_DMC0098	Klebsiella pneumoniae	aac(6')-Ib-cr5	NA	
24ARS_GMH0029	Klebsiella pneumoniae	aac(6')-Ib-cr	rmtB1	
24ARS_JLM0018	Klebsiella pneumoniae	aac(6')-Ib-cr5	NA	
24ARS_JLM0020	Klebsiella quasipneumoniae	NA	NA	
24ARS_NKI0050	Klebsiella pneumoniae	NA	NA	
24ARS_NKI0051	Klebsiella pneumoniae	aac(6')-Ib-cr5	NA	
24ARS_STU0024	Klebsiella pneumoniae	NA	NA	

sample_id	species	AMR CARBAPENEM	AMR CEPHALOSPORIN	AMR EFFLUX	AMR FOSFOMYCIN	AMR SPECTINOMYCIN
24ARS_STU0027	Acinetobacter pittii	blaOXA	blaADC	amvA, adeE, adeD	abaF	ant(4)

sample_id	species	AMR AMIKACIN/KANAMYCIN/AMINOGLYCOSIDE	AMR VANCOMYCIN/TEICoplanin	AMR AZITHROMYCLIN/CLINDAMYCIN	AMR BETA-LACTAMASES/BETA-LACTAM	AMR BETA-LACTAMASES/BETA-LACTAM	AMR BETA-LACTAMASES/BETA-LACTAM	AMR BETA-LACTAMASES/BETA-LACTAM	AMR BETA-LACTAMASES/BETA-LACTAM	AMR FOS-FOMYCIN	AMR GEN-TAM-ICIN	AMR KLEB-TOXIN
24ARS_CRH0030	Klebsiella quasipneumoniae	NA	NA	mph(A)	blaOKP-B	NA	NA	blaCTX-M-15	kdeA, emrD	fosA	NA	NA
24ARS_DMC0098	Klebsiella pneumoniae	aac(6')-lb-cr5	NA	mph(A)	blaSHV-11, blaTEM-1	NA	NA	blaCTX-M-15	kdeA, emrD	fosA	aac(3)-lld	NA
24ARS_GMH0029	Klebsiella pneumoniae	aac(6')-lb-cr	rmtB1	mph(A)	blaSHV-11	ble	blaNDM-7	blaCTX-M-15, blaOXA-1	kdeA, emrD	fosA	aac(3)-lle	NA
24ARS_JLM0018	Klebsiella pneumoniae	aac(6')-lb-cr5	NA	mph(A)	blaSHV-11	ble	blaNDM-5	blaCTX-M-15, blaOXA-1	kdeA, emrD	fosA	aac(3)-lld	NA
24ARS_JLM0020	Klebsiella quasipneumoniae	NA	NA	mph(A)	blaOKP-B	NA	NA	blaCTX-M-15	emrD, kdeA	fosA	NA	NA
24ARS_NKI0050	Klebsiella pneumoniae	NA	NA	NA	blaSHV-1	NA	NA	NA	emrD, kdeA	fosA	NA	NA
24ARS_NKI0051	Klebsiella pneumoniae	aac(6')-lb-cr5	NA	mph(A)	blaSHV-28	ble	blaNDM-5	blaCTX-M-15, blaOXA-1	emrD, kdeA	fosA	aac(3)-lle	NA
24ARS_STU0024	Klebsiella pneumoniae	NA	NA	NA	blaSHV-11	NA	NA	blaCTX-M-15	kdeA, emrD	fosA	NA	aac(3)-lle