Electronic Supplementary Material (ESI) for Analytical Methods.

Market-Ready U-AST Kit: Simple, Fast, Cost-Effective Solution for Detecting Urinary Tract Infection and Antibiotic Resistance Concurrently

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Table S1: Antibiotic solution dose optimization on susceptible standards (*Pseudomonas aeruginosa, Vibrio cholerae , Escherichia coli, Pseudomonas species*)for the four antibiotics.

Antibiotics Name	**Control**	**1.81µg/ml (100µL)**	**3.33 µg/ml (200µL)**	**4.61 µg/ml (300µL)**	**5.71 µg/ml (400µL)**	**6.66 µg/ml (500µL)**
Ampicillin	*Pseudomonas aeruginosa*	2.11E+05	2.22E+04	2.44E+03	2.10E+02	0.00E+00
Amoxicillin	*Vibrio cholerae*	3.20E+04	2.67E+04	2.36E+03	2.55E+02	0.00E+00
Antibiotic Name	**Control**	**5.45 µg/ml (100 µL)**	**10 µg/ml (200 µL)**	**13.84 µg/ml (300 µL)**	**17.14 µg/ml (400 µL)**	**20 µg/ml (500 µL)**
Amikacin	*Escherichia coli*	2.36E+05	2.49E+04	2.01E+04	2.37E+02	0.00E+00
Antibiotic Name	**Control**	**0.90 µg/ml (100 µL)**	**1.66 µg/ml (200 µL)**	**2.30 µg/ml (300 µL)**	**2.85 µg/ml (400 µL)**	**3.33 µg/ml (500 µL)**
Ciprofloxacin	*Pseudomonas species*	2.91E+05	3.10E+04	2.66E+03	2.58E+02	0.00E+00

Table S2: Antibiotic inhibition time optimization using Ampicillin with *Escherichia coli* as R (Resistant) and *Pseudomonas aeruginosa* as S (Susceptible), Amoxicillin with *Escherichia coli* as R (Resistant) and *Vibrio cholerae* as S (Susceptible), Amikacin with *Enterococcus faecalis* as R(Resistant) and *Escherichia coli* as S(Susceptible), Ciprofloxacin with *Escherichia coli* as R (resistant) and *Pseudomonas species* as S (Susceptible)

Antibiotics Name	**Control**	**0hr**	**1hr**	**2hrs**	**3hrs**	**4hrs**	**5hrs**	**6hrs**
Ampicillin	*Escherichia coli*	3.27E+03	4.86E+03	6.29E+04	8.71E+04	1.98E+05	4.77E+05	3.02E+06
	Pseudomonas aeruginosa	4.89E+03	4.71E+03	4.43E+03	3.96E+03	3.55E+03	2.10E+02	0.00E+00
Amoxicillin	*Escherichia coli*	2.98E+03	3.64E+03	4.30E+03	5.89E+04	3.27E+05	4.77E+05	5.26E+06
	Vibrio cholerae	1.70E+04	4.85E+03	6.15E+03	9.57E+03	1.39E+02	1.99E+02	0.00E+00
Amikacin	*Enterococcus faecalis*	2.28E+03	3.55E+03	4.01E+03	2.99E+04	5.73E+04	2.24E+05	4.98E+06
	Escherichia coli	4.69E+03	3.99E+03	2.93E+03	1.93E+03	3.10E+02	2.10E+02	0.00E+00
Ciprofloxacin	*Escherichia coli*	2.18E+03	2.52E+03	3.70E+03	1.41E+04	2.22E+04	3.77E+05	5.07E+06
	Pseudomonas species	3.55E+03	3.11E+03	2.97E+03	2.34E+03	2.13E+02	1.77E+02	0.00E+00

Fig S1: Antibiotic solution dose optimization with (A) Ampicillin with *Pseudomonas aeruginosa,* (B) Amoxicillin with *Vibrio cholerae*, (C) Amikacin with *Escherichia coli* and (D) Ciprofloxacin with *Pseudomonas species*

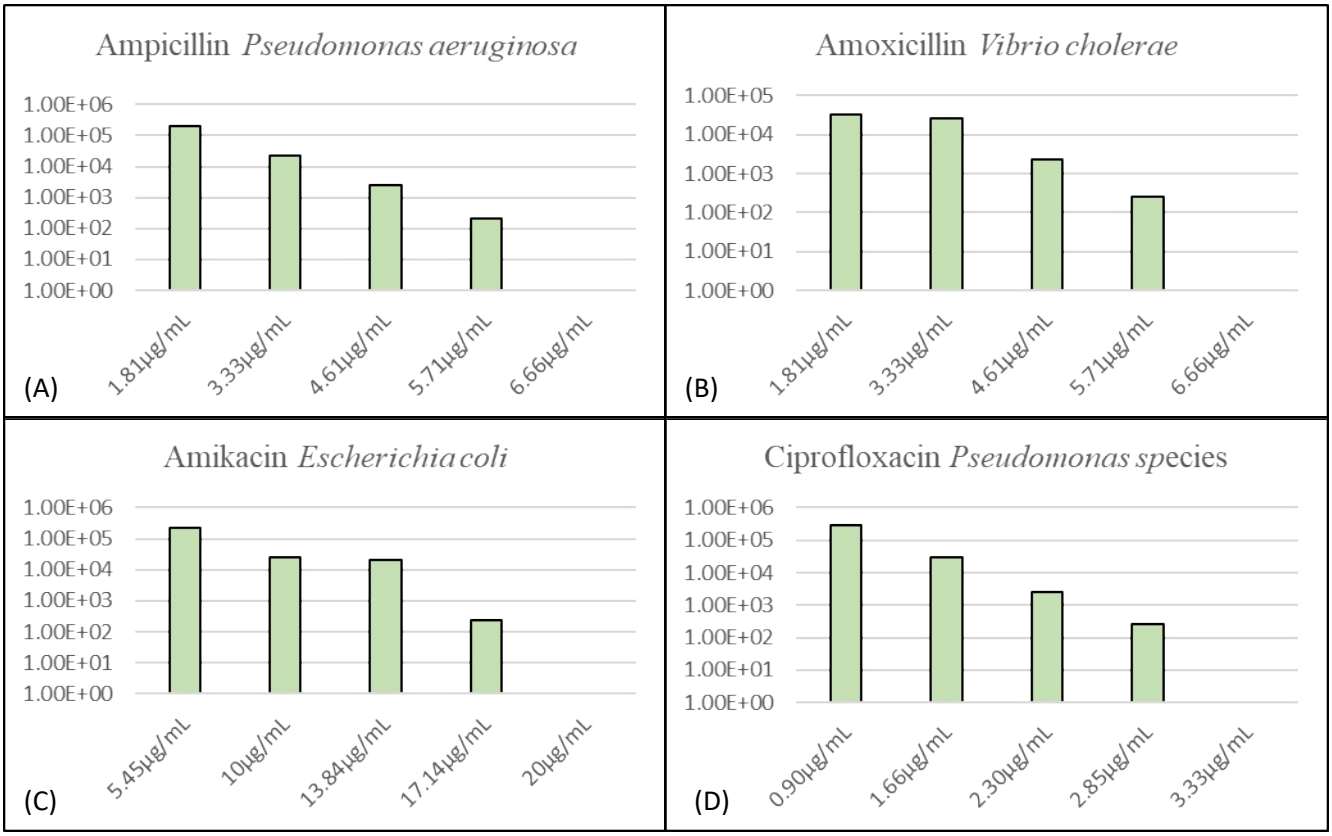

Fig S2: Optimization of Antibiotic inhibition time using (A) Ampicillin with *Escherichia coli* as R (Resistant) and *Pseudomonas aeruginosa* as S (Susceptible), (B) Amoxicillin with *Escherichia coli* as R (Resistant) and *Vibrio cholerae* as S (Susceptible) (C) Amikacin with *Enterococcus faecalis* as R (Resistant) and *Escherichia coli* as S (Susceptible) and (D) Ciprofloxacin with *Escherichia coli* as R(Resistant) and *Pseudomonas species* As R (Resistant) and sterile urine without any antibiotic is a control