

Supplementary

Polymicrobial Biofilm Dynamics of Multidrug-Resistant *Candida albicans* and Ampicillin-Resistant *Escherichia coli* and Antimicrobial Inhibition by Aqueous Garlic Extract

Priya Ashrit ¹, Bindu Sadanandan ^{1,*}, Kalidas Shetty ² and Vijayalakshmi V ¹

¹ Department of Biotechnology, M S Ramaiah Institute of Technology, Bengaluru, India; priyaashrit@gmail.com (P.A.); v.viju114@gmail.com (V.V.)

² Department of Plant Sciences, North Dakota State University, Fargo, ND 58105, USA; kalidas.shetty@ndsu.edu


* Correspondence: bindu@msrit.edu or bindu.sadanandan@gmail.com; Tel.: +91-80-2308331; Fax: 91-80-2360-3124

Dept of Neuromicrobiology, NIMHANS, B'LORE

VITEK@MS Review
Identification Report
Printed July 21 2019,11:45 IST

Number of isolates: 02
List of Reviewed Results

Sl No.	Patient Name	Accession ID	Organism Name	Confidence Value	Review Status
1	NA	MSR-1	<i>Escherichia coli</i>	99.9	Reviewed
2	NA	MSR-2	<i>Candida albicans</i>	99.9	Reviewed



Dr. Nagarathna S
 डॉ. नागरथना एस
 Professor & Head / प्राध्यापक और प्रमुख
 Department of Neuromicrobiology
 न्यूरोमैक्रोबायोलॉजी विभाग
 NIMHANS, Bengaluru-560 029

Figure S1. Vitek MALDI Identification Report of *C. albicans* and *E. coli*.

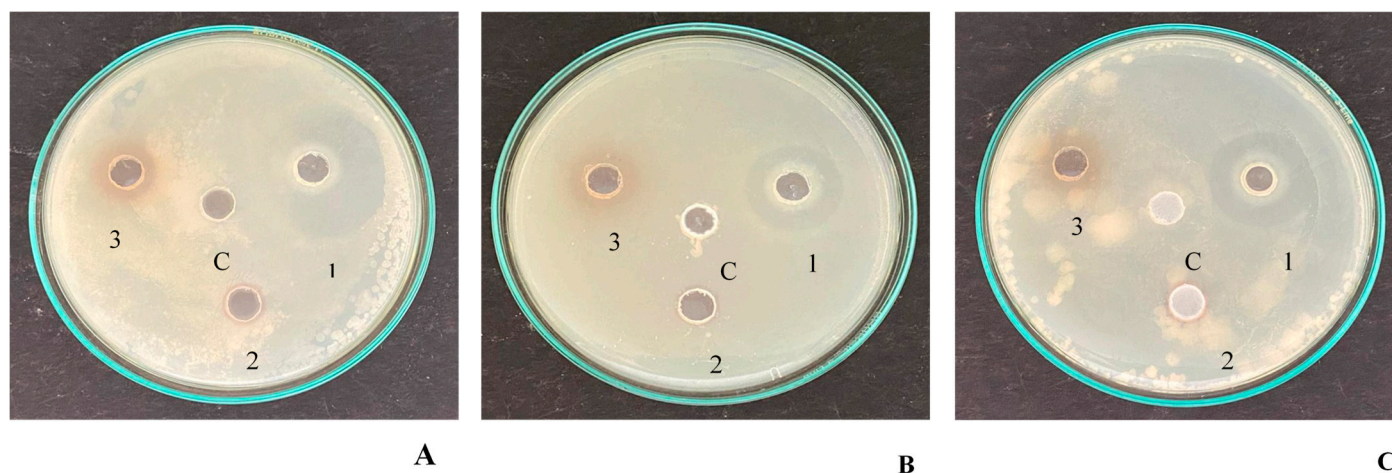


Figure S2. Antimicrobial activity of fresh whole aqueous extracts 1) AGE (200 mg); 2) Gooseberry (86 mg); 3) Clove (43 mg): A) *C. albicans* M207; B) *E. coli* ATCC 39936; C) *C. albicans* M207+ *E. coli* ATCC 39936 by well diffusion method. Water was used as control. Concentration of extracts are expressed as dry weight measurements.

A

biomerieux customer- VITEK2C

Dept of Neuromicrobiology, NIMHANS, B'LORE
Microbiology Chart Report

Printed May 29 2019,15:47 IST

Patient Name:
Location:
Lab ID: M-207/MSRIT

Patient ID:
Physician:
Isolate Number: 1

Organism Quantity
Selected Organism: *C. albicans*

Source:
Collected:

Comments:

Susceptibility Information		Analysis Time: 35.88 hours		Status: Final	
Antimicrobial	MIC	Interpretation	Antimicrobial	MIC	Interpretation
Fluconazole	32	R	Amphotericin B	0.5	S
Voriconazole	<=12	S	Flucytosine		
Caspofungin	>=8	R			

**= Deduced Drug * = AES Modified ** = User Modified

AES Findings

Confidence: Analysis Not Performed

Nagarathna S
Dr. S. Nagarathna
Professor and Head
Department of Neuromicrobiology
NIMHANS, Bangalore-560 029

B

biomerieux customer- VITEK2C

Dept of Neuromicrobiology, NIMHANS, B'LORE
Microbiology Chart Report

Printed July 21 2019, 11:45 IST

Patient Name:
Location:
Lab ID: E.coli/MSRIT

Patient ID:
Physician:
Isolate Number: 1

Organism Quantity
Selected Organism: Escherichia coli

Source: Collected:

Comments:

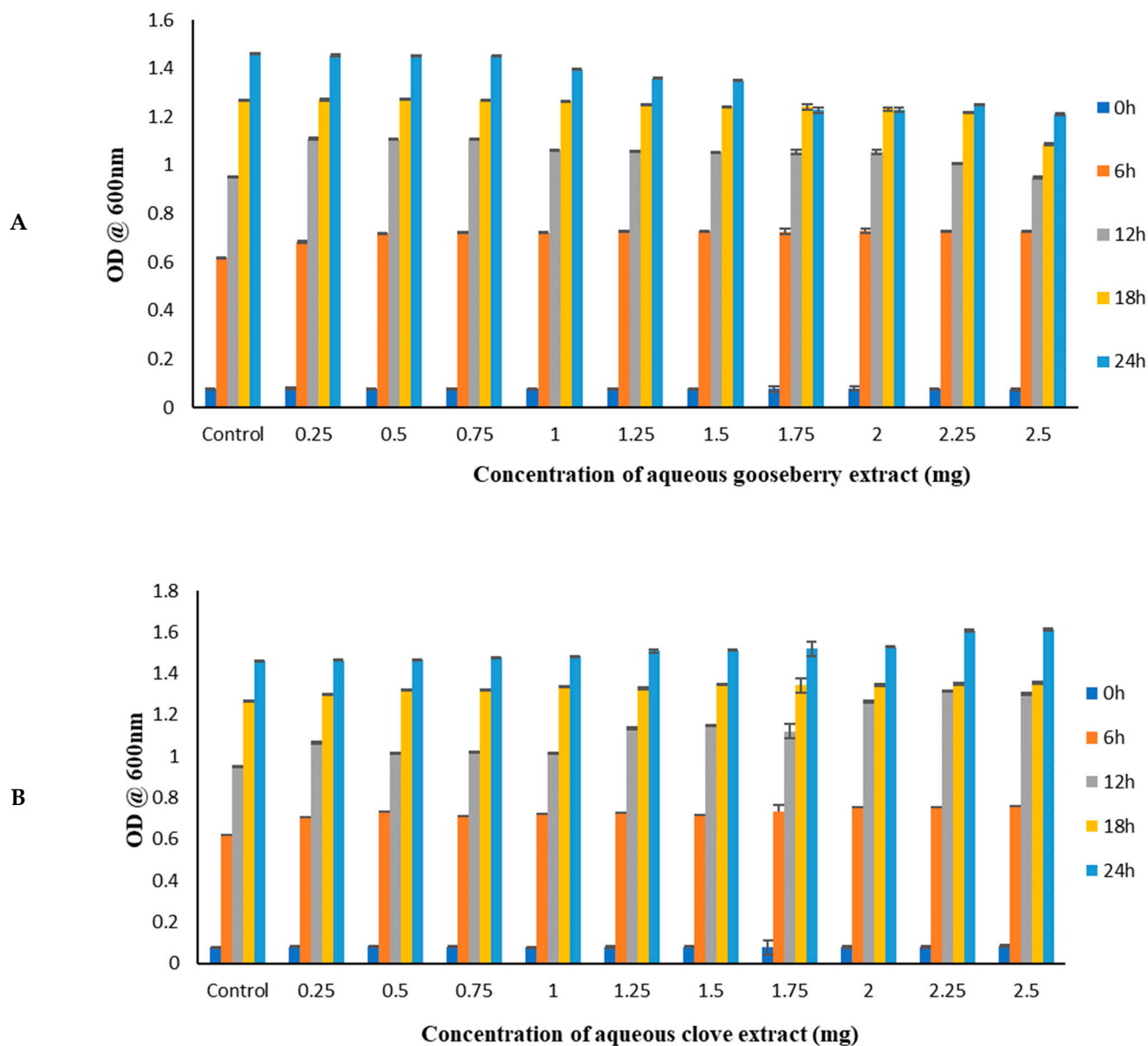
Susceptibility Information		Analysis Time: 13.02 hours		Status: Final	
Antimicrobial	MIC	Interpretation	Antimicrobial	MIC	Interpretation
Ampicillin	>=32	R	Meropenem	1	S
Ampicillin/Clavulanic acid	4	S	Amikacin	<=2	S
Piperacillin/Tazobactam	<=4	S	Gentamicin	<=1	S
Cefuroxime	2	S	Nalidixic acid	<=2	S
Cefuroxime Axetil	2	S	Ciprofloxacin	<=0.25	S
Ceftriaxone	<=1	S	Tigecycline	<=0.5	S
Cefepime	<=8	S	Nitrofurantoin	<=16	S
Ertapenem	<=1	S	Colistin	<=0.5	S
Imipenem	<=0.25	S	Trimethoprim/sulfamethoxazole	<=20	S

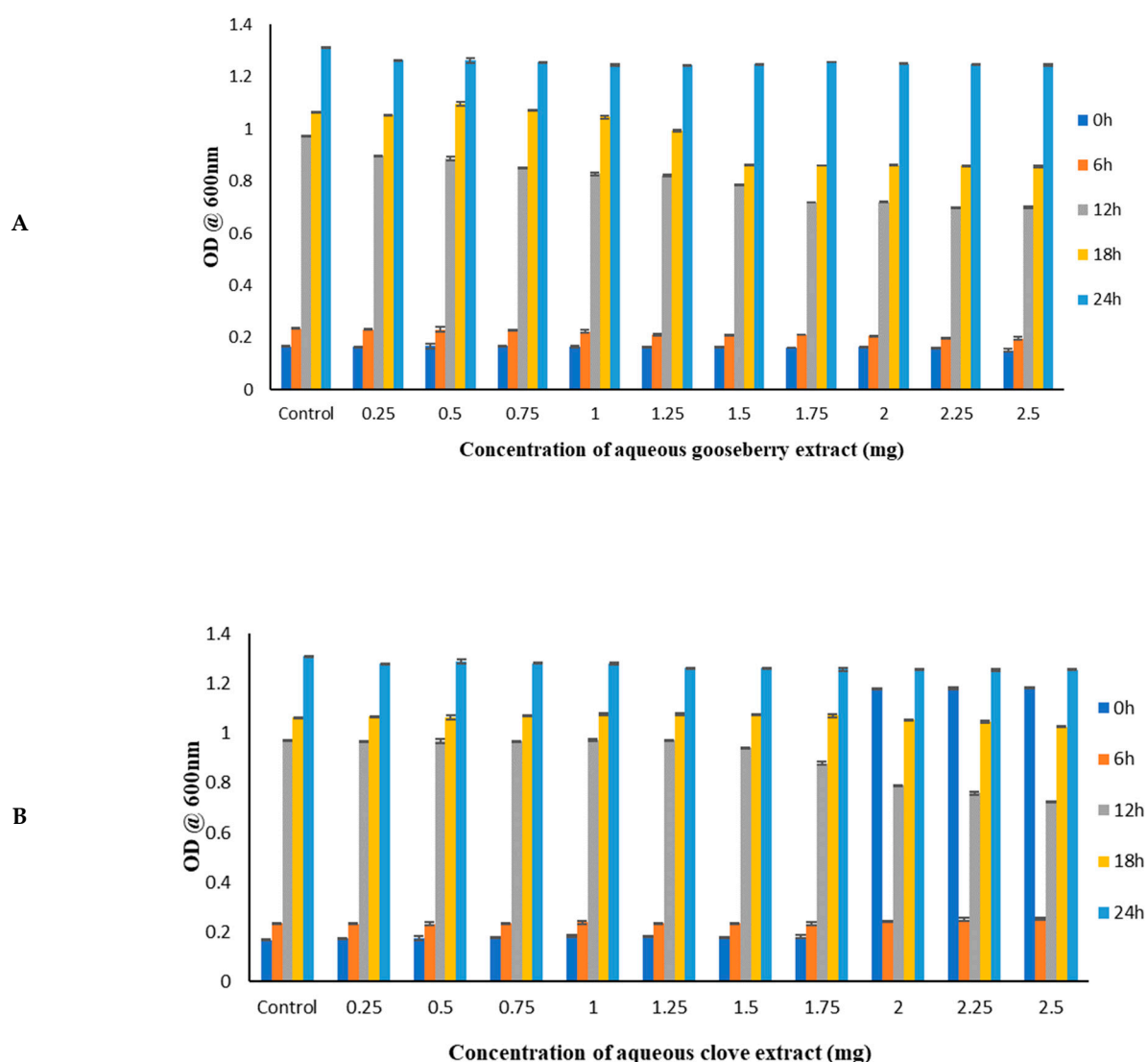
AES Findings

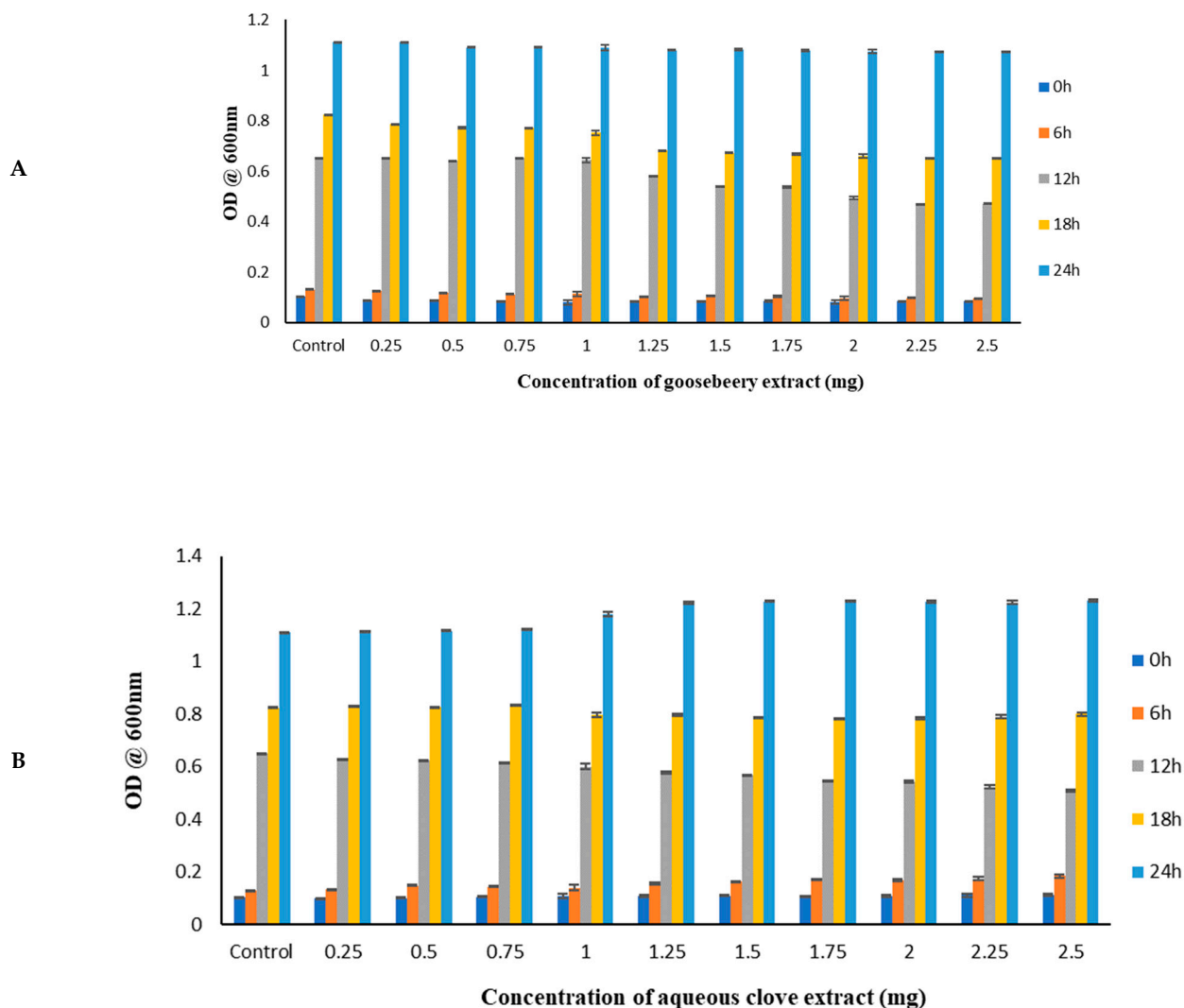
Confidence: Consistent

Nagarathna S.
S.Nagarathna
Professor and Head
Department of Neuromicrobiology
NIMHANS, Bangalore-560 029

Figure S3. A. Vitek Antimicrobial Susceptibility Test Report showing the resistance of *C. albicans* M207 to Fluconazole and Caspofungin; B. Vitek Antimicrobial Susceptibility Test Report showing the resistance of *E. coli* ATCC 39936 to Ampicillin.







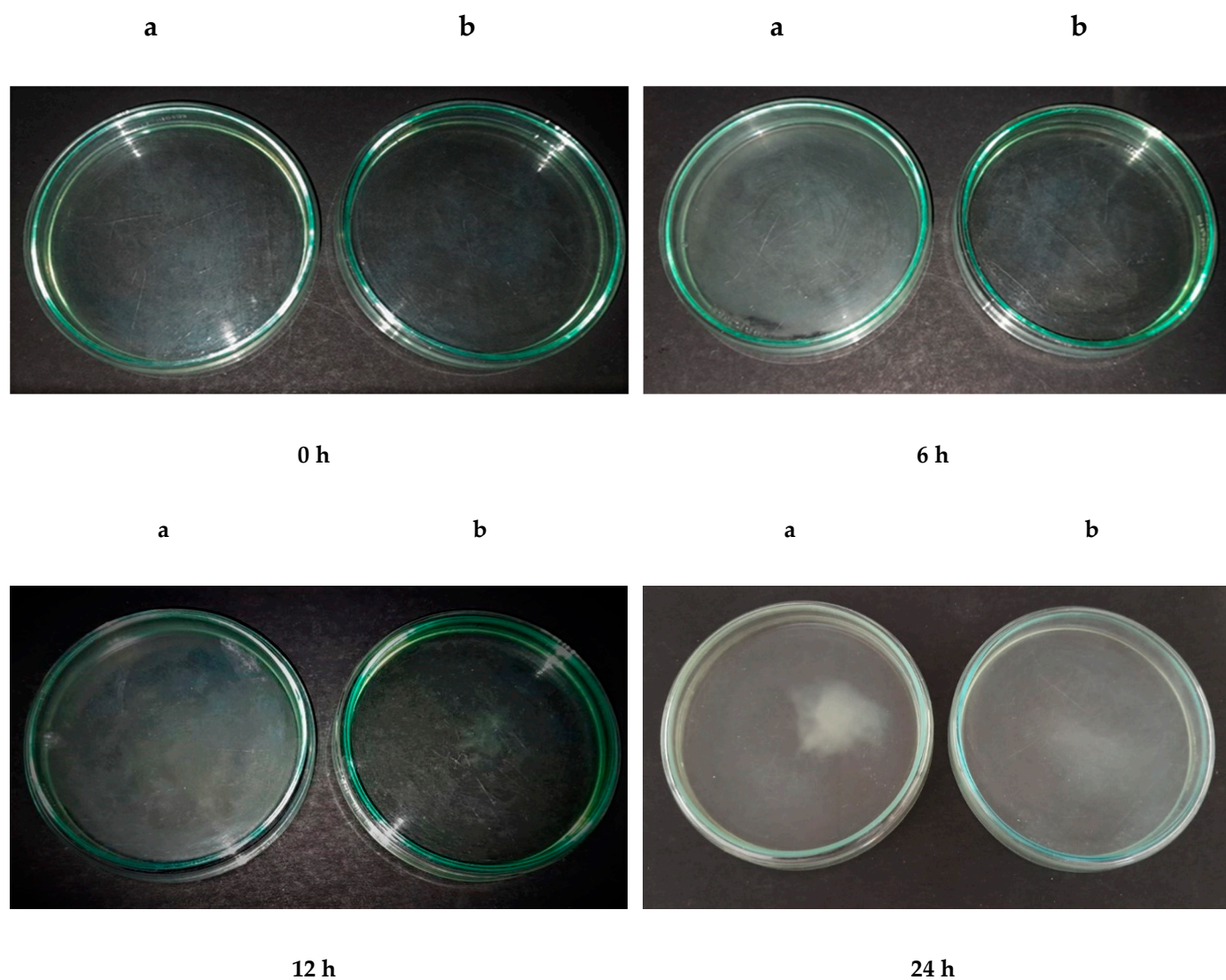


Figure S7. Biofilm control in petridish for *C. albicans* M207 at 0, 6, 12 and 24 h time points: (a) Control; (b) Whole AGE Treated (1mg).

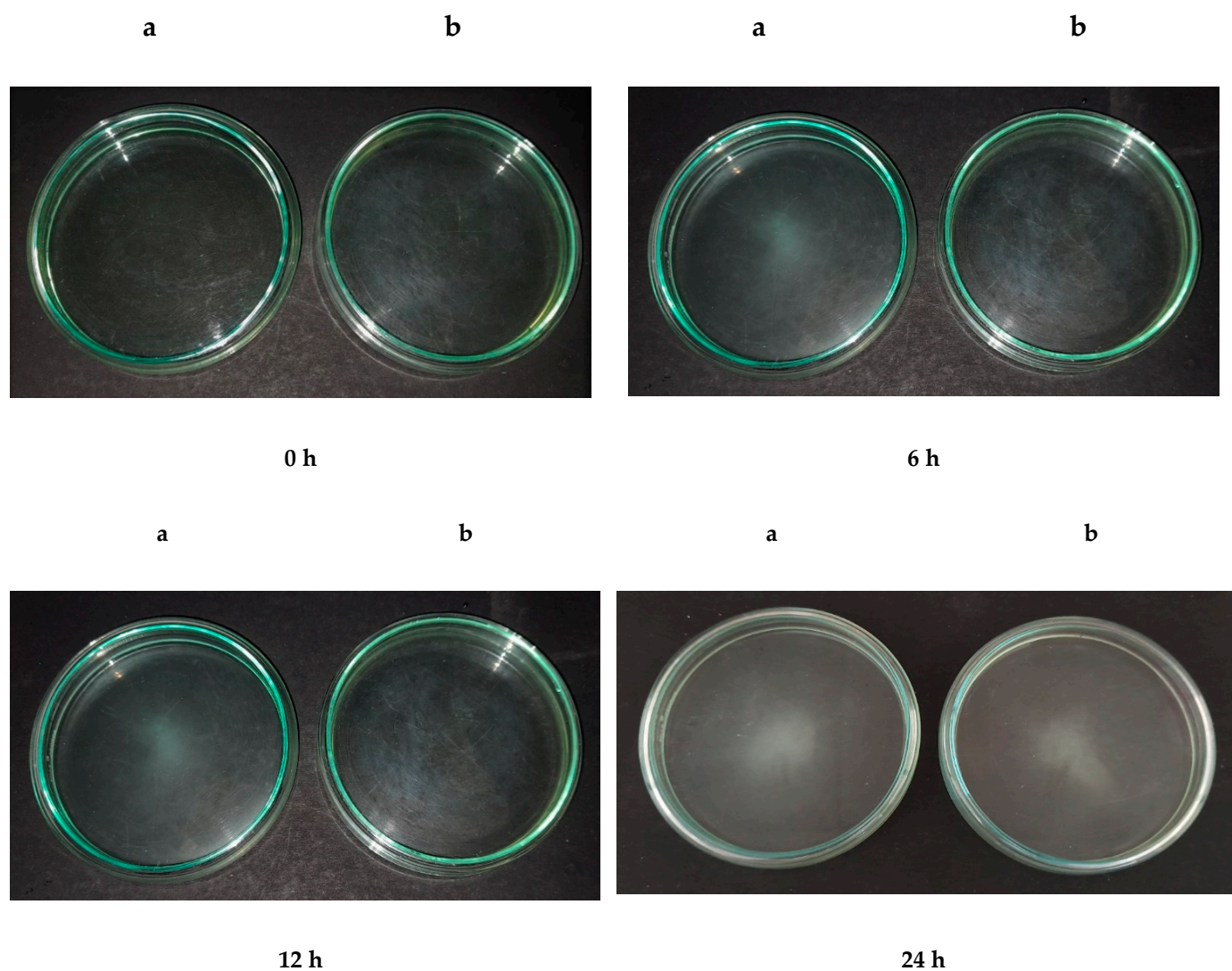


Figure S8. Biofilm control in petridish for *E. coli* ATCC 39936 at 0, 1, 6, 12 and 24h time points: (a) Control; b) Whole AGE Treated (1.25 mg).

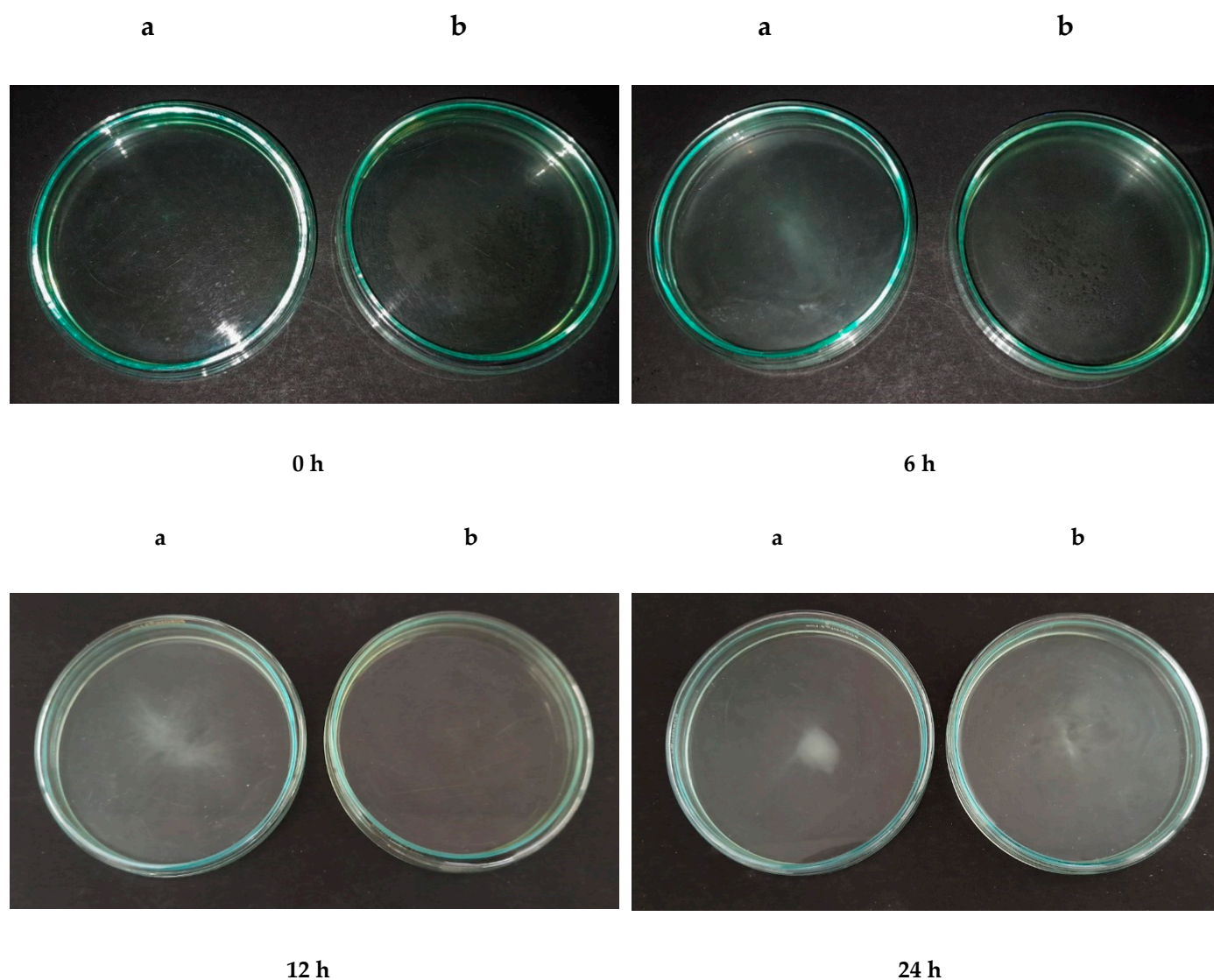


Figure S9. Biofilm control in petridish for *C. albicans* M207+ *E. coli* ATCC 39936 at 0, 6, 12 and 24h time points: (a) Control; b) Whole AGE Treated (1mg).