Electronic Supplementary Material (ESI) for RSC Advances.

Synthesis, Characterization, *In silico* Molecular Docking, and Antibacterial Activities of Some New Nitrogen-heterocyclic Analogues Based *p*-Phenolic Unit

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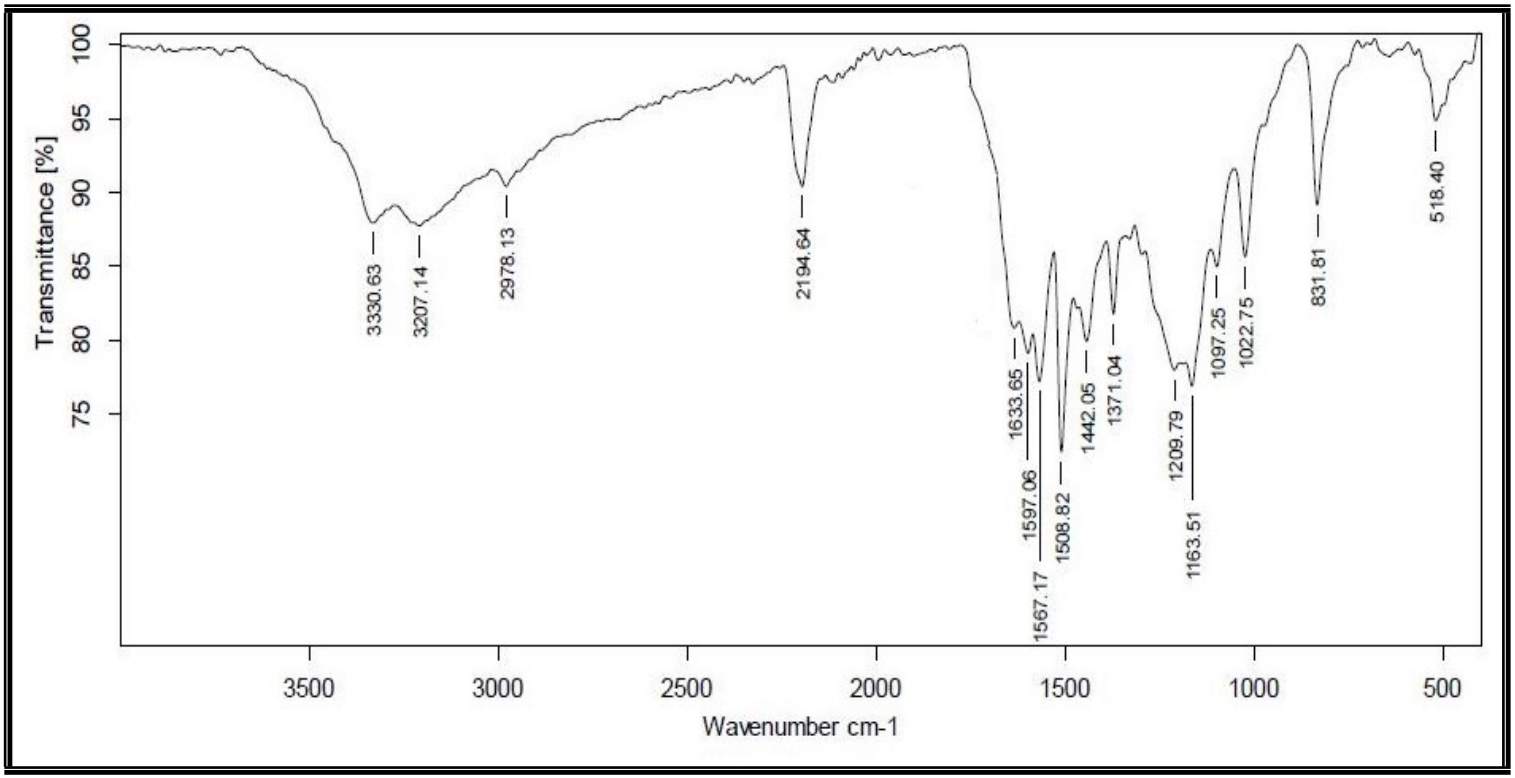


Figure S1. IR Spectrum of Compound (2a)

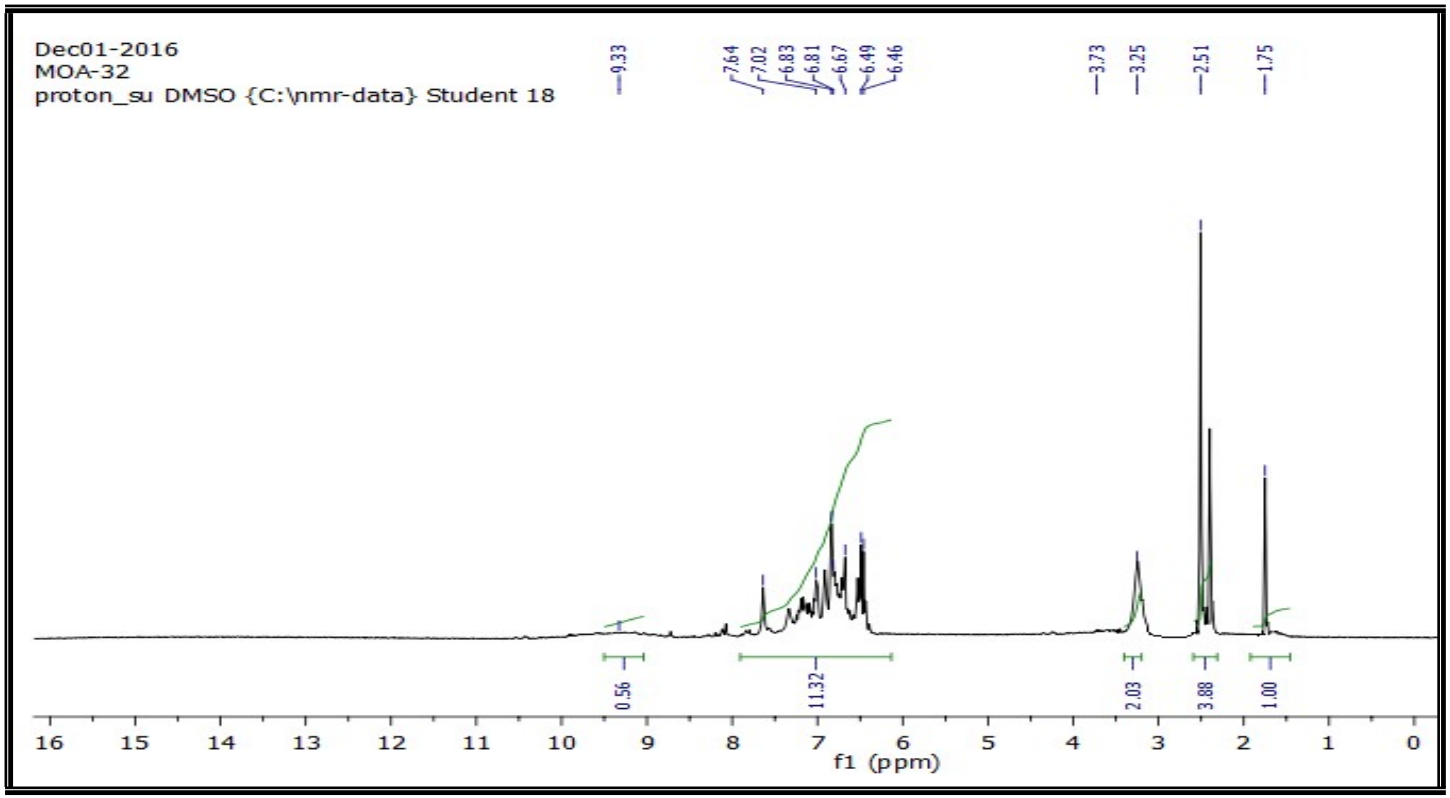


Figure S2. ^{1}H NMR Spectrum of Compound (2a)

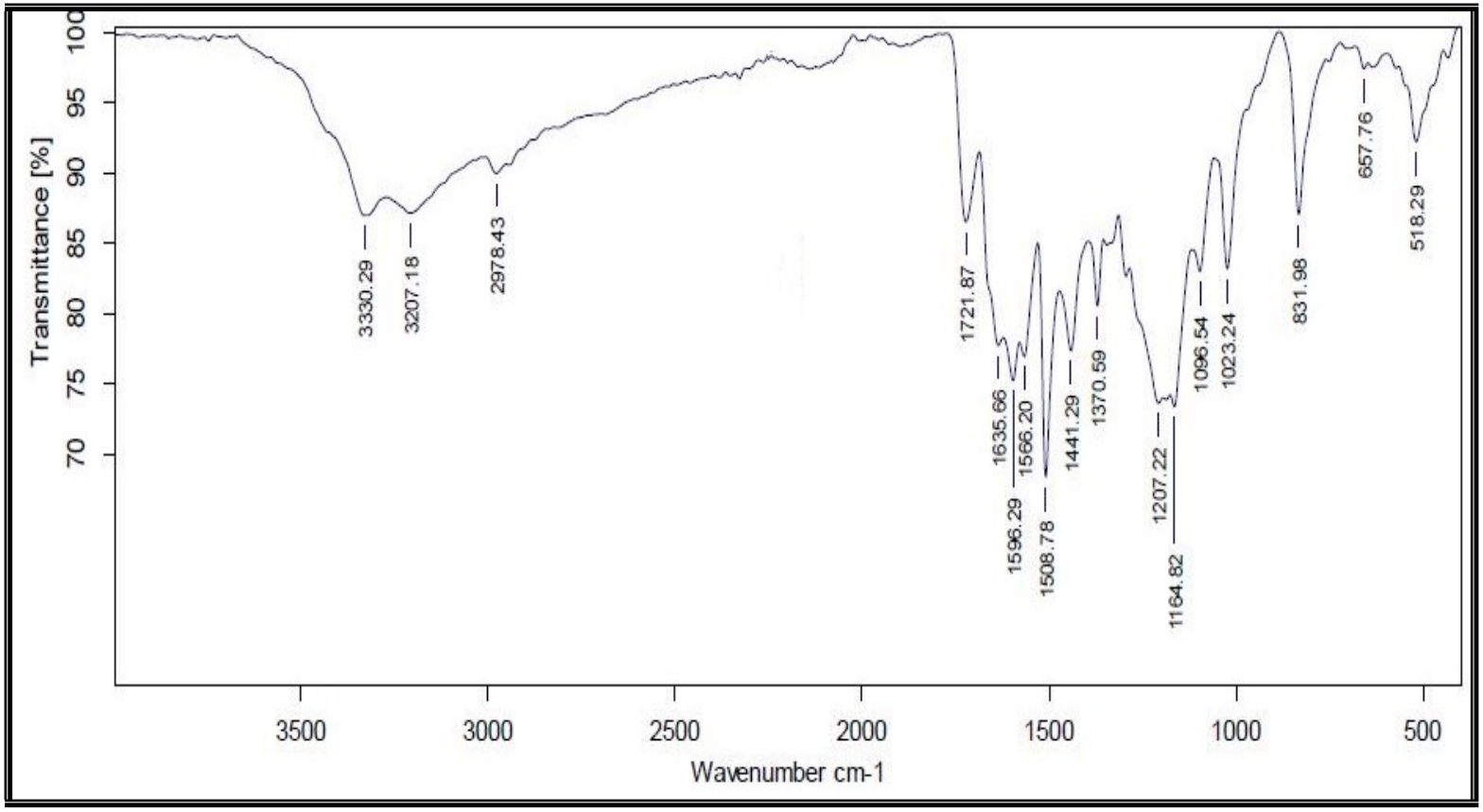


Figure S3. IR Spectrum of Compound (2b)

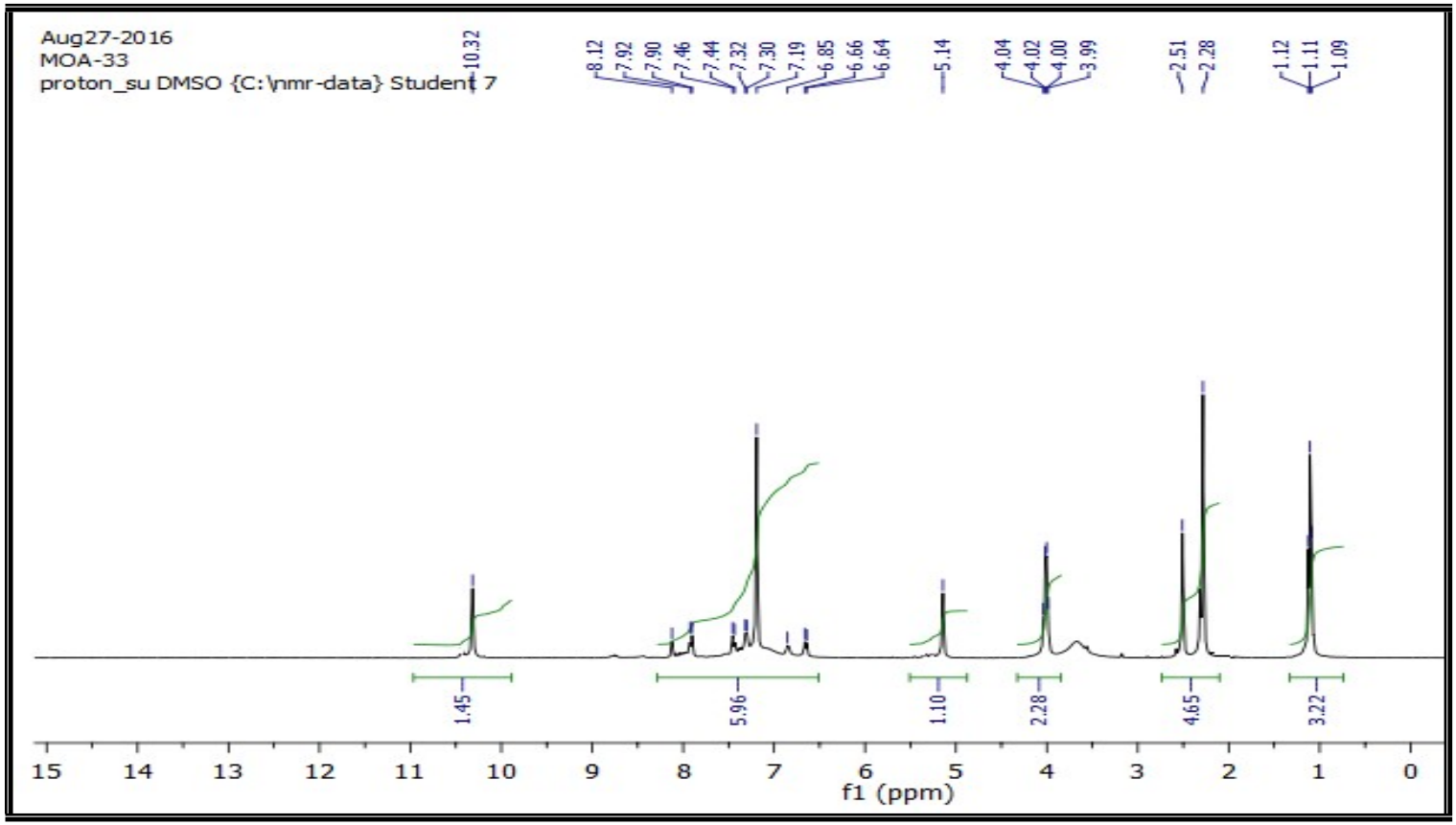


Figure S4. ^{1}H NMR Spectrum of Compound (2b)

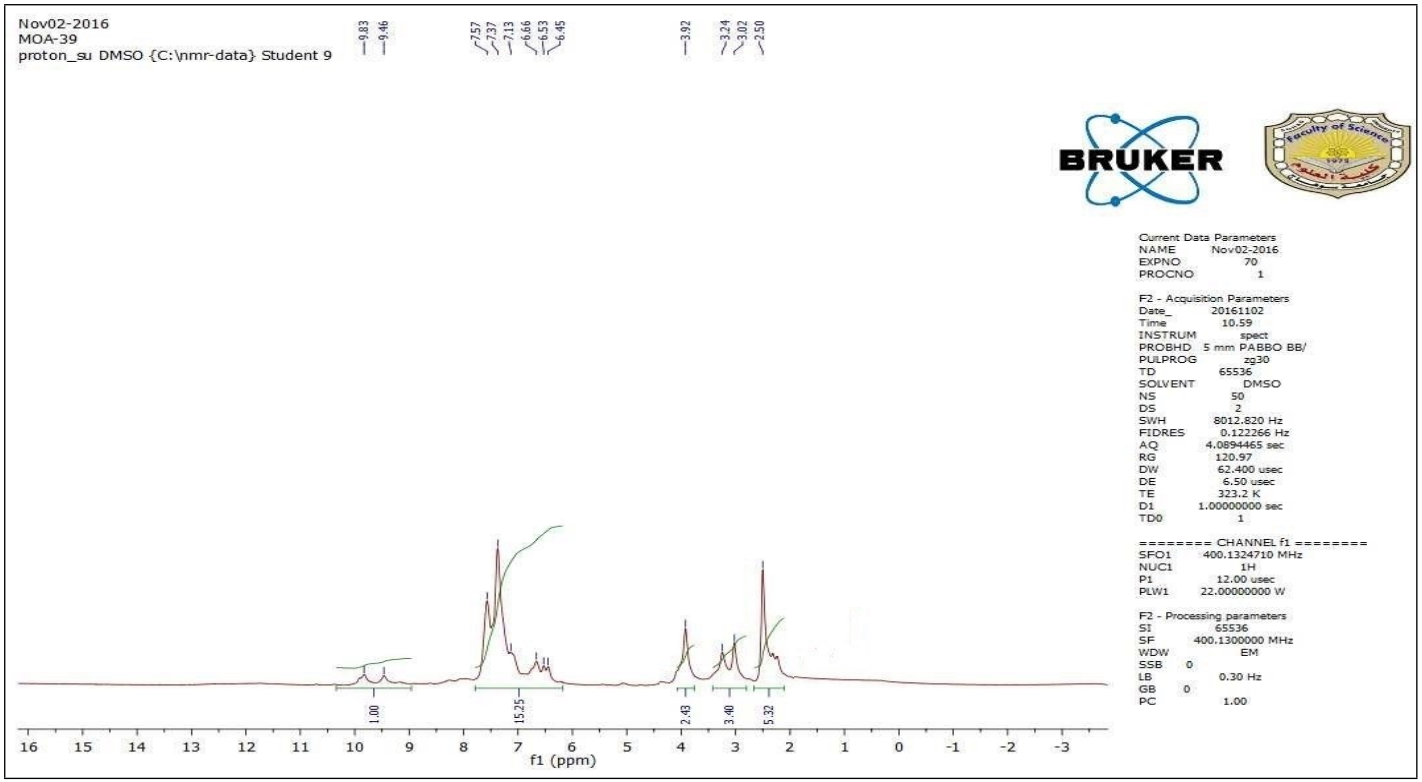


Figure S5. ^{1}H NMR Spectrum of Compound (3)

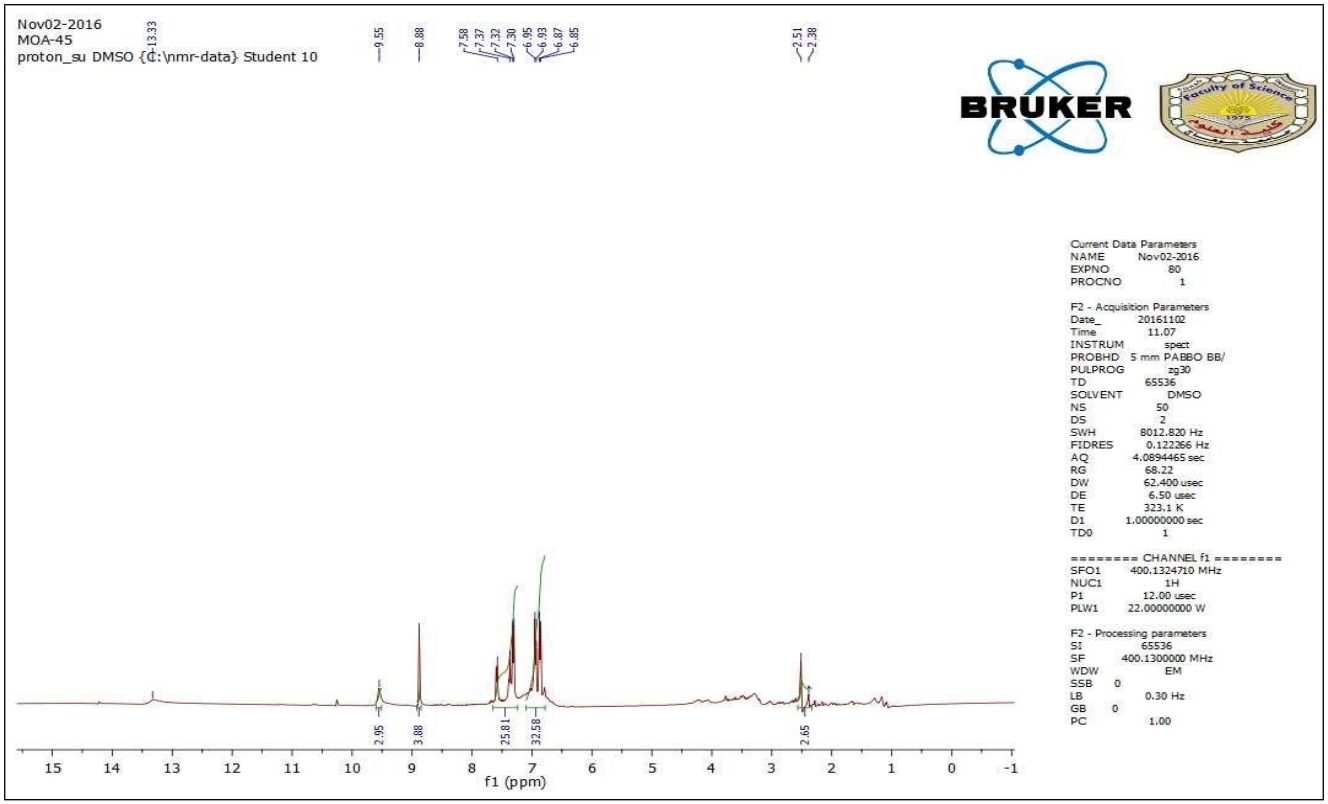


Figure S6. ^{1}H NMR Spectrum of Compound (4)

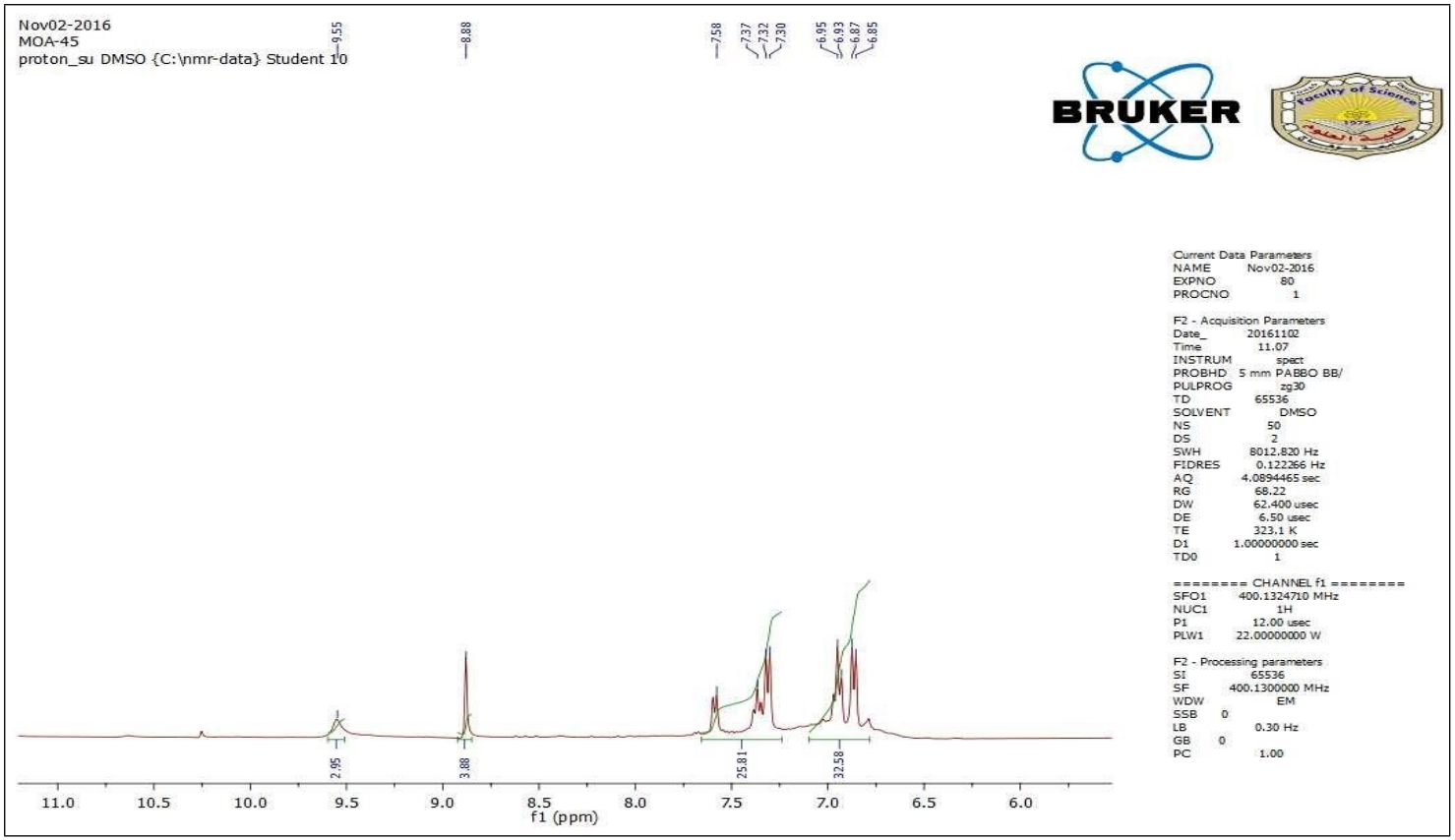


Figure S7. ^{1}H NMR Spectrum of Compound (4)

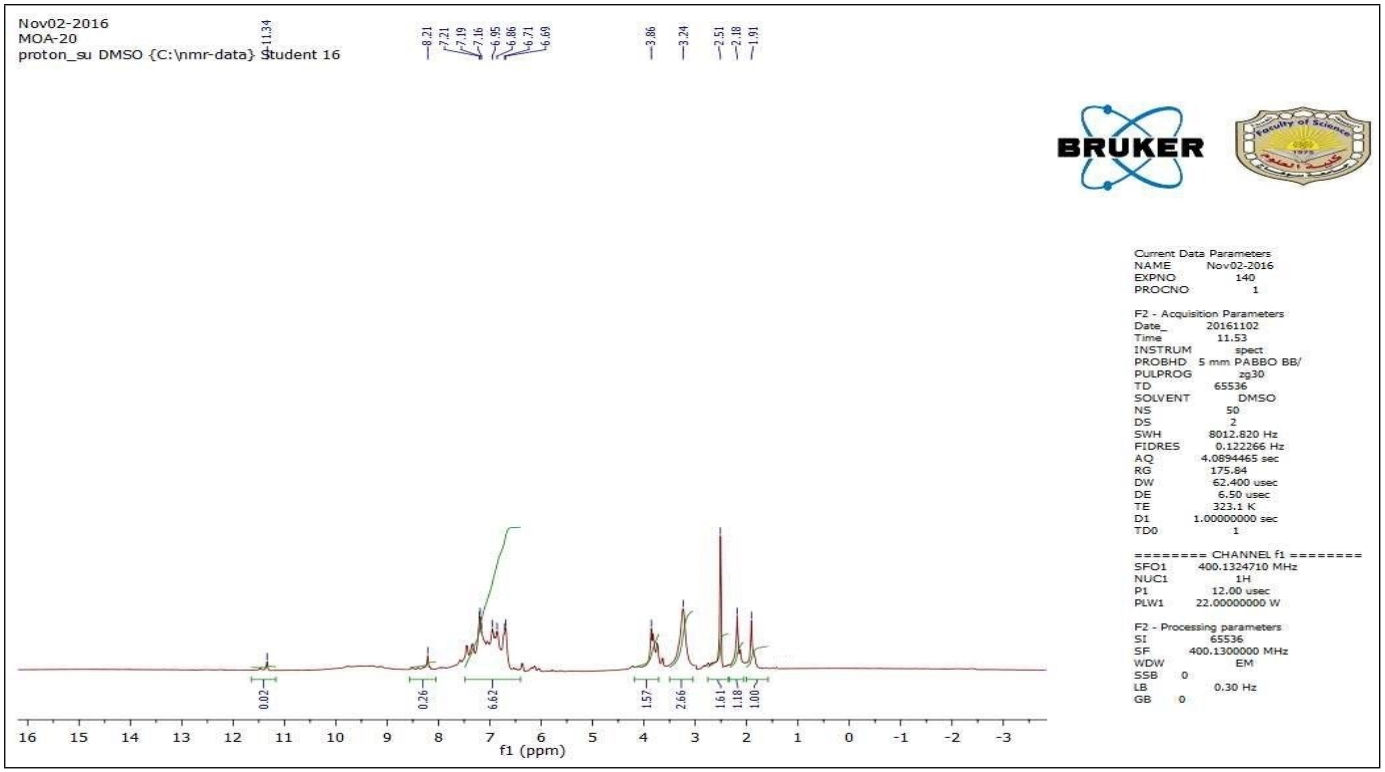


Figure S8. ^{1}H NMR Spectrum of Compound (5)

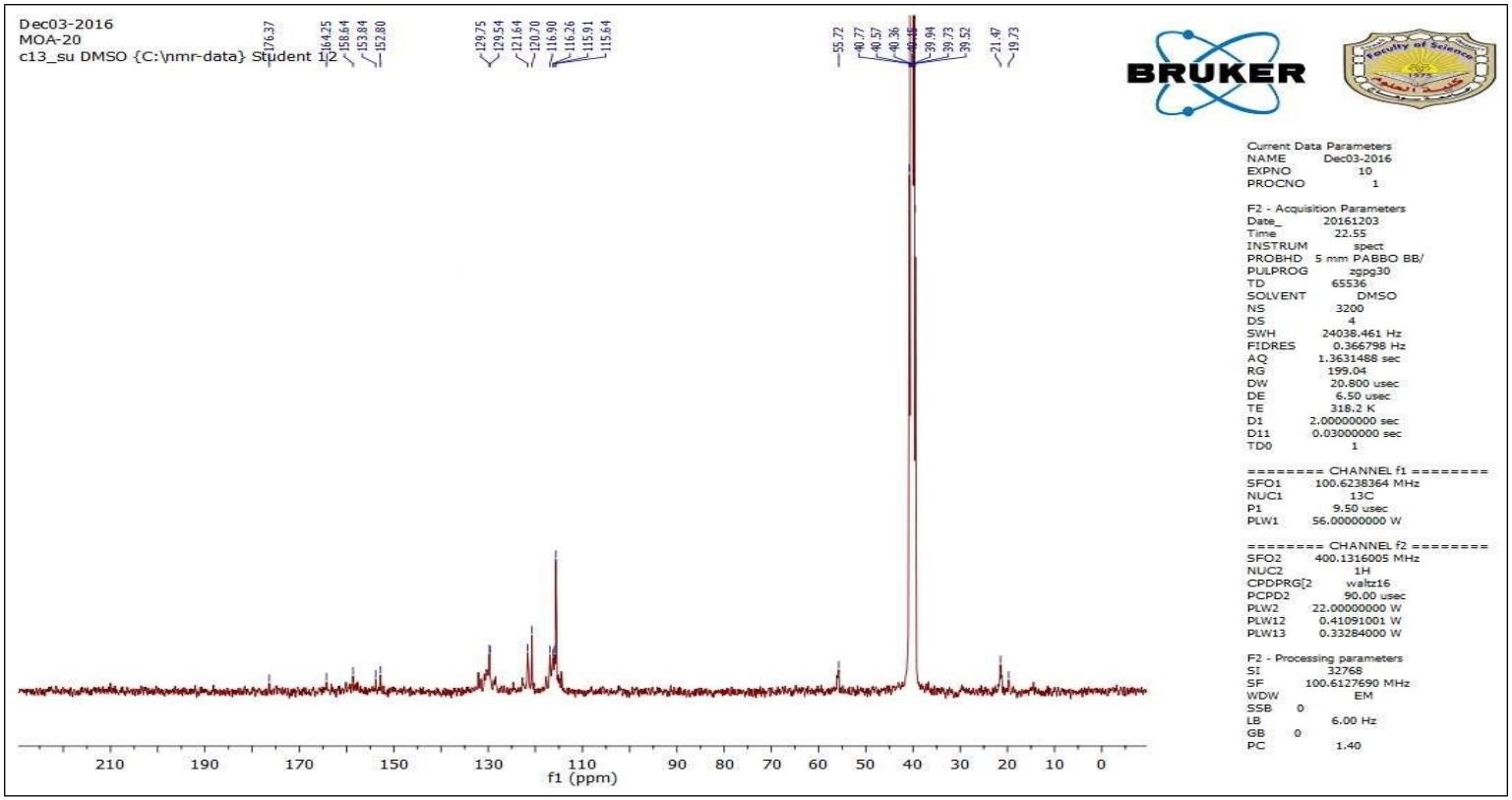


Figure S9. ^{13}C NMR Spectrum of Compound (5)

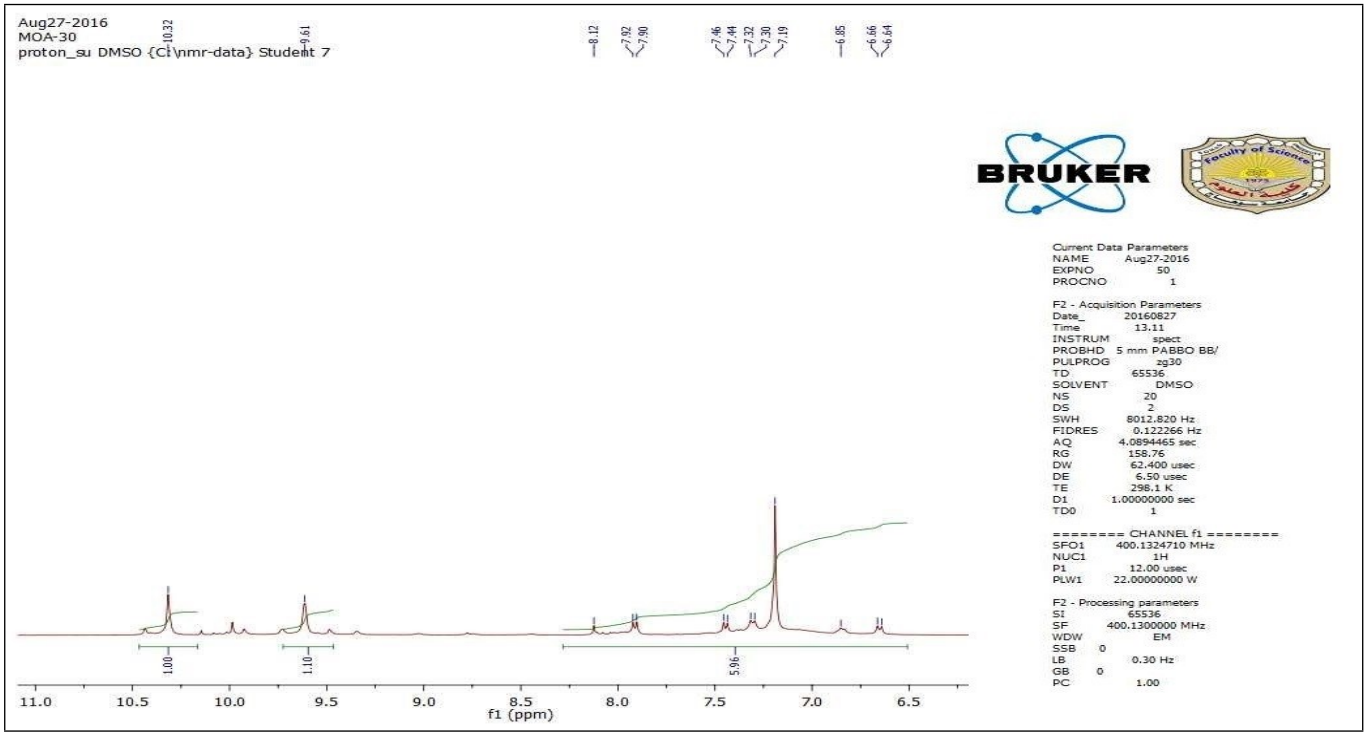


Figure S10. ^{1}H NMR Spectrum of Compound (6a)

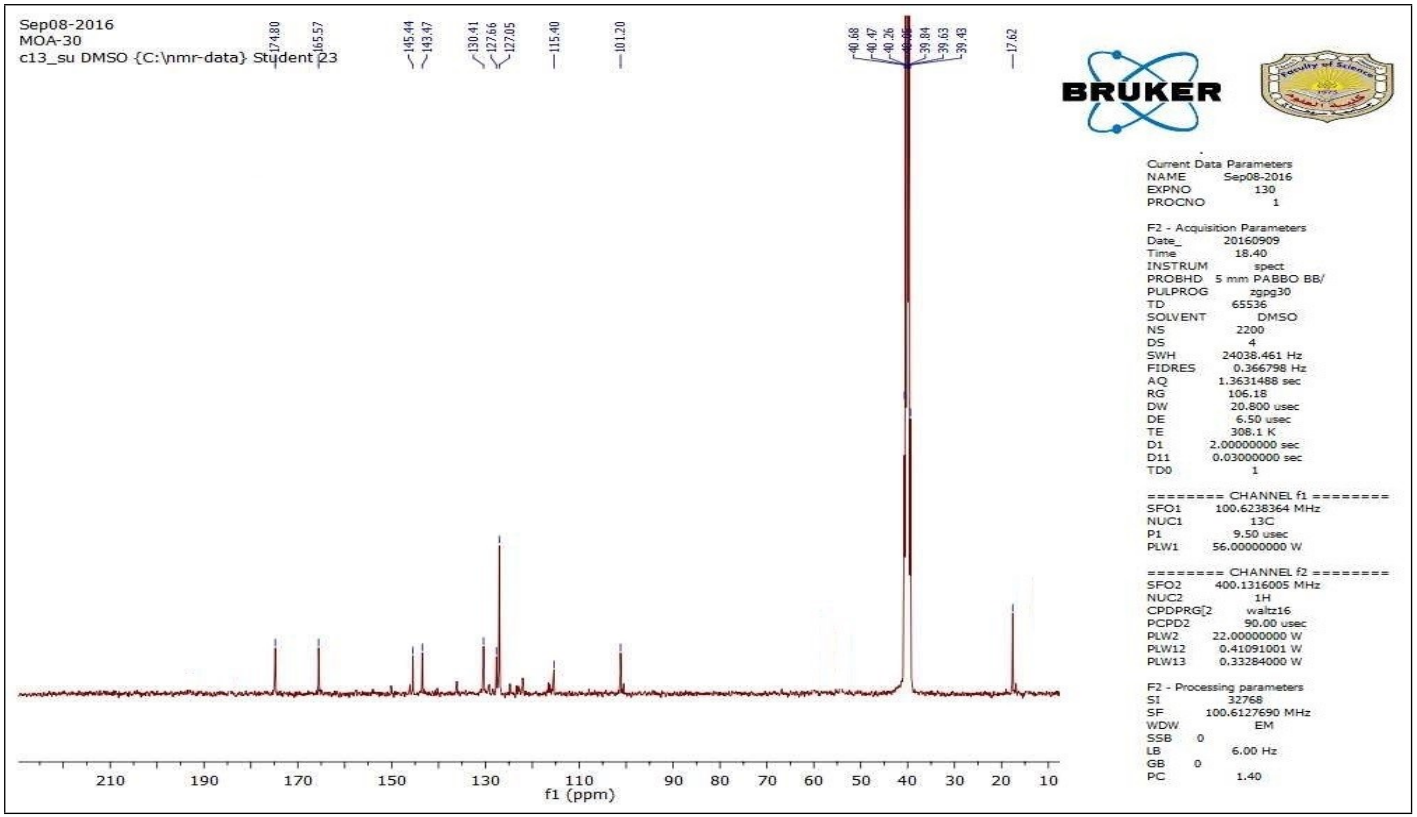


Figure S11. ^{13}C NMR Spectrum of Compound (6a)

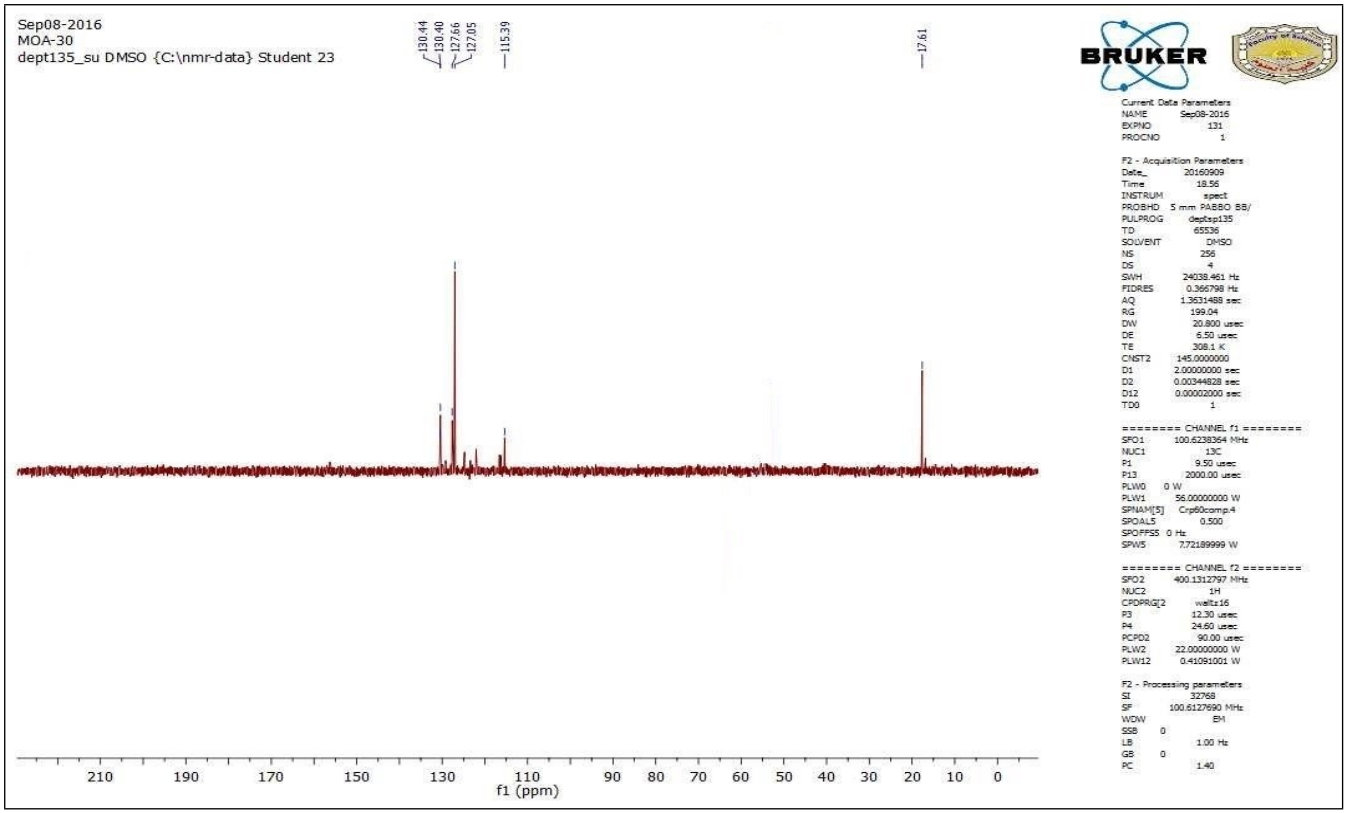


Figure S12. DEPT 135 ^{13}C NMR Spectrum of Compound (6a)

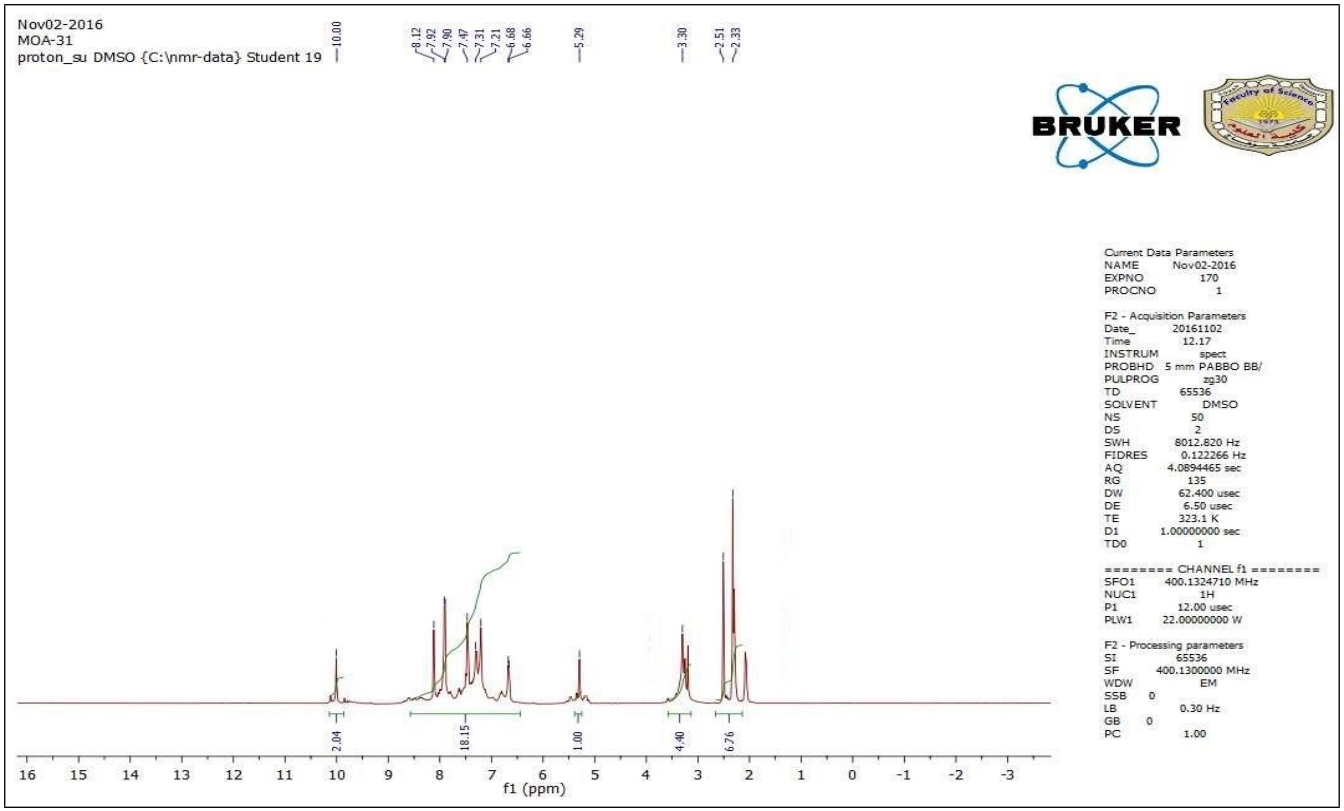


Figure S13. ^{1}H NMR Spectrum of Compound (6b)

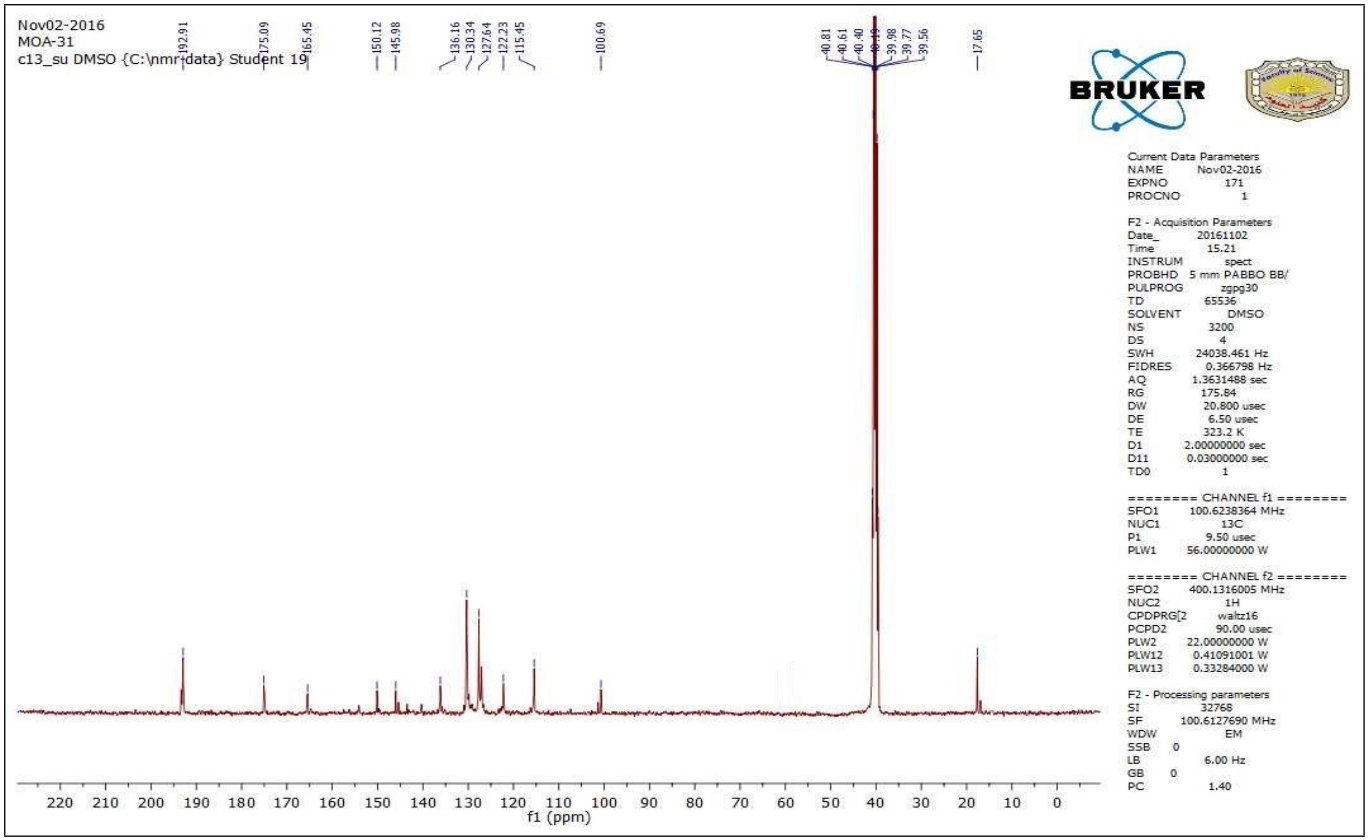


Figure S14. ^{13}C NMR Spectrum of Compound (6b)

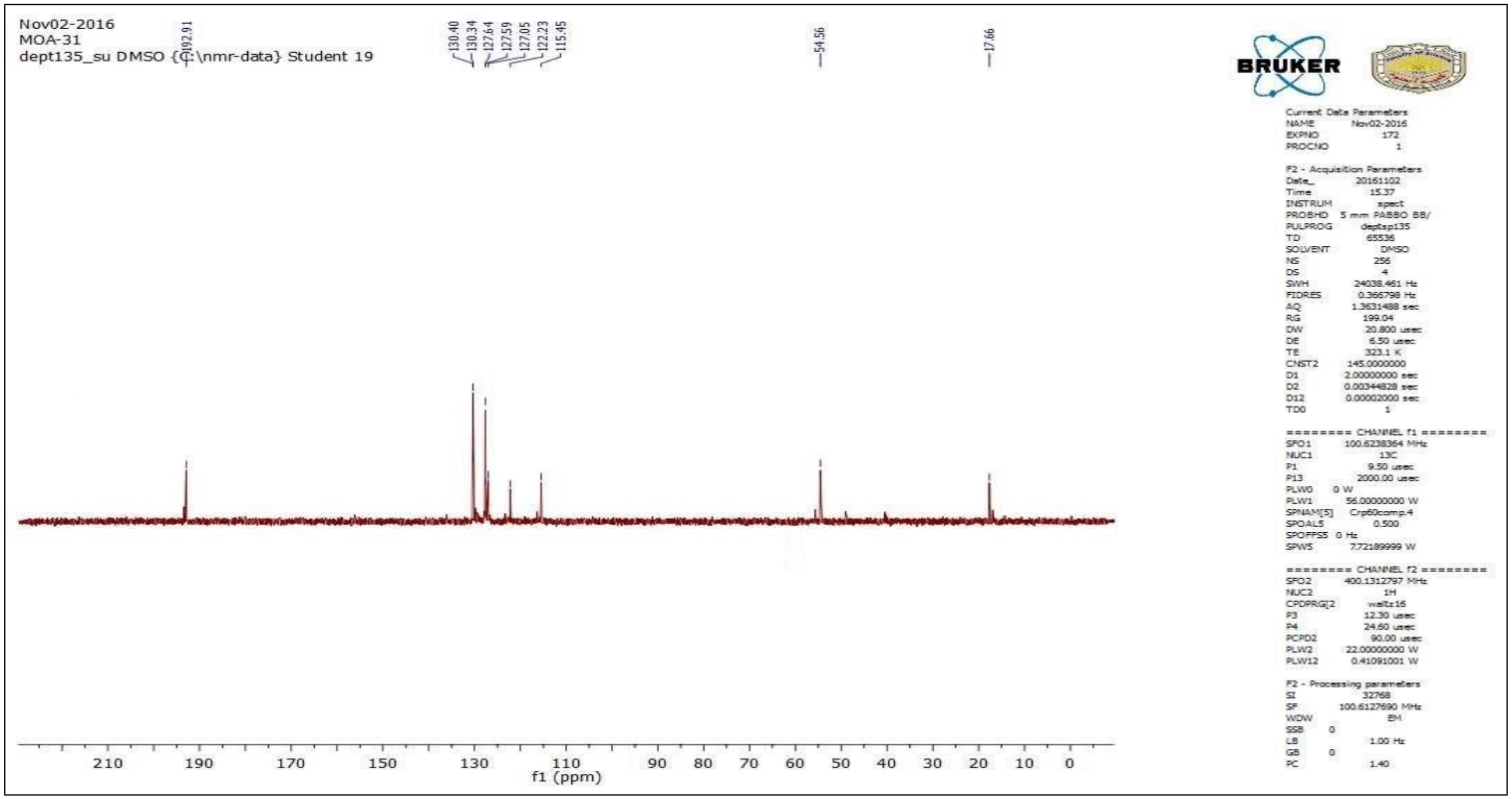


Figure S15. DEPT 135 ^{13}C NMR Spectrum of Compound (6b)

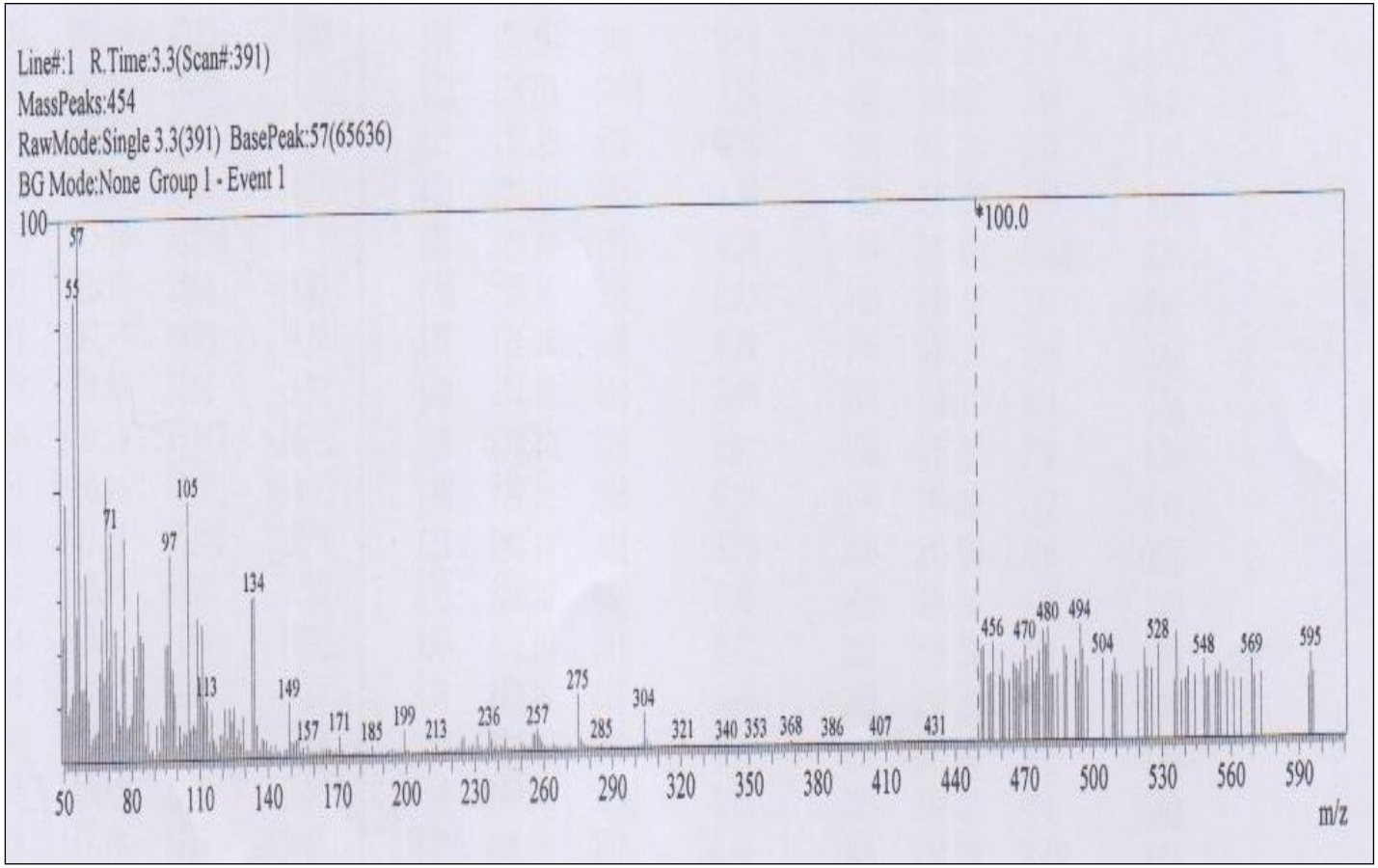


Figure S16. Mass Spectrum of Compound (6b)

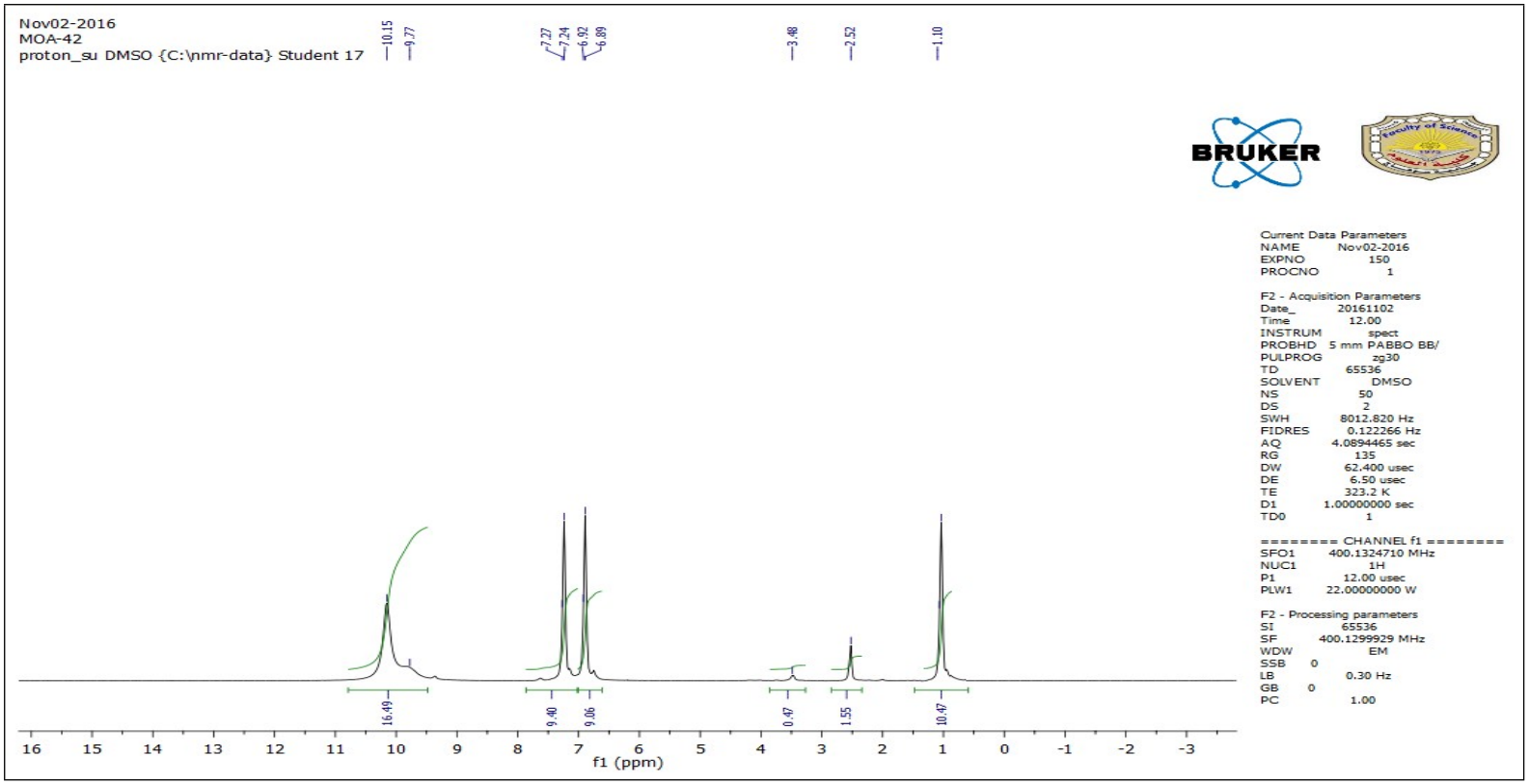


Figure S17. ^{1}H NMR Spectrum of Compound (7)

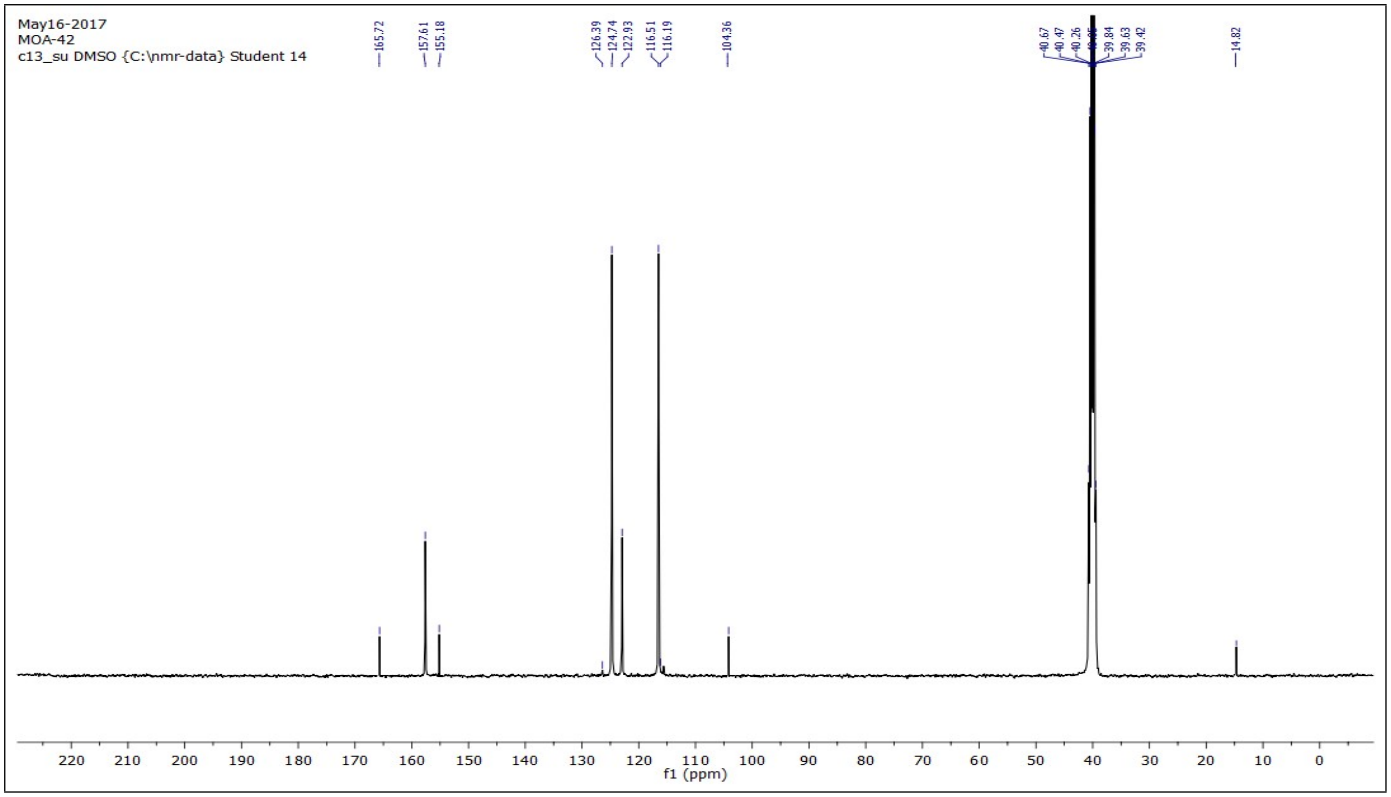


Figure S18. ^{13}C NMR Spectrum of Compound (7)

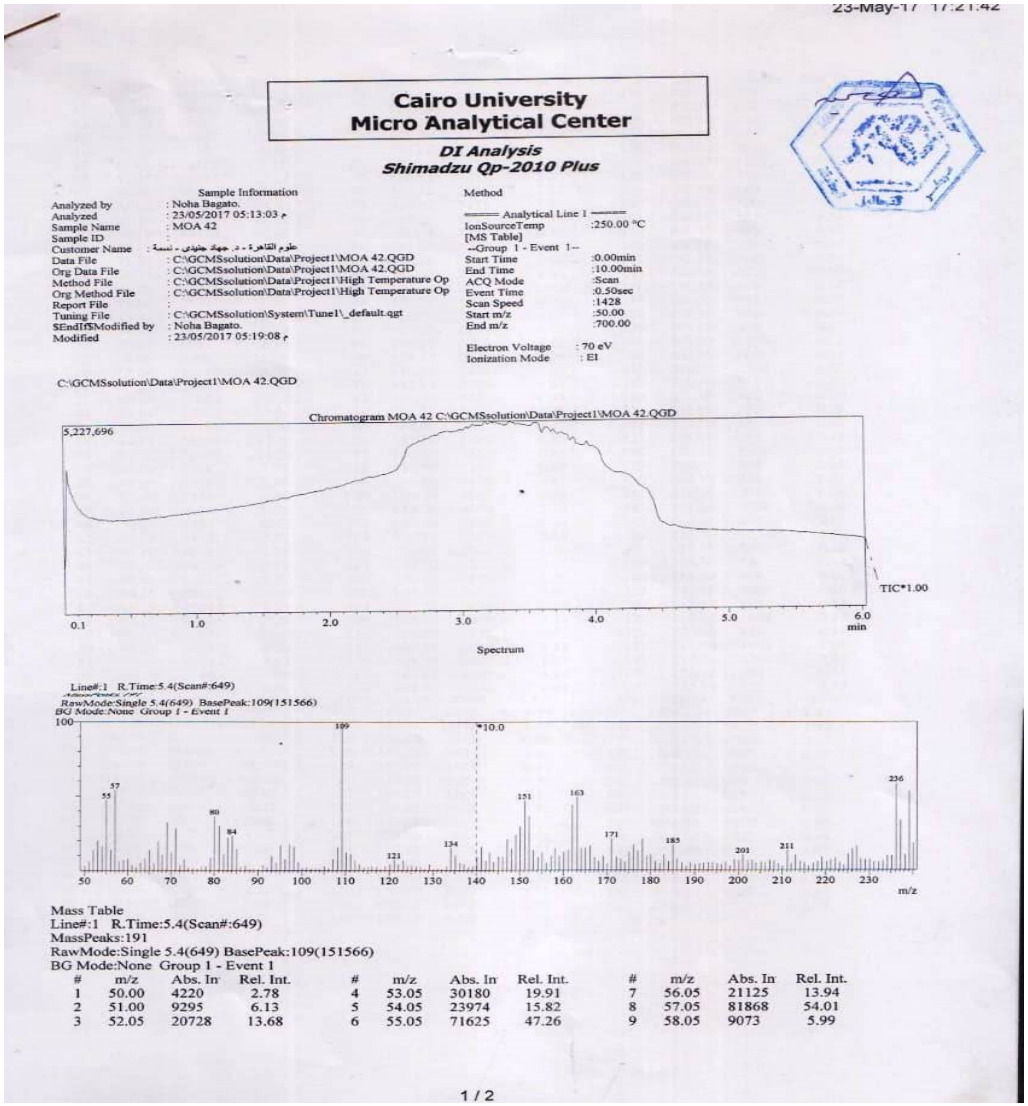


Figure S19. Mass Spectrum of Compound (7)

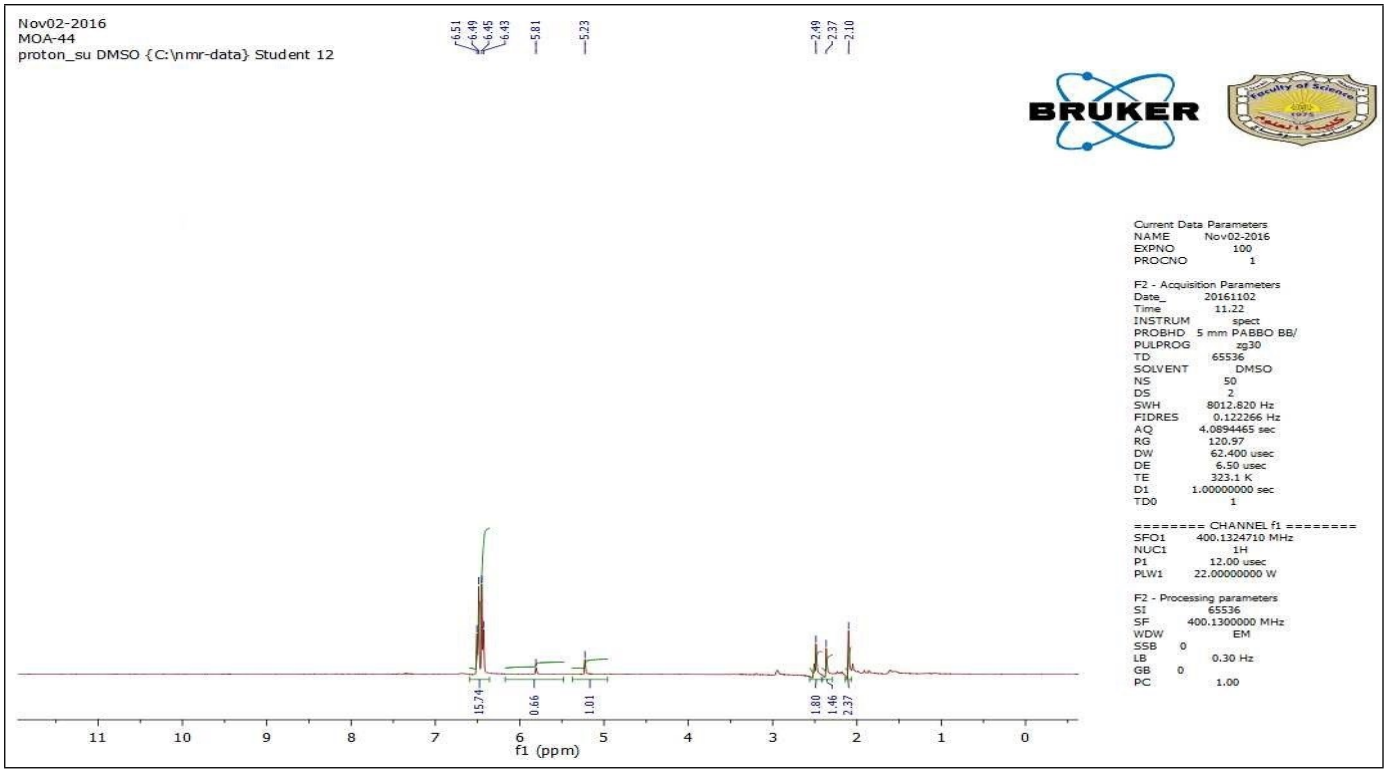


Figure S20. ^{1}H NMR Spectrum of Compound (8)

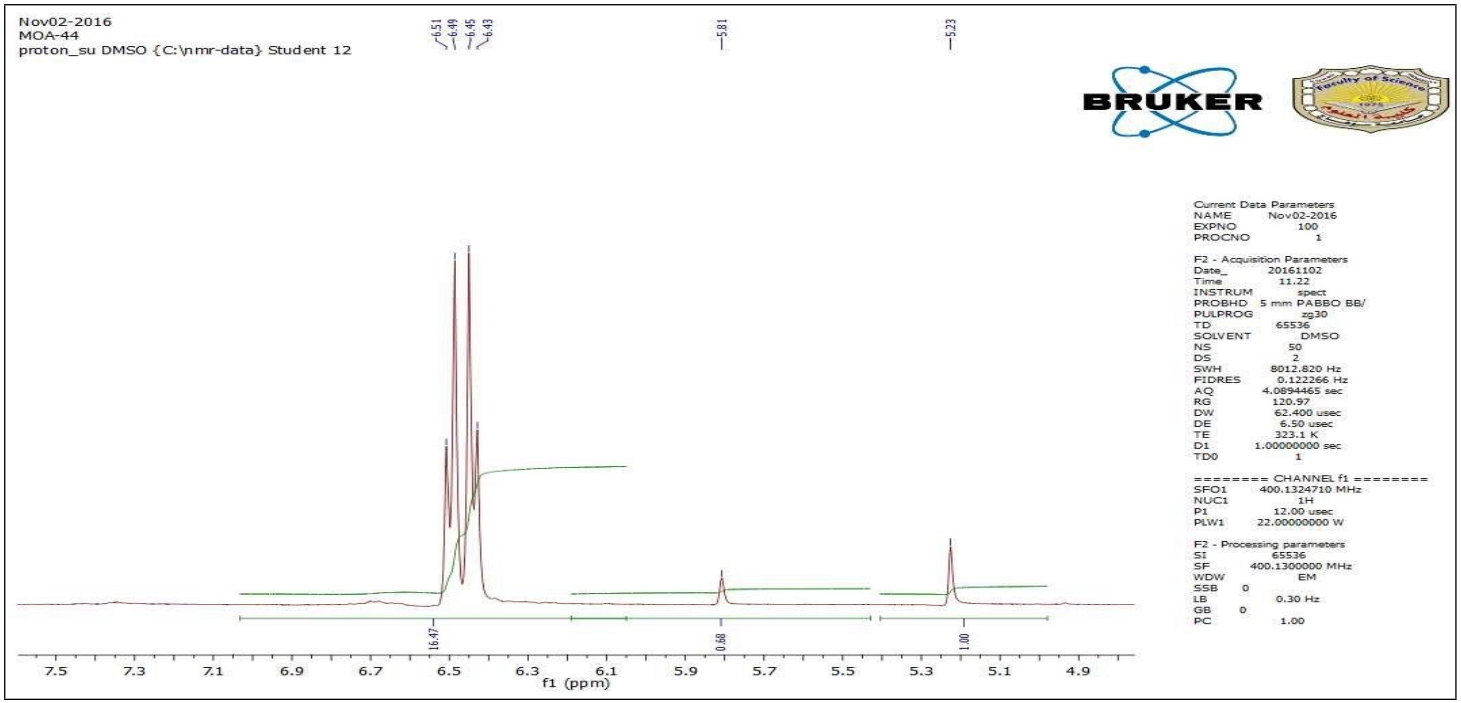
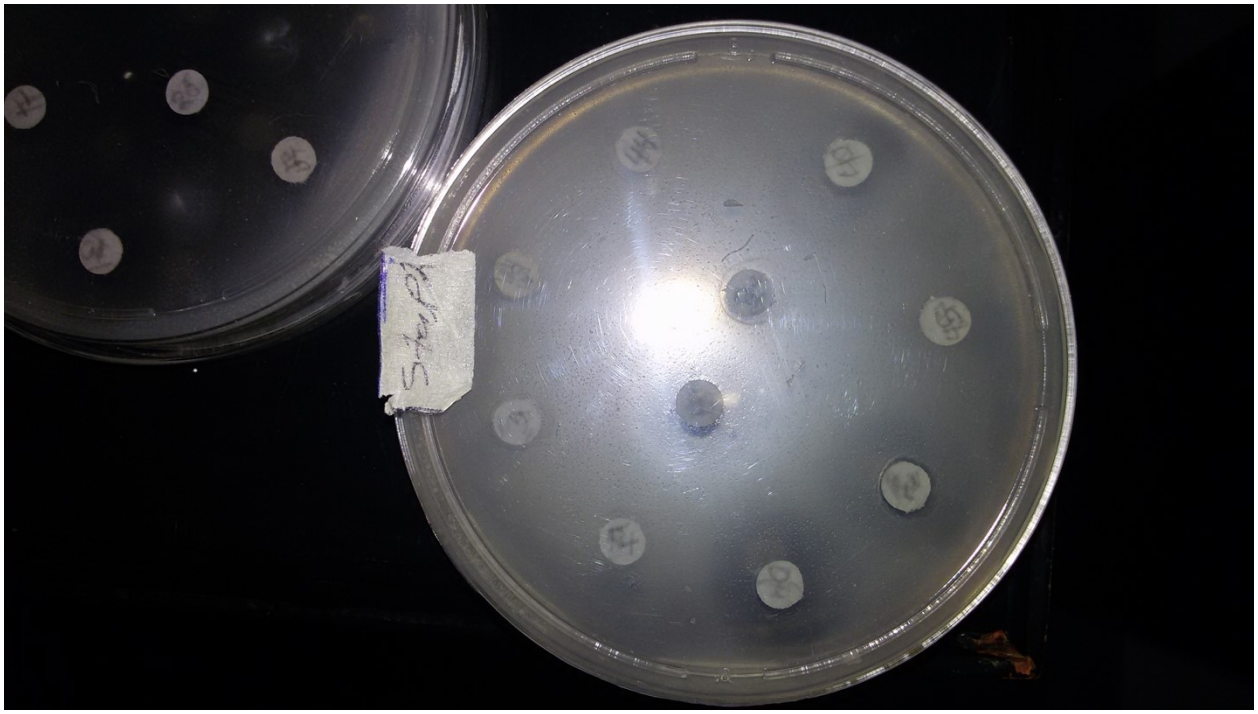
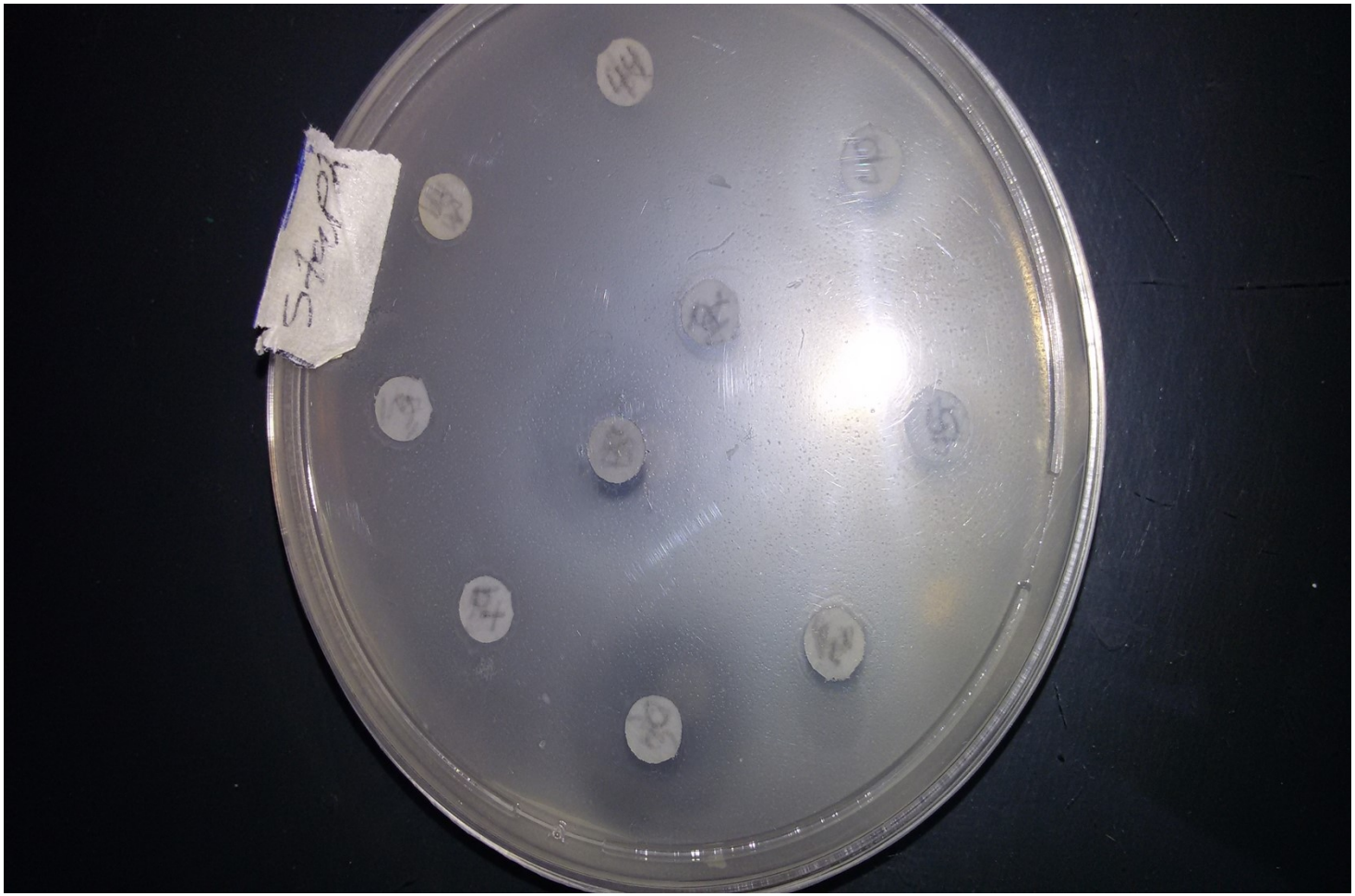
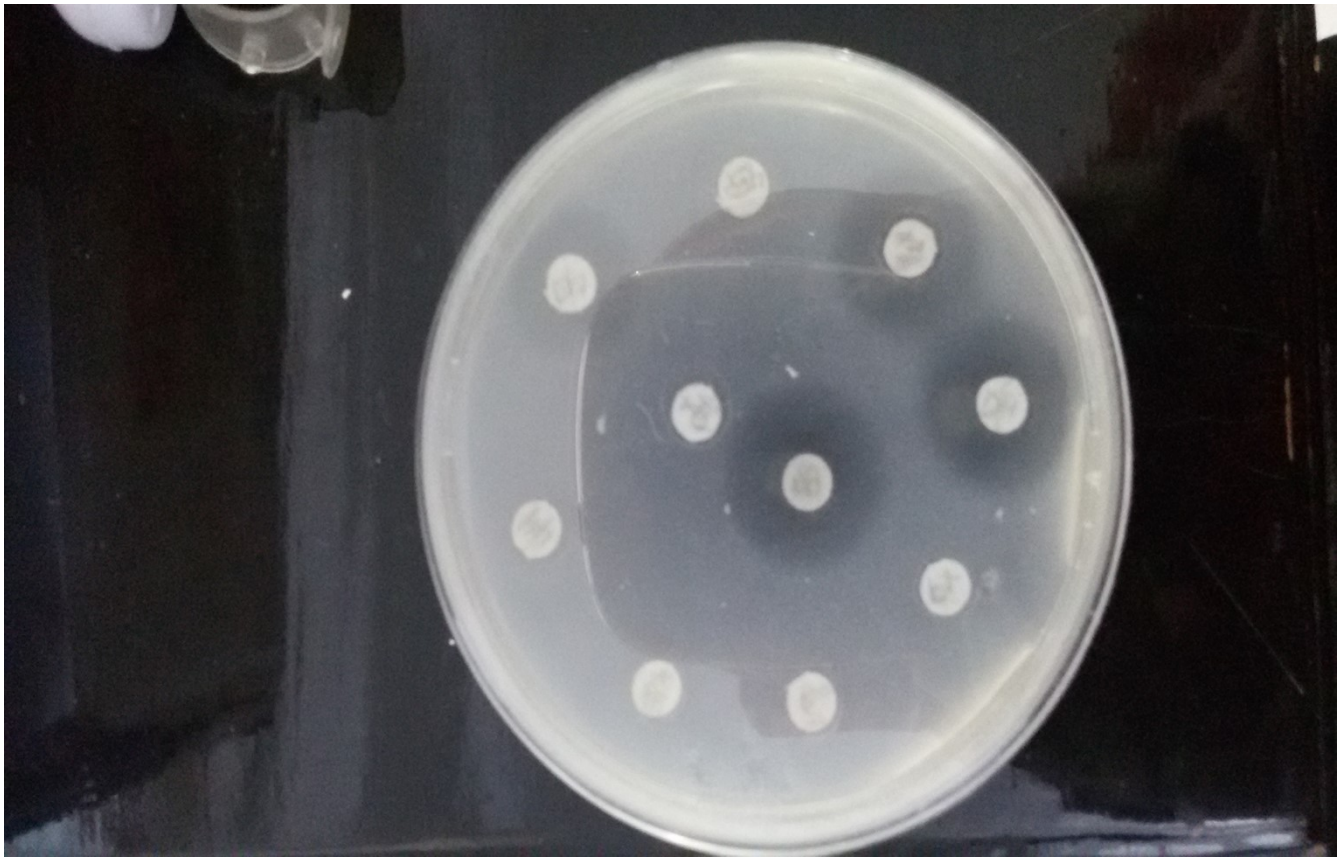
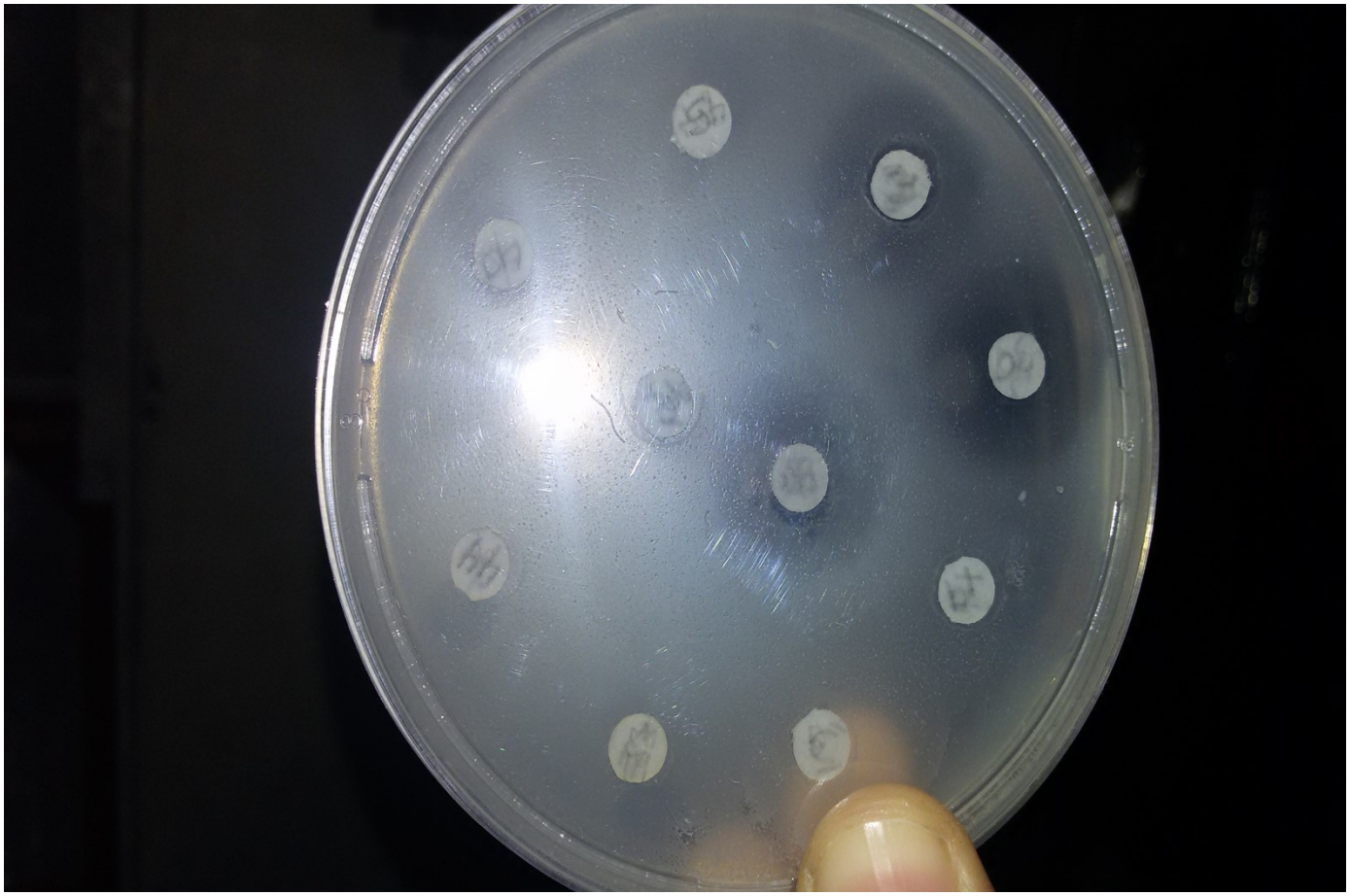


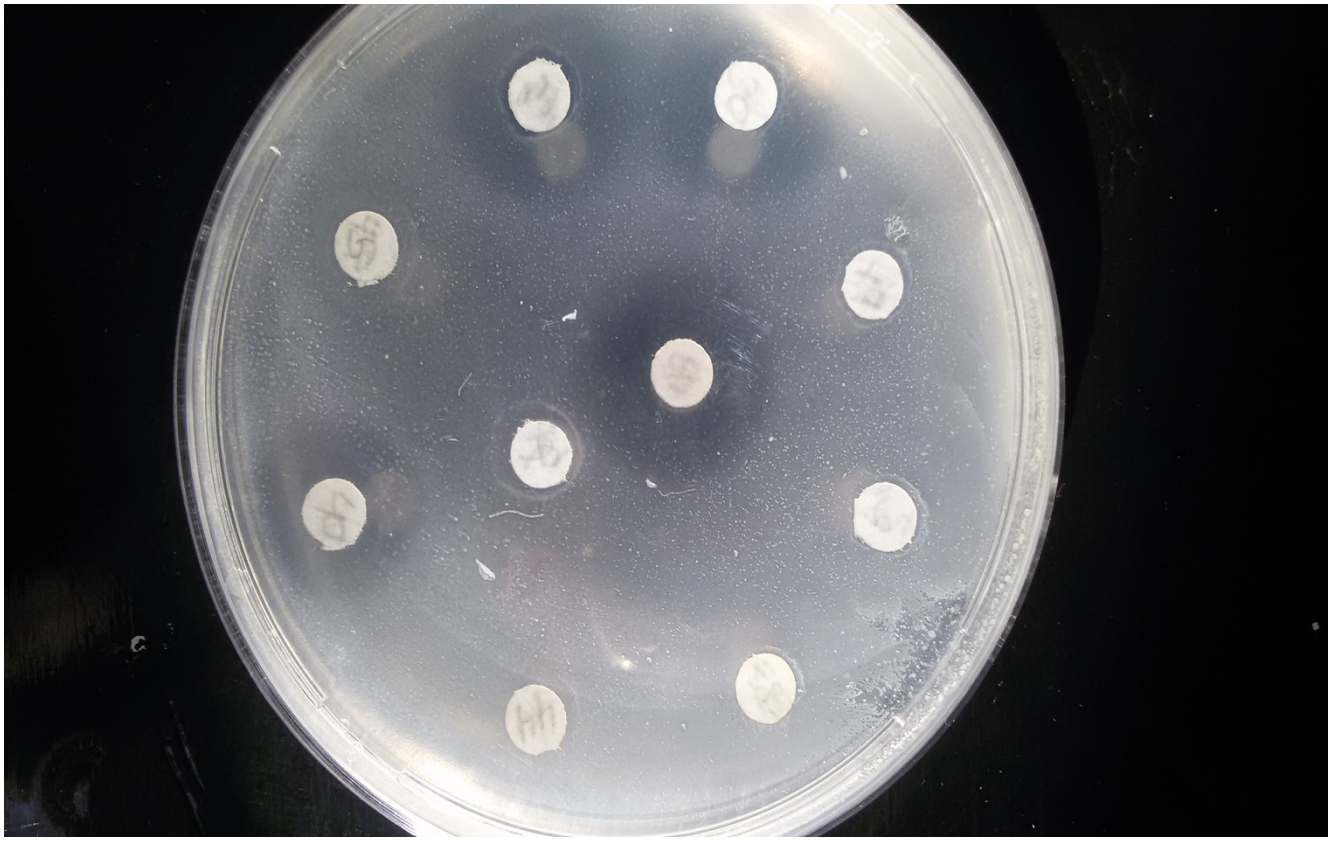
Figure S21. ^{1}H NMR Spectrum of Compound (8)

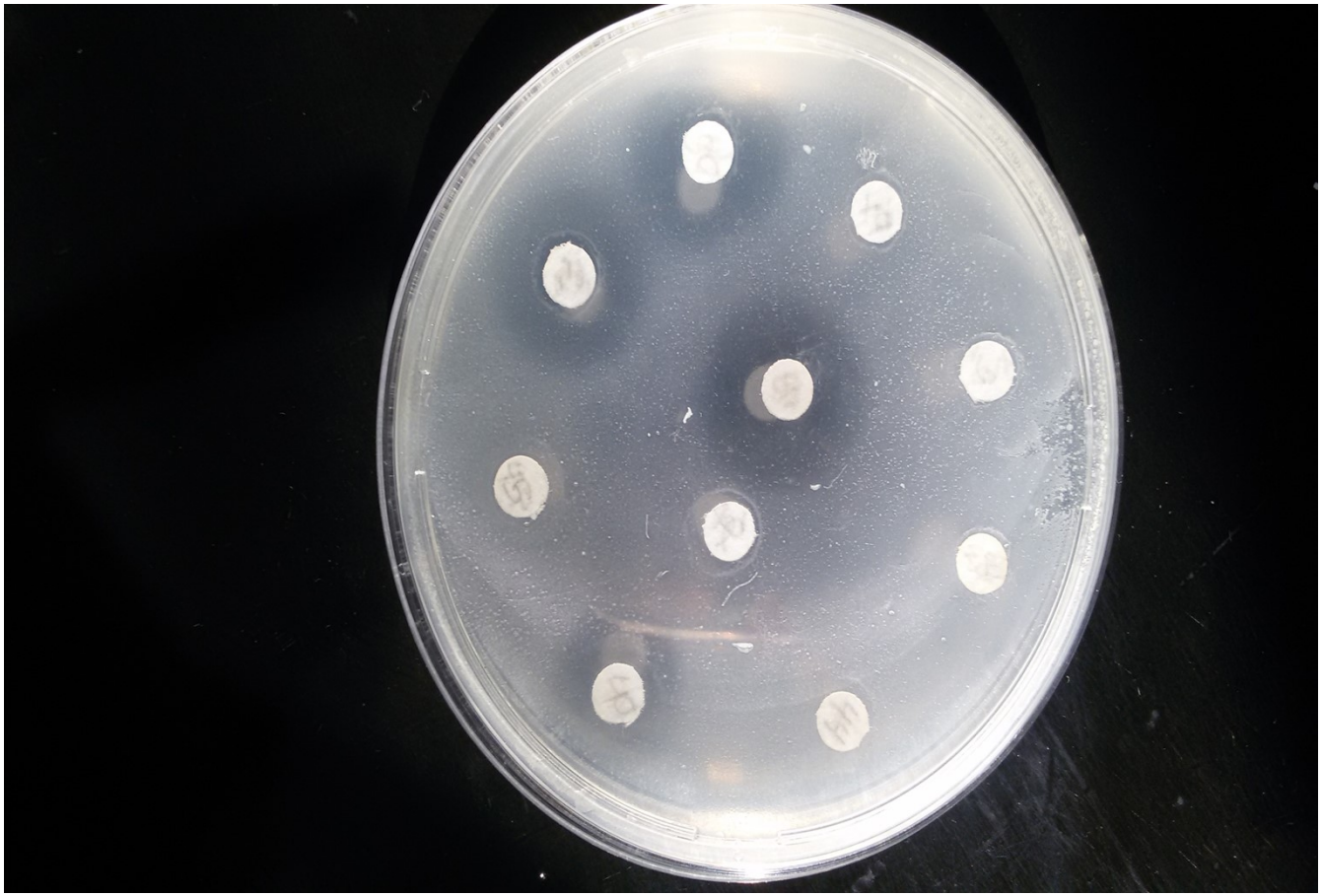


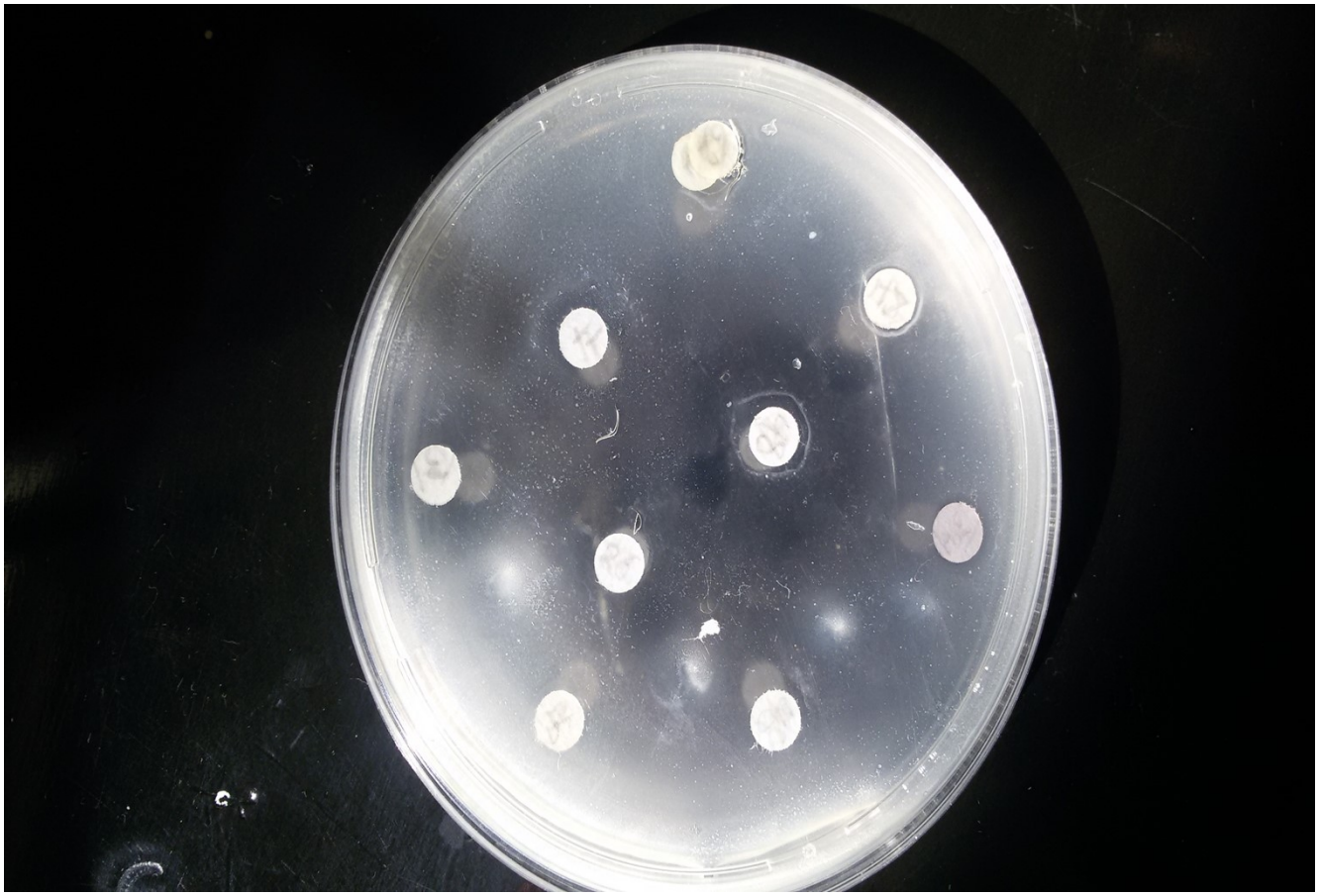


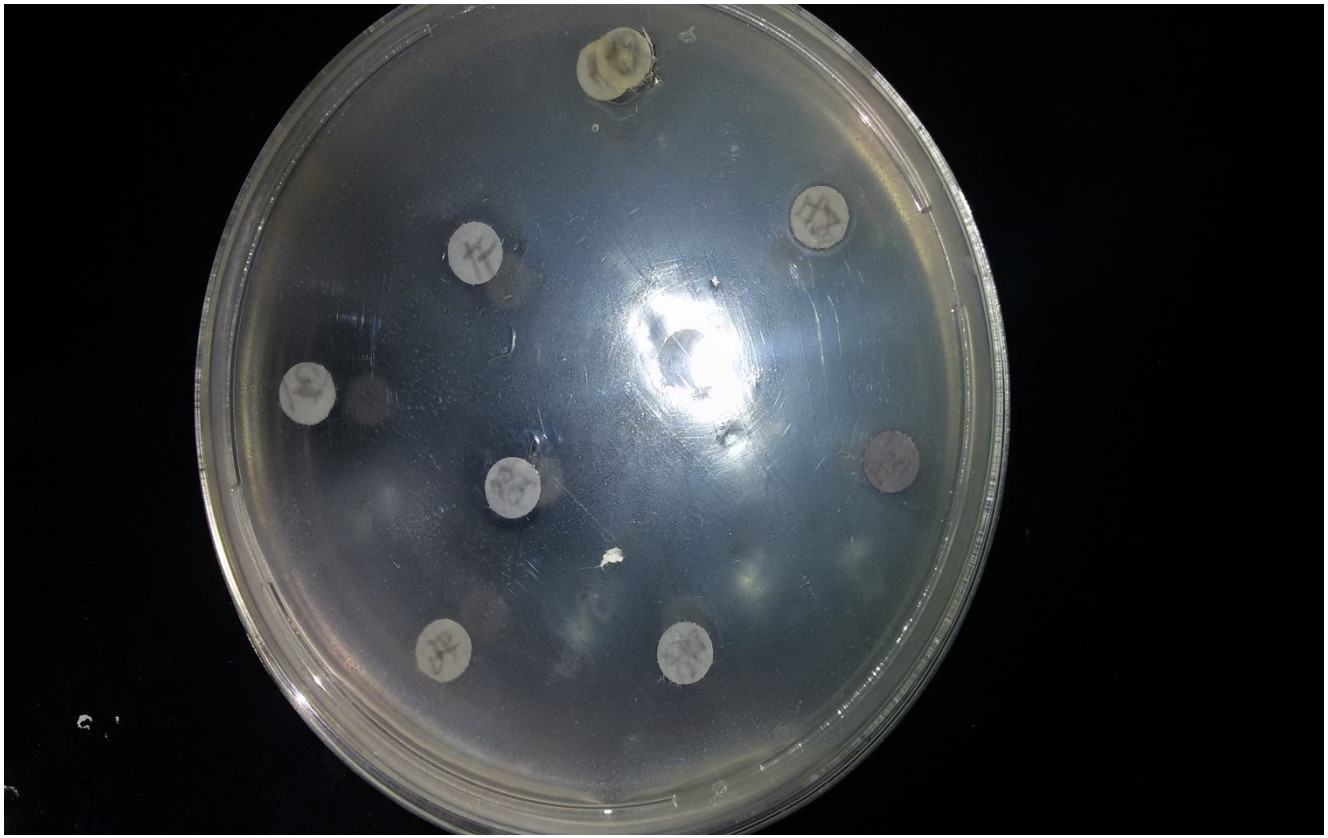


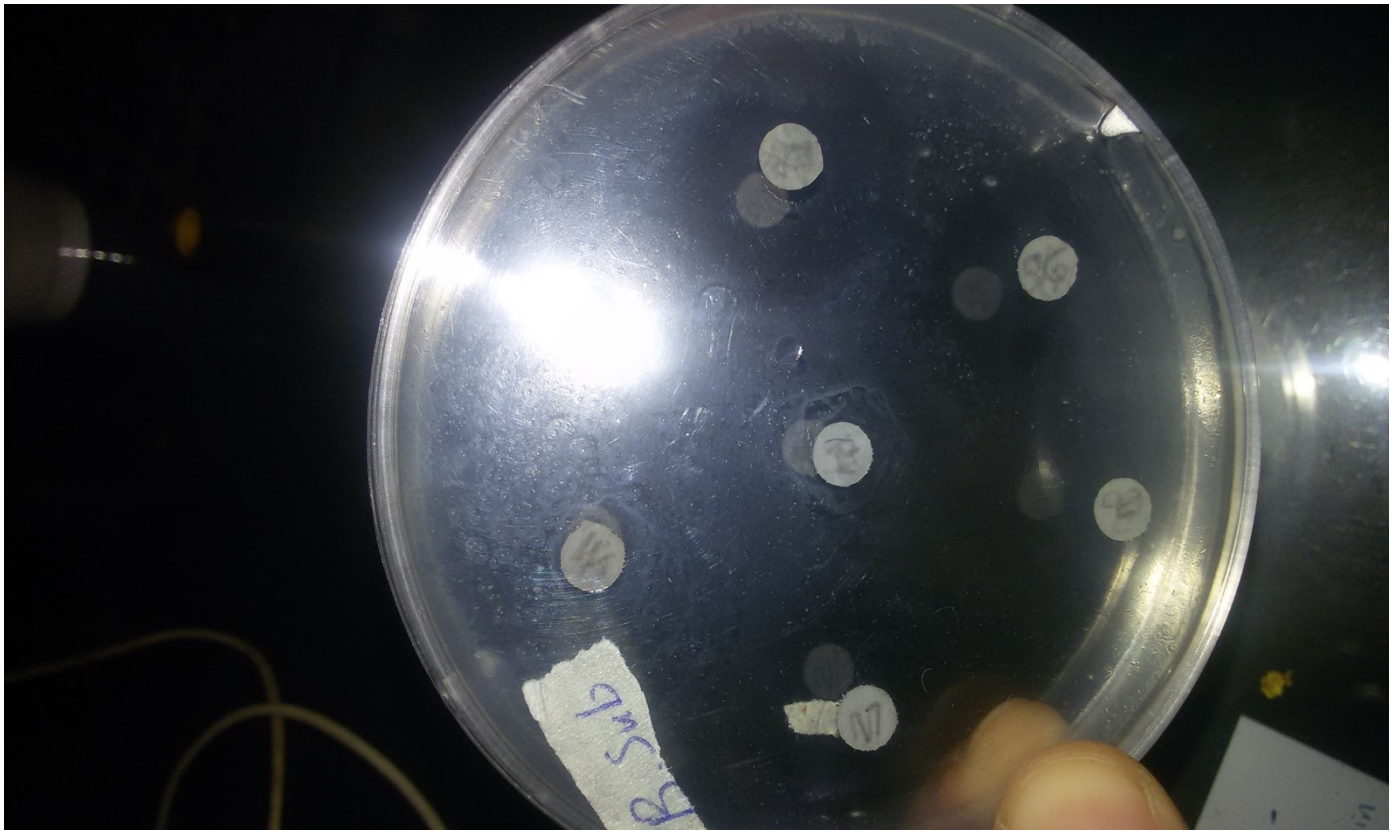












Figures S22. Antibacterial activity of compounds against pathogenic bacterial strains *Escherichia coli, Staphylococcus haemolyticus, Kocuria kristinae, Enterococcus casseliflavus,* and *Bacillus cereus*.

Card Type: GP Testing Instrument:

Bionumber: 0504021237202221

Organism Quantity:

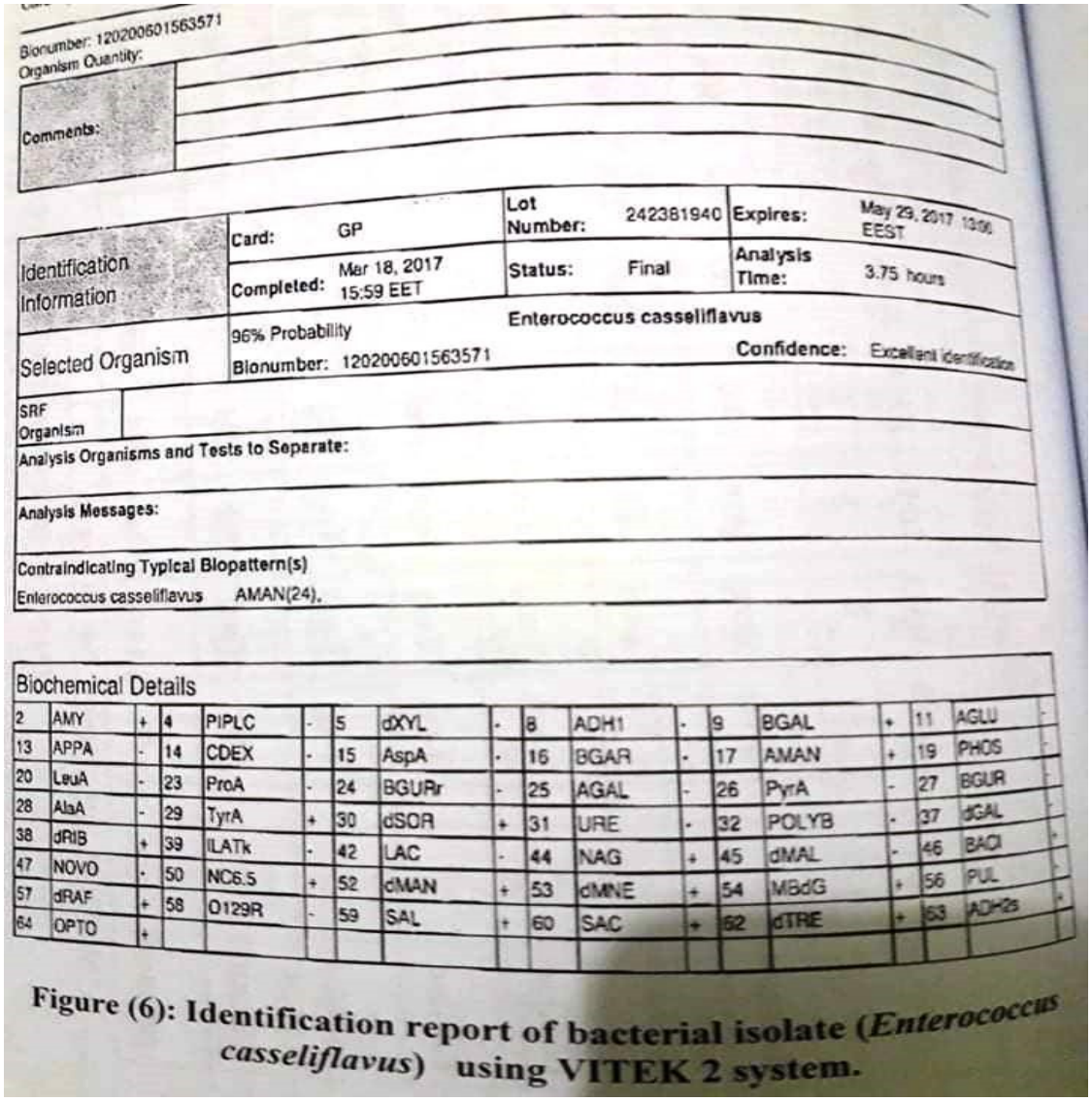
Comments:	

Identification Information	Card:	GP	Lot Number:	242381940	Expires:	May 29, 2017 13:00 EEST
	Completed:	Mar 16, 2017 14:12 EET	Status:	Final	Analysis Time:	7.00 hours
Selected Organism	66% Probability		Staphylococcus haemolyticus			
	Bionumber: 0504021237202221				Confidence:	Acceptable Identification
SRF Organism						
Analysis Organisms and Tests to Separate:						
Analysis Messages:						
Contraindicating Typical Biopattern(s)						
Staphylococcus haemolyticus	SAC(97),AlaA(2),dGAL(77),POLYB(1),					

Biochemical Details

2	AMY	-	4	PIPLC	-	5	dXYL	-	8	ADH1	+	9	BGAL	-	11	AGLU	+		
13	APPA	-	14	CDEX	-	15	AspA	-	16	BGAR	-	17	AMAN	-	19	PHOS	(+)		
20	LeuA	-	23	ProA	-	24	BGURr	-	25	AGAL	-	26	PyrA	+	27	BGUR	-		
28	AlaA	+	29	TyrA	-	30	dSOR	-	31	URE	-	32	POLYB	+	37	dGAL	-		
38	dRIB	+	39	ILATk	+	42	LAC	-	44	NAG	+	45	dMAL	+	46	BACI	-		
47	NOVO	-	50	NOEL5	+	52	dMAN	-	53	dMNE	-	54	MdGG	-	56	PUL	-		
57	bRAF	-	58	O129R	+	59	SAL	-	60	SAC	-	62	ITRE	+	63	ADH2k	-		
64	OPTD	+																	

Figure (8): Identification report of bacterial isolate (*Staphylococcus haemolyticus*) using VITEK 2 system.



Bionumber: 120200601563571
Organism Quantity:

Comments:	

Identification Information	Card:	GP	Lot Number:	242381940	Expires:	May 29, 2017 13:00 EEST
	Completed:	Mar 18, 2017 15:59 EET	Status:	Final	Analysis Time:	3.75 hours
Selected Organism	96% Probability		Enterococcus casseliflavus		Confidence:	Excellent identification
	Bionumber:	120200601563571				
SRF Organism						

Analysis Organisms and Tests to Separate:

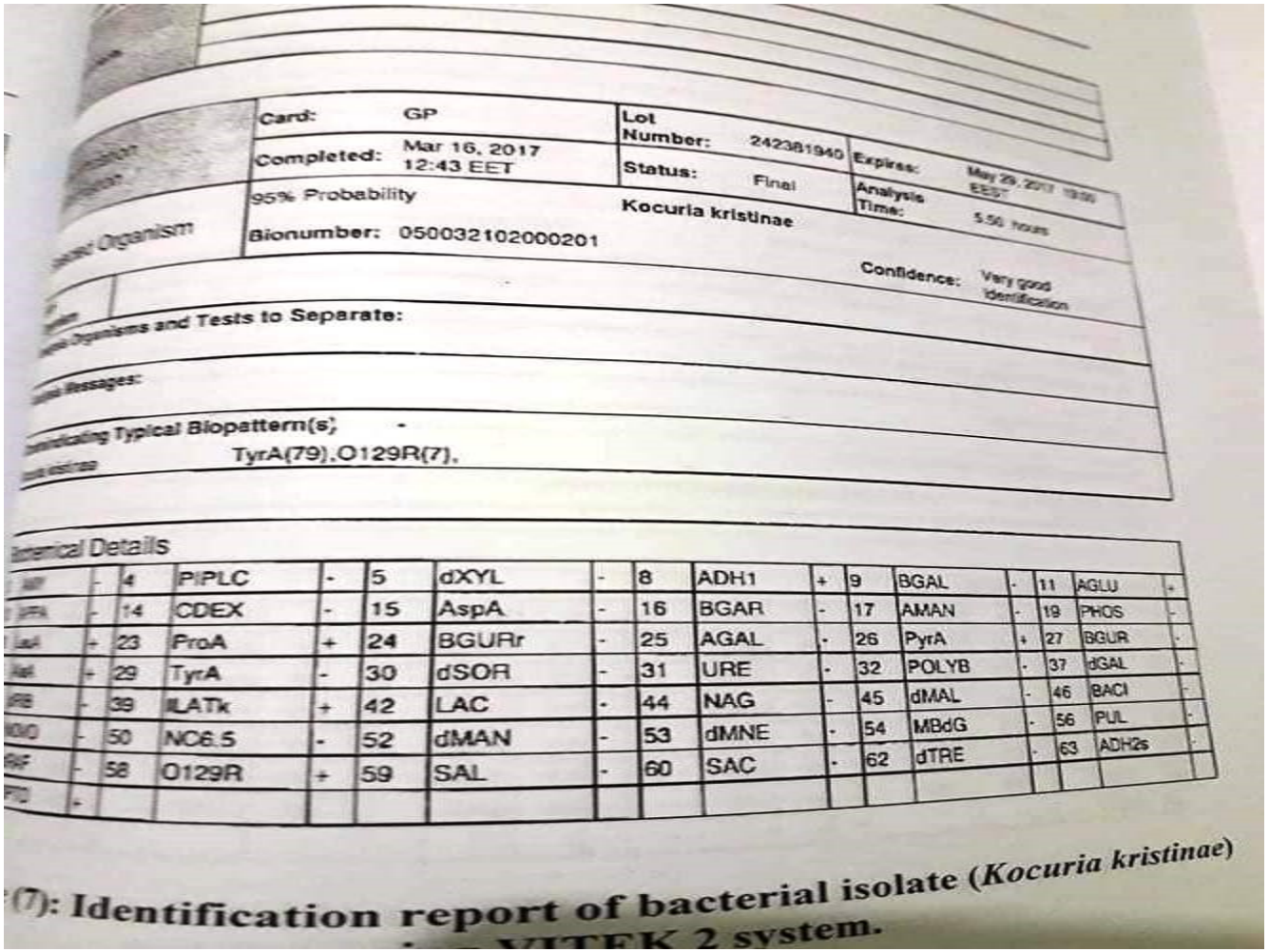
Analysis Messages:

Contraindicating Typical Biopattern(s)
Enterococcus casseliflavus AMAN(24).

Biochemical Details

2	AMY	+	4	PIPLC	-	5	dXYL	-	8	ADH1	-	9	BGAL	+	11	AGLU	-
13	APPA	-	14	CDEX	-	15	AspA	-	16	BGAR	-	17	AMAN	+	19	PHOS	-
20	LeuA	-	23	ProA	-	24	BGURr	-	25	AGAL	-	26	PyrA	-	27	BGUR	-
28	AlaA	-	29	TyrA	+	30	dSOR	+	31	URE	-	32	POLYB	-	37	dGAL	-
38	dRIB	+	39	ILATk	-	42	LAC	-	44	NAG	+	45	dMAL	-	46	BACI	+
47	NOVO	-	50	NC6.5	+	52	dMAN	+	53	dMNE	+	54	MBdG	+	56	PUL	-
57	dRAF	+	58	O129R	-	59	SAL	+	60	SAC	+	62	dTRE	+	63	ADH2s	+
64	OPTO	+															

Figure (6): Identification report of bacterial isolate (*Enterococcus casseliflavus*) using VITEK 2 system.



Card:	GP	Lot Number:	24238194O
Completed:	Mar 16, 2017 12:43 EET	Status:	Final
95% Probability		Kocuria kristinae	
Bionumber:	050032102000201		

Expires: May 29, 2017 EET
Analysis Time: 5.50 hours
Confidence: Very good identification

Organisms and Tests to Separate:

Typical Biopattern(s): -

TyrA(79),O129R(7),

Biochemical Details

	-	4	PIPLC	-	5	dXYL	-	8	ADH1	+	9	BGAL	-	11	AGLU	+	
	-	14	CDEX	-	15	AspA	-	16	BGAR	-	17	AMAN	-	19	PHOS	-	
	+	23	ProA	+	24	BGURr	-	25	AGAL	-	26	PyrA	+	27	BGUR	-	
	+	29	TyrA	-	30	dSOR	-	31	URE	-	32	POLYB	-	37	dGAL	-	
	-	39	ILATk	+	42	LAC	-	44	NAG	-	45	dMAL	-	46	BACI	-	
	-	50	NO6.5	-	52	dMAN	-	53	dMNE	-	54	MBdG	-	56	PUL	-	
	-	58	O129R	+	59	SAL	-	60	SAC	-	62	dTRE	-	63	ADH2s	-	
	+																

(7): Identification report of bacterial isolate (*Kocuria kristinae*)

Figure S23. BIOMERIEUX VITEK2 SYSTEM-bio number analysis