



حاصلة على شهادة الاعتماد من الهيئة القومية
لضمان جودة التعليم والاعتماد في 2012/7/12م



Research Lab Sheet

Lab Name	Heterocyclic compounds Chemistry Research Lab
Academic Year	2021 - 2022

Basic Information	
Department	Organic Chemistry
Location	Building 2 - first floor
Total area (m²)	19
Head of the Lab	Dr. Eman A. Ahmed
Establishment date	

No. of Staff	Ass. Prof.	Technicians
	1	



حاصلة على شهادة الاعتماد من الهيئة القومية
لضمان جودة التعليم والاعتماد في 2012/7/12م



Articles produced by the Lab

1	Boosting the catalytic performance of zinc linked amino acid complex as an eco-friendly for synthesis of novel pyrimidines in aqueous medium. Eman A. Ahmed ; Ahmed M.M. Soliman; Ali M. Ali; Mahmoud Abd El Aleem Ali Ali El-Remaly; <i>Appl Organomet Chem.</i> 2021 ;e6197. DOI:org/10.1002/aoc.6197J.
2	Synthesis, EGFR-TK Inhibition and Anticancer Activity of New Quinoxaline Derivatives. Eman A. Ahmed , Mamdouh F. A. Mohamed, Ahmed Omran & Hanan Salah; <i>Synthetic Communications</i> 2020 , DOI: 10.1080/00397911.2020.1787448
3	Design and Synthesis of Some New Analgesic Azole Derivatives Containing Tramadol Moiety. Ahmed Khodairy, Eman A. Ahmed , Mohamed Ismael, Khaled M. Mohamed, and Shymaa A. Thabet; <i>J. Heterocycl. Chem.</i> 2019 , DOI 10.1002/jhet.3492
4	Synthesis of Esters and Carbamothioates Contaminating Tramadol Moiety and Their HPLC Applications A. Khodairy, E.A. Ahmed , Khaled M. Mohamed and Shymaa A. Thabet; <i>Asian J. Org. Med. Chem.</i> 2017 DOI: https://doi.org/10.14233/ajomc.AJOMC-P62
5	Ring rearrangements and reactivity of 3-((4-oxo-4H-chromen-3-yl)methylene)-4-phenyl-1H-[1,5]benzodiazepin-2(3H)-one toward some nucleophiles; Salah, H., Ahmed, E.A. , Hassan, M.M.; <i>Arabian J. Chem.</i> 2017 DOI: 10.1016/j.arabjc.2015.03.008
6	Hetaryl-1,5 benzodiazepines Part I: Synthesis of 3-pyrimidyl- and imidazolyl-1,5-benzodiazepines, A. Khodairy, Eman A. Ahmed ; H. Abdel Ghany; <i>J. Heterocyclic Chem.</i> , 2016 , DOI 10.1002/jhet.2573
7	(4E)-1-Phenyl-4-[(piperidin-1-yl)methylidene]pyrazolidine-3,5-dione, S. K. Mohamed, J. T. Mague, M.Akkurt, A.Khodairy, M. R. Albayatie, Eman A. Ahmed , <i>Crystallographica Section E</i> , 2016 . .doi.org/10.1107/S2414314616010282



حاصلة على شهادة الاعتماد من الهيئة القومية
لضمان جودة التعليم والاعتماد في 2012/7/12م



8	(4E)-1-Phenyl-4-[(pyridin-2-yl)amino]methylidene}pyrazolidine-3,5-dione, Shaaban K. Mohamed, Joel T. Mague, Mehmet Akkurt, Ahmed Khodairy, Mustafa R. Albayatie, Eman A. Ahmed , <i>Crystallographica Section E</i> , 2016 . doi.org/10.1107/S2414314616009093
9	Convenient Synthesis and Biological Activity of 4-Aminomethylene1-phenylpyrazolidine-3,5-diones, Eman A. Ahmed , <i>J. Mex. Chem. Soc.</i> 2015 , 59(3), 181-190.
10	Synthesis of some new fused and spiro heterocyclic compounds under phase transfer catalysis (PTC) conditions, Elshafei, A.K., Ahmed, E.A. , Abd El-Raheem, E.M.M., <i>Egyptian J. Chem.</i> 2015 , 485
11	Crystal structure of ethyl 4-(2-methoxyphenyl)-6-methyl-2-sulfanylidene-1,2,3,4-tetrahydropyrimidine-5-carboxylate, Mohamed, S.K., Mague, J.T., Akkurt, M., Khodairy, A., Ahmed, E.A. , <i>Acta Crystallographica Section E</i> , 2015 , 71, DOI: 10.1107/S2056989015010026
12	Crystal structure of (4Z)-4-[(dimethylamino)methylidene]-3,5-dioxo-2-phenylpyrazolidine-1-carbaldehyde, Mague, J.T., Mohamed, S.K., Akkurt, M., Ahmed, E.A. , Khodairy, A., <i>Acta Crystallographica Section E</i> , 2015 , 71, DOI: 10.1107/S2056989015010038
13	Crystal structure of ethyl 2-(2-[(1E)-[(E)-2-(2-hydroxybenzylidene)hydrazin-1-ylidene]methyl}phenoxy)acetate, Akkurt, M., Mague, J.T., Mohamed, S.K., Ahmed, E.A. , Albayati, M.R., Xu, D.-J., <i>Acta Crystallographica Section E</i> , 2015 , 71, DOI: 10.1107/S2056989014027273
14	Crystal structure of ethyl 2-[2-[(1Z)-1-hydroxy-3-(4-nitrophenyl)-3-oxoprop-1-en-1-yl]phenoxy]acetate, Mohamed, S.K., Mague, J.T., Akkurt, M., Ahmed, E.A. , Albayati, M.R., <i>Acta Crystallographica Section E</i> , 2015 , 71, DOI: 10.1107/S2056989015020794
15	Crystal structure of ethyl 2-[2-[(1E)-[(1E)-2-[2-(2-ethoxy-2-oxoethoxy)benzylidene]hydrazin-1-ylidene]methyl}phen-oxy]acetate, Mague, J.T., Mohamed, S.K., Akkurt, M., Ahmed, E.A. , Omran, O.A.,



حاصلة على شهادة الاعتماد من الهيئة القومية
لضمان جودة التعليم والاعتماد في 2012/7/12م

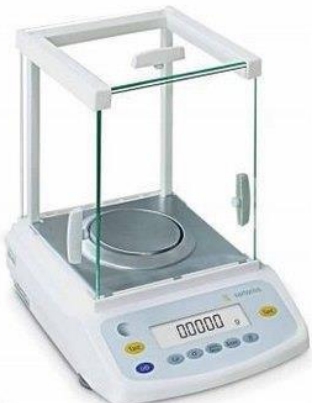


	Harrison, W.T.A., <i>Acta Crystallographica Section E</i> , 2015 , 71, DOI: 10.1107/S2056989014025584
16	Rapid and Green Chemistry Catalysis in Synthesis of Hexahydroquinazolinones and Cyclopenta, Cyclohepta[d]Pyrimidinones with Prediction of Biological Activity via PASS INET, A. M. M. El-Saghier, Eman A. Ahmed and A. M. A. Mahmoud, <i>J. Pharm. Appl. Chem.</i> , 2015 , 11, 9-19.
17	3-Oxo-N0,2-diphenyl-2,3-dihydro-1Hpyrazole-4-carbohydrazide, Mague, J. T.; Mohamed, S. K.; Akkurt, M.; Eman A. Ahmed ; Albayati, M. R. <i>ActaCrystallograph. E</i> , 2014 , 70, o819–o820. doi:10.1107/S1600536814012392
18	Crystal structure of ethyl 2-({[(4Z)-3,5-dioxo-1-phenylpyrazolidin-4-ylidene]methyl}amino)acetateMohamed, S. K.; Akkurt, M.; Mague, J. T.; Eman A. Ahmed and Albayati, M. R. <i>ActaCrystallograph. E</i> 2014 , 70, o938–o939. doi:10.1107/S1600536814016766
19	(4E)-4-[(2-Hydroxyanilino)methylidene]-1-phenylpyrazolidine-3,5-dione dimethyl sulfoxide hemisolvate Akkurt, M.; Mohamed, S. K.; Elremaily, M. A. A.; Eman A. Ahmed ; Albayati, M. R. <i>ActaCrystallograph. E</i> , 2013 , 69, o1408–o1409. doi:10.1107/S1600536813022034
20	14. Eman A. Ahmed , M. A. A. Mohamed and A. M. M. El-Saghier, One-Pot Synthesis of Dihydropyrimidin-2(1H)-ones Catalyzed by Ceric (IV) Ammonium Nitrate (CAN) under Solvent Free Conditions, <i>J. Am. Sci.</i> 2012 ; 8, 815-818.

Lab instruments						
No.	Device	quantity	Quality			
			Good	Poor	Need maintenance	malfunction
1	Hot Plate	1	√			
2	Hot Plate with stirrer	1	√			
3	UV Lamp	1	√			
4	Desiccator	1	√			
5	Digital balance	1			√	

Instruments Description

Device name	Device image	Description /use
Hot Plate		Hot plate is a device used: • For heating samples in glass beakers, flasks, vials, bottles and other vessels. • For boiling under refluxing the organic reactions. • To heat samples before chemical analysis.
Hot Plate with stirrer		Hot platewith stirrer is a device used: • For heating samples in glass beakers, flasks, vials, bottles and other vessels. • For refluxing with stirring the organic reactions. • To heat samples before chemical analysis.
UV Lamp		UV lamp is a device used for: • For detection the formation of products from reaction mixtures. • To view organic samples on TLC plates.

Desiccator		Desiccator is a glass device used for preservation organic samples dried.
Digital balance		A digital balance is used to weigh different chemical substances that used during different chemical reactions.

Evaluate the fulfillment of lab to appropriateness of areas, building installations, facilities and human resources standards

Areas of assessment		Indicators	Yes	Somewhat	No
Floor area and capacity	1	Adequacy of the total capacity of the lab for the number of researcher (1).	√		
Windows and doors	2	Availability of windows for adequate ventilations.	√		
	3	Ease of use of windows.	√		
	4	There are two exits (doors) at least (2).			√
	5	There are signs to locate directions of emergency exits		√	
Equipment	6	Appropriate temperature during the lectures (3).	√		
	7	Availability of good ventilation.			√
	8	The existence of adequate lighting (4).	√		
	9	Lab is connected to the Internet	√		
	10	The existence of directions inside the Lab showing entrances and emergency exits.		√	
Security and Safety	11	Existence of firefighting equipment near the hall.	√		
	12	Cleanliness of the room.	√		

1- Minimum area: 1m² for each person.



حاصلة على شهادة الاعتماد من الهيئة القومية
لضمان جودة التعليم والاعتماد في 2012/7/12م



2. Doors characteristics: Consists of one movable piece - opening to the inside.
3. The appropriate temperature is 18-25 °C in winter and 28°C in summer due to air-condition use.
4. Providing adequate lighting and good ventilation: windows area 10-15% of the floor area
5. Security and safety requirements: evacuation plan / evacuation responsible person/ fire distinguishers / bucket of sand / water source / good condition extinguish hoses / alarm system against fire).