

PROGRAM SCHEDULE

National Workshop on Repair and Maintenance of Scientific Equipment in Universities,
Research Institutes and Small Scale Industries”,
Kazakhstan, KazNU (October 2-6, 2017)

Inaugural Session (Location – Al-Farabi Scientific Library)

09:00-09:15	Guest to be seated
09:15-09:20	Starting Prayer /Recitation of Holy Quran
09:20-09:35	Welcome Address by Al-Farabi KazNU Representative
09:35-09:50	Message from ED-COMSATS by COMSATS Representative
09:50-10:05	Message from DG-ISESCO by ISESCO Representative
10:15-10:30	Keynote Address by Chief Guest
10:05-10:30	Refreshments

Technical Session – 1 (Lecture Session) (Location – Al-Farabi Scientific library) Day-1

- 10:30 General Repair & Maintenance Techniques (1- hours)
by Arif karim
- 11:30 General Repair & Maintenance Tools (1- hours)
by Pir Bukhsh khan

13:30 Lunch / Prayer break

Technical Session – 2 (Practical Session)

- 14:30 Repair & Maintenance of Existing Equipments
Physical-Technical Faculty, 222-cabinet
- 18:30 1st Day Concluding Session

Technical Session – 3 (Lecture Session) (Location – Al-Farabi Scientific library) Day-2

- 9:00 Spectrophotometer Systems & Trouble Shooting Techniques (2-hours)
by Pir Bukhsh khan
- 11:00 Tea break (30 minutes)

- 11:30 LC / HPLC Systems & Trouble Shooting Techniques (2-hours)
by Arif karim

13:30 Lunch / Prayer break

Technical Session – 4 (Practical Session)

- 14:30 Repair & Maintenance of Existing Equipments
- Research Institute for Problems of Ecology, 509-cabinet
 - Research Institute for Problems of Biology and Biotechnology, 216-cabinet
- 18:30 2nd Day Concluding Session

Technical Session – 5 (Lecture Session) (Location – Al-Farabi Scientific library) Day-3

- 9:00 Laboratory Reactor Systems & Trouble Shooting Techniques (1-hours)
by Pir Bukhsh khan
- 10:00 GC/MS Systems & Trouble Shooting Techniques (1-hours)
by Arif karim
- 11:00 Tea break (30 minutes)
- 11:30 AAS Systems & Trouble Shooting Techniques (1-hours)
by Arif karim
- 12:30 Potentiostat-Galvanostat & Trouble Shooting Techniques (1-hours)

by Pir Bukhsh khan

Technical Session – 6 (Practical Session)

14:30 Repair & Maintenance of Existing Equipments

- Center of Physico-Chemical Methods of Research and Analysis, 201-cabinet
- SRI for New Chemical Technologies and Materials, 302-cabinet

18:30 3rd Day Concluding Session

Technical Session – 7 (Lecture Session) (Location – Al-Farabi Scientific library)

Day-4

9:00 ICP-OES (Alloy Analyzer) & Troubleshooting Techniques (1-hours)

by Arif karim

10:00 Auto Distillation Unit & Trouble Shooting Techniques (1-hours)

by Pir Bukhsh khan

11:00 Tea break (30 minutes)

11:30 Mass Spectrometer (MS) & Troubleshooting Techniques (1-hours)

by Arif karim

12:30 Galvanostat and Potentiostat (1-hours)

by Pir Bukhsh khan

13:30 Lunch / Prayer break

Technical Session – 8 (Practical Session)

14:30 Repair & Maintenance of Existing Equipments

Faculty for Chemistry and Chemical Technology, 304-cabinet

Faculty for Chemistry and Chemical Technology, 101-cabinet

18:30 4th Day Concluding Session

Technical Session – 9 (Lecture Session) (Location – Al-Farabi Scientific library)

Day-5

9:00 ICP-MS & Troubleshooting Techniques (2-hours)

By Arif karim

11:00 Tea break (30 minutes)

11:30 Autoclave & Troubleshooting Techniques (2-hours)

by Pir Bukhsh khan

13:30 Lunch / Prayer break

Technical Session – 10 (Practical Session)

14:30 Repair & Maintenance of Existing Equipments

Faculty for Chemistry and Chemical Technology, 424-cabinet

18:30 5th Day Concluding Session

Concluding Ceremony (Location – Al-Farabi Scientific library)

16:30

Guest to be seated
Starting Prayer / Recitation of Holy Quran
Speech by Al-Farabi KazNU Representative
Speech by COMSATS representative
Speech by Chief Guest
Participants Comments
Distribution of Certificates
Closing Remarks & Vote of Thanks

17:40-18:00

Refreshment

List of Instruments Repaired / Fault Diagnosed

#	Instrument Name/ Model	Worth (USD) Approx.	Problems Reported	Repair Work Carried Out	Final Status
1.	Spectrophotometer Lambda 35, PerkinElmer	6,000	Out of order	After thorough checking it was found that its calibration was not done / expired. The instrument has been recalibrated and it was made operative.	Made operative
2.	Auto Distillation Unit (ADU-4)	15,000	No response	There was no software communication with the instrument. Its computer has been repaired, Serviced and made operative.	Made operative
3.	Laboratory Reactor LR-2/ST (Germany) UNIZIK	4,000	Agitator Fault	It was thoroughly checked, serviced and made operative.	Made operative
4.	FTIR Systems CM1201	15,000	No communication with PC	It was thoroughly checked and serviced. The communication parameter was established and made operative.	Made operative. Need calibration.
5.	Liquid Chromatograph	15,000	Vacuum Degasser problem	It was thoroughly checked; two of the vacuum pumps were serviced and made operative. The degasser chambers and pipes were found blocked due to deposition. One of the chamber was successfully cleaned and there engineers were asked to do the same for the rest of the three chambers.	Two of the vacuum pumps and a degasser chamber were successfully made operative.
6.	FTIR Systems FSM	15,000	Out of order, Sample Cabinet was broken,	Serviced and made operative. Sample press rod was broken it can be easily fabricated from the market or replaced with new one. Measurement of the rode has been made, and if require can be fabricated in PCSIR-labs.	Made operative. Need replacement of sample preparation rod.
7.	Spectrophotometer Shimadzu UV 3600	20,000	Out of order	After thorough checking it was found that the life of D2 lamp and the tungsten lamp has been expired. The lamps need to be replaced.	Problem diagnosed need replacement of lamps.
8.	Highly effective liquid chromatography (HELC) SYCAM	25,000	Completely dead	After thorough checking, the problem was found in the Refractive-Index detector. It was opened and hardware was serviced. The lamp of the RI-detector was found deteriorated	Problem diagnosed need replacement of lamps

				and need to be replaced.	
9.	Alloy analyzer (spectrometer) Agilent 725	100,000	Noise in the signal.	The instrument was checked and it was found that the nebulizer, spray chamber and the ICP-Torch require cleaning. Due to shortage of time the user/operator was given videos and guideline for cleaning and servicing.	Problem diagnosed, needs cleaning of sample introduction system and ICP torch.
10.	ICP-MS Agilent 7500, USA	150,,000	Vacuum takes too long to achieve.	The instrument was thoroughly checked, the problem was found in the operation. Due to shortage of time the operator was given guide lines as under: <ul style="list-style-type: none"> • The equipment need to continuously be switched on or keep in standby mode, i.e. such instruments are not usually shutdown, and when they are shutdown , they took several hours to achieve good vacuum. • Use rotary-vacuum pump ballasting at least once in a week to remove any solvent present in the oil. This will increase the vacuum speed. 	Problem is in the operation, the operator was given guide lines for proper operation.
11.	IR-spectrometer Nicolet IR200	15,000	Completely dead	Software was reinstalled, serviced and made operative. Its moving mirror was damaged it need to be replace.	Problem diagnosed need replacement of mirror.
12.	Mass Spectrometer / Chromatech-crystal 5000	10,000	Completely dead	After thoroughly checking it was found that the main power supply card is faulty and some of the components were missing. In addition, SIL-connectors were found damaged. They were asked to arrange the missing components and repair the SIL-connectors.	Problem diagnosed need replacement of electronic components.
13.	Auto Distillation Unit	10,000	Sensor Error	The error was due to the improper installation. The operator was new to it. Due to shortage of time he was given guide lines for proper connection of pipes and filling of internal container/vessel.	Problem diagnosed requires proper connection of pipes and filling of containers.

List of Participants

“National Workshop on Repair and Maintenance of Scientific Engineering Equipments in Universities, Research Institutions and Small Scale Industries”, 2-6 October, 2017,
Location: Al-Farabi, KazNU, Almaty, Science Library

#	Full Name	Position	Organization
1.	Kuznetsov A.T.	Leading Specialist	Faculty of Chemistry and Chemical Technology
2.	Tursynbek S.	PhD – 2 course	Department of Chemistry and Chemical Technology
3.	Kasabekova J.A.	Leading Specialist	Department of Chemistry and Chemical Technology
4.	Nurgalimov B.N.	Leading Specialist	Department of Chemistry and Chemical Technology
5.	Shingisova R.D.	Leading Specialist	Department of Chemistry and Chemical Technology
6.	Azhigulova R.N.	Senior teacher	Department of Chemistry and Chemical Technology
7.	Kubasheva J.B.	Leading Specialist	Department of Chemistry and Chemical Technology
8.	Imangaliyeva A.N.	Teacher	Department of Chemistry and Chemical Technology
9.	Dobzhinetskaya V.L.	Leading Specialist	Department of Chemistry and Chemical Technology
10.	Dalibay A.	Master of 1 course	Department of Chemistry and Chemical Technology
11.	Seisembekova A.B.	PhD – 1 course	Department of Chemistry and Chemical Technology
12.	Konuspaev S.R.	Director of LLP «Sterin» Innovation Company»	Department of Chemistry and Chemical Technology
13.	Kalugin S.N.	Assistant professor	Department of Chemistry and Chemical Technology
14.	Mylytkbayeva Zh.K.	Deputy Dean on Scientific and Innovation Work and International Relations	Department of Chemistry and Chemical Technology
15.	Karagulanova A.S.	Leading Specialist, PhD, 1-course	Department of Science and Innovation, Department of Chemistry and Chemical Technology
16.	Utegenov A.	Scientific Researcher	SRI of Experimental and theoretical physics
17.	Ussenov Y.	Deputy Director	National Nanotechnology Open Laboratory
18.	Batryshev D.	Head	Laboratory of engineering profile al-Farabi KazNU
19.	Shekerbaev K.S.	Scientific Researcher	National Nanotechnology Open Laboratory
20.	Sagidolda Y.	Deputy Head of Department for Science,	Department of Physics and Technology

Annexure C: List of Instruments

		Innovation work and International Relations	
21.	Issanova M.	Deputy Dean on Research Activities & International Affairs	Department of Physics and Technology
22.	Muratov M.	Director	National Nanotechnology Open Laboratory
23.	Baimuldina N.	Senior lecturer	Department of Mechanics and Mathematics, Computer Science
24.	Baubekova A.S.	Deputy Dean on Scientific and Innovation Work and International Relations	Department of Biology and Biotechnology (KazNU)
25.	Akhmetova A.B.	Candidate of biological sciences, the teacher of department of botany and ecology	Department of Biology and Biotechnology (KazNU)
26.	Shymshykov B.E.	Lecturer	Department of Biology and Biotechnology (KazNU)
27.	Akhmetkaliyeva B.E.	Master student	Department of Biology and Biotechnology (KazNU)
28.	Abylaikhanova N.	Candidate of Biological Sciences	Department of Biology and Biotechnology (KazNU)
29.	Tastambek K.	PhD, 1-course	Department of Biology and Biotechnology (KazNU)
30.	Kosalbayev B.	PhD, 1-course	Department of Biology and Biotechnology (KazNU)
31.	Sokolov Yu.A.	Senior Researcher	Center of Physico-Chemical Methods of Research and Analysis
32.	Bektassov M.	Junior Researcher	Center of Physico-Chemical Methods of Research and Analysis
33.	Derbissalin M.	Junior Researcher	Center of Physico-Chemical Methods of Research and Analysis
34.	Kenesov B.N.	Professors	Center of Physico-Chemical Methods of Research and Analysis
35.	Temirbayeva K.A.	Vice-Dean on Scientific and Innovation Work and International Relations	Department of Geography and Environmental Sciences
36.	Kozhakhmetov B.T.	Senior Lecturer	The Department of Geography, Land Management and Cadastre (KazNU)
37.	Zhargasbekov Y.Zh.	Lecturer	The Department of Cartography and Geoinformatics (KazNU)
38.	Mukaliev Zh.K.	Lecturer	The Department of Geography, Land Management and Cadastre (KazNU)
39.	Bekkuliev A. A.	Lecturer	The Department of Geography, Land Management and Cadastre (KazNU)
40.	Sarybaev E.S.	Senior lecturer	The Department of Cartography and Geoinformatics
41.	Satarbayeva A.S.	Senior lecturer	The UNESCO Chair for Sustainable Development
42.	Plokhikh R.V.	Doctor of geographical sciences, acting Professor	The Department of Recreational Geography and Tourism

Annexure C: List of Instruments

43.	Sapiyeva A.Zh.	Assistant	The Department of Recreational Geography and Tourism
44.	Minzhanova G.M.	Candidate of Geographical Sciences, Acting Assistant Professor	The UNESCO Chair for Sustainable Development
45.	Issanbekova A.T.	PhD, Senior Lecturer	The UNESCO Chair for Sustainable Development
46.	Nyssanbayeva A.S.	Vice Head on Scientific and Innovation Work and International Relations	The Department of Meteorology and Hydrology
47.	Ibrayev B.M.	Executive Director for Research and Cooperation	JSC «M. Tynyshpayev Kazakh Academy of Transport and Communications»
48.	Alzhanuly B.	Senior Specialist of the Research Center	Eurasian Technological University
49.	Kurmangaliyev M. Zh.	Head of the Engineering and Laboratory Complex	Caspian Public University
50.	Kuldybaev N.M.	Junior researcher	Kazakh National Agrarian University
51.	Rahman D.	Senior Assistant	Kazakh National Agrarian University
Participants from Non-Almaty Universities			
52.	Moldakhmetov M.M.	Deputy Director of the Agro-Bio Research Institute of the Ministry of Education and Science of the Republic of Kazakhstan	
53.	Mahmudova L.K.	Head of the Department of Geography and History Taraz University of Innovation and Humanities	
54.	Rakhimov R.V.	chief specialist of the Research and Production Center "ENU-Lab" of Eurasian National University, Astana	
55.	Saltayev A.K.	laboratory assistant of the highest category of the laboratory maintenance branch of Eurasian National University, Astana	
56.	Sagituly R.	Head of the Laboratory Services Branch of Eurasian National University, Astana	
57.	Baibazarova E.	Master of Chemistry, lecturer of M.Kh.Dulati Taraz State University	
58.	Kenzhina I.	Junior researcher	
59.	Omarov E.A.	Engineer LIP Kyzylorda State University. Korkyt Ata	
60.	Karkynbekuly N.	Specialist of mathematics faculty	