

Training Course Plan for Laboratory Quality Control Course (QC-lab)

Objectives

To make lab personnel aware that good quality control systems must be applied laboratories if analytical results are to be trustworthy.

New of good analytical equipment is not enough to secure quality results, but trained personnel following procedures and using checklist for to make mistakes unlikely is needed. This course aims at by presentation and discussion to reach an understanding among laboratory staff that quality control in not just a bureaucratic demand but a needed framework for laboratory work. It is also hoped that water laboratories will apply methods for QC and also follow up work with participating on regular ring test for QC enhancement results.

The end results is trustworthy and reliable analytical results form Laboratories prepared within acceptable range of deviations of results.

Participants:

Laboratory staff who is working (or recently engaged is such work) in water analytical laboratories in Afghanistan as lab supervisors, or lab technicians who is used to work with field kits from Hach-Lange or equivalent instruments.

Only possible to cater for max 15 participants per course.

Course duration:

3 days

Teaching methods engaged

1. By letting the participants analyse quite standard water analysis themselves and then compare if all results are the same within acceptable tolerance levels of not. (Lab practical work)
2. If they are not, then discuss why differences and possible needs for stricter adherence to methodologies, procedures and check lists for work.
3. Lectures given in technical methods for self checking of analytical errors. Use of methods to eliminate errors from masking and interference substances, make use of known standard solutions, and use of ring test for assurance of quality control for continuous enhancement.
4. Lectures in methods for quality control how covered by international standards for accredited laboratories. Discussing appropriate methodologies for Afghanistan at this stage, use of procedures, checklists, documentation of methodologies engages and checks for reagents, cleanliness, equipment etc.
5. After introduced to theoretical technical and desk administrative quality control procedures, redo tests to see how results are affected in practice.

Discuss and agree of proposed action plan for step by step incorporate QC systems for laboratories.

Laboratory quality control Course

agenda/ (QC) RuWatSIP? NORPLAN/UNICEF

Day	Time	Activity	Responsible /presenter
Day 1 18.6.13	9:00	Registration, and opening	Director
	9:10	Objection and course methodology	Prof. Eqrar
	9:20	Participants presentation with statement of background and experience	Prod. Eqrar
	9:40	Introduction of laboratory testing, tutorial, divide into groups of 2, definition of exercise	Sabour
	10:00	Tutorial /group work in laboratory	Sabour /UNICEF, Norplan, DACAAR
	1200	Lunch	
	13:00	Lab practical work continue	Sabour /UNICEF, Norplan, DACAAR
	13:45	Presentation of lab results	Participants
	15:00	Discussing perceived reasons for the variance in results. Why ,and what could be done better?	Sabour/Stoveland
	15:45	Summary of day one. Need for improvement?	Stoveland
Day 2 19.6.13	9:00	Introducing day 2 with summary from day 1 - general sources on non-analytical errors - interactive discussions	Stoveland
	10:00	Technical methods for eliminating interferences and analytical errors	/ Sabour
		Tea	
	11:15	Laboratory standards and quality standards in Afghanistan	ANSA
	11:45	Examples how international standards (ISO 17025) demands laboratories to work. Methods, supervised control, need for documentation though signed checklists etc	Dr Stoveland
	11:30	Which standards, approaches and QC can be implemented in Afghanistan. Discussion of what and how	Stoveland/ participants
	12:00	Lunch	

	13:00	Discuss and outline tentative next steps for QC to be applied in participating laboratories and method, procedures for introduction in Afghan labs	
	14:45	Summary of day 2 and plans for last day	Prof. Eqraer
		Summary of day 2 and plans for last day	
Day 3 18.6.13	9:00	Define laboratory work at tutorials using agreed enhanced QC procedures for selected analysis. Instruction of procedures for each analytical method	Sabour/Stoveland
	10:00	Lab tutorials /group work with focus on QC	UNICEF/Norplan/DACAAR
	12:00	Lunch	
	13:00	Lab work continues	
	13:45	Presentation of results and discussion of achievements	Participants
	14:10	Course evaluation by participants	Participants
	14:20	Course summary and agreed action	Stoveland
	14:40	Hand-out of course attendance certificates	Director RuWatSIP
	14:50	Closing of course	Director RuWatSIP