ORGANISATION FOR PROHIBITION OF CHEMICAL WEAPONS

TECHNICAL SECRETARIAT

Quality management system document No.: QDOC/LAB/WI/OSA3

DOCUMENT TITLE:

THE CHAIN OF CUSTODY AND DOCUMENTATION FOR OPCW SAMPLES ON-SITE

This is a quality management system document, which has been written by Andrew Othieno, Inspection Team Leader; and reviewed by Gary Mallard, Head of the OPCW Laboratory; Meehir Palit, Senior Analytical Chemist and Oliver Terzic, Inspector Analytical Chemist. It has been approved by the Director of Verification Division and issued by the Verification Division to the copy holder shown below in accordance with the quality system documentation procedures.

APPROVED BY: Horst Reeps, Director of Verification

SIGNED: _____ DATE: _____

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HELD BY: Mohamed Louati, Director, Office of Internal Oversight, Central Registry (Holder of this controlled copy)

SIGNED: _____ DATE: _____

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CONTROL STATUS OF THIS DOCUMENT[1]

[1] **A hard copy of this document is considered controlled if it bears the original signature of the authorised persons. The electronic file of this controlled document is maintained in the Quality System Document Database..**

AMENDMENT RECORD SHEET

This form contains a record of all amendments made to the previous version of this document in accordance with QDOC/ODG/SOP001.

Paragraph(s)		Brief details of amendment	Proposed by	Approved by
New doc.	**Previous doc.**			
-	-	Cover page updated and new copy holder identified	A. Othieno	G. Mallard
Whole document	Whole document	QDOC/LAB/WI/GCMS8 changed to QDOC/LAB/WI/GCMS10 & QDOC/LAB/WI/GCMS6 deleted	A. Othieno	G. Mallard
6.2(a)	6.2(a)	Reference made to the documentation as support documents to be registered in the OICMR separately	A. Othieno	G. Mallard
6.2 (c)	6.2 (c)	Deleted the word "correctly" and clarified on the reporting format	A. Othieno	G. Mallard
Annex 3	Annex 3	Included in the table, the Strong Anion Exchange (SAX) procedures & re-designated the respective sample preparation fraction numbers "f"	A. Othieno	G. Mallard
Annex 4	Annex 4	Table VI.1 renamed "General Summary Table of AMDIS Hits" and a new table VI.3 Result of onsite analysis added	A. Othieno	G. Mallard
Annex 4	Annex 4	Changed the attachments to support documentation & added equipment lists and certification documents	A. Othieno	G. Mallard

Distribution list

All staff members have access to the latest electronic version of this WI under the Quality System Document database on Lotus Notes on a "read-only" basis. Only two hard copies of this WI have been issued on a controlled basis to the following document holders in accordance with QDOC/ODG/SOP/001:

1. Director of Office of Internal Oversight, Central Registry Copy 1 of 2
2. Head of OPCW Laboratory Copy 2 of 2

Table of Contents

1. Purpose

This WI outlines the principles to be followed during on-site analysis to maintain the integrity and chain of custody of samples and to ensure a complete documentation of on-site sampling and analysis activities.

2. Scope

This WI describes the procedures to be followed to maintain the integrity and the chain of custody of samples throughout the on-site analysis process. It describes how on-site sampling and analysis activities are documented by the inspection team and consequently complements the OPCW procedures for the collection of samples, sample preparation and on-site analysis. It also describes the documentation and communication required if samples are to be sent off-site.

3. References

(a) Collection and Splitting of Toxic Samples under Hazardous Conditions On-site, QDOC/LAB/WI/SC1

(b) Collection and Splitting of Samples under Non-hazardous Conditions On-site, QDOC/LAB/WI/SC2

(c) Preparation of Samples On-site for GC/MS Analysis, QDOC/LAB/WI/SP2

(d) Agilent 6850 GC with 5975 or upgraded 5973 Inert MSD On-site Analysis, QDOC/LAB/WI/GCMS10

(e) Packing of Off-site Samples, QDOC/LAB/WI/OSA4

(f) On-Site Analysis by the Inspection Team Using OPCW Equipment and Procedures, QDOC/LAB/SOP/OSA1

(g) OPCW Manual of Confidentiality Procedures

4. Definitions and Acronyms

AMDIS	Automated Mass Spectral Deconvolution and Identification System
C16	OPCW Confidential Material Consignment Note
GC/MS	Gas chromatograph/mass spectrometer
ISP	Inspected State Party
ITL	Inspection Team Leader
OICMR	On-site Inspection Team Confidential Material Register
OPB	Operations and Planning Branch
QA/QC	Quality assurance/Quality control
QDOC	Quality Management System document
TSB	Technical Support Branch

5. Responsibilities

The responsibilities of the Inspection Team Leader and the team member(s) involved in the procedures are described in the SOP "On-Site Analysis by the Inspection Team Using OPCW Equipment and Procedures" (QDOC/LAB/SOP/OSA1).

6. Documentation

6.1 On-site Sampling and Analysis Booklet

(a) Sample collection, sample splitting, sample preparation, analysis activities and results summary are documented in the "OPCW On-site Sampling and Analysis Booklet" (Booklet), the "Inspector's Notebook" and the "AMDIS print outs". At the completion of on-site analysis activities all relevant information is compiled in an "On-site Analytical Report".

(b) The purpose of the Booklet is to record activities performed with the sample. This facilitates procedures to be repeated under conditions as close as possible to the original ones, and, if possible, enables identification of factors affecting the uncertainty related to these procedures.

(c) A Booklet is compiled for every authentic sample and method blank by using the necessary forms found in Annex 3. The front page of the Booklet contains the sample code and the OICMR document control number.

(d) The identities of the personnel performing sample collection, sample preparation and analysis activities are documented in the Booklet. Particular activities of the process are authenticated by the inspector performing the task.

(e) Any information, comments and observations to the activities that are not recorded in the Booklet are recorded in the inspector's notebook.

(f) Any deviations from OPCW procedures during any step of sampling, sample splitting, sample preparation or analysis are either documented in the Booklet or in a non-conformity report (Annex 2). In both cases the information to be recorded includes:

(i). nature of and reason for the deviation;

(ii). date, time and location of the event;

(iii). QDOC number of the procedure concerned;

(iv). name of the responsible supervisor;

(v). signature of the reporting inspector.

(g) Writing errors in the Booklet or in any other documents are corrected using a single line to strike through the incorrect entry, ensuring that the error is still readable. All annotations and corrections of this kind must be initialled, dated and timed.

(h) The sub-team leader initials every page of the Booklet after checking that the documentation is complete, i.e. everything is correctly reported and marked with

the appropriate confidentiality classification, all attachments (if applicable) are in place, and unused parts of the Booklet are stricken out. The Booklets are offered to the ISP representative witnessing the activities for signature.

(i) If the inspector who is performing a task is not recording it in the Booklet personally, he/she will review the entry, make corrections as necessary and initial or sign the appropriate space in the Booklet.

6.2 Analytical Report

(a) At the completion of analysis activities an analytical report is compiled documenting the analytical activities performed on-site. This report is referenced into the Preliminary Findings Report, recorded in the OICMR and handled in accordance with OPCW confidentiality procedures. The following are support documents to the analytical report (see QDOC/LAB/WI/GCMS10) and are registered as such in the OICMR.

(i). GC/MS Logbook including reports of mass spectrometer tune, mass scale calibration, and test mixture performance analysis conducted at the OPCW Laboratory;

(ii). Original analysis reports (AMDIS print outs) of:

- instrument performance tests with OPCW GC/MS test mixture and other daily QA/QC tests;
- method blank and authentic sample injections;

(iii). Equipment lists and Certificates for all analytical equipment associated with the on-site laboratory (this could be a CD of the documentation in pdf format).

The Booklets are an essential part of the sampling and analysis documentation but being separate OICMR documents they are only referenced in the analytical report and not attached.

(b) The analytical report includes a comprehensive collection of all the information from the sample and analysis booklets; names and tasks of the analytical chemist inspectors in the on-site laboratory; information about the on-site laboratory set up; analytical equipment; sample collection; sample preparation; and GC/MS results.

(c) All compounds identified by AMDIS using the OPCW Central Analytical Database shall be reported (See Table VI.1 in Analytical Report template). Those compounds that are judged by the AC as being correct identifications shall also be reported separately in another table (Table VI.2 in Analytical Report) and subsequently in the Preliminary Findings report. Reasons for exclusion of any compound identified/reported by AMDIS shall be clearly elaborated by the AC in the report. The compounds identified by search of other libraries (i.e. commercial libraries) are used to clarify results that are suspected to be false positives. The reports of the results of these searches will be made in such a way as to minimise possible compromise of confidential information.

(d) Annex 4 contains an example of an Analytical Report template. The template is a guide to give the minimal amount of information required. It is acceptable to add additional information regarding sample and analysis activities if the need arises.

(e) At the end of the inspection, copies of the latest tuning report and performance test are sent back to the OPCW Laboratory, if so required. If the AMDIS printouts are classified the Laboratory is consulted before they are sent there.

7. Chain of custody and confidentiality

(a) The sample is considered to be under OPCW custody, with the formal custodian being the Inspection Team Leader (ITL), if:

(i). an inspector has physical control of the sample;
(ii). sample is under continuous visual observation by an OPCW inspector;
(iii). the sample is under OPCW seal.

(b) In case that the integrity of a sample is questionable (for example when there has been a time when the sample was not under OPCW custody or when there is an indication of tampering with the sample or seal) the ITL must be informed. Such a sample will not be accepted for OPCW verification purposes.

(c) Seals are used to assure that the samples are not tampered with and as protection from unauthorised alteration of sample material. Before any seal is broken it is examined for tampering; any observations are noted down in the appropriate space in the Booklet. The samples are sealed as follows:

(i). The original sample container is sealed at the point of collection or at the latest at the cold line of the contamination control station. The original seal may be removed for splitting and another seal applied after splitting. These seals are recorded in the appropriate section of the Booklet. After splitting, any remaining part of the original sample is kept under seal in its original container.

(ii). After splitting is completed, split fractions not being used for on-site analysis will always be stored under seal. The vials may be stored in one container, which is then sealed, or all vials may be sealed individually.

Note: no markings are allowed on the split vials which are reserved for off-site analyses; they are identified **only** by their seal numbers.

(iii). Individual sample preparation extracts do not need to be sealed during the course of on-site analysis provided an OPCW inspector is with the samples. If left unattended in the on-site laboratory, they are kept under seal in an appropriate storage location. A record of these seals is kept in the inspector's notebook. In case that the integrity of a seal is questionable the Team Leader must be informed.

(d) The return of sample material to the ISP is documented into the Booklet.

(e) In the event that samples are sent off-site to the OPCW Laboratory for analysis at designated laboratories C16 forms shall be used to document any handover of sample material (see QDOC/LAB/WI/OSA4). Upon completion of the inspection the C16 forms are archived together with the Analytical Report or the respective Booklets.

(f) Any destruction of sample material (i.e. the original sample, a split fraction or a sample preparation extract) will be certified by the ITL and the sub-team leader by signing the appropriate form in the Booklet.

(g) All Booklets are recorded in the OICMR. The total number of pages to be recorded in the respective space in the OICMR does not include attachments or support documentation to the Booklet (e.g. C16s).

8. Issues in relation to collection and splitting of samples

(a) The sample is collected by an OPCW inspector (QDOC/LAB/WI/SC1 and SC2) or by a representative of the ISP in the presence of an OPCW inspector. The solvents/reagents used to prepare the respective method blank are collected by an OPCW inspector from solvent bottles which will be used for sample preparation in the on-site laboratory. In both cases, the OPCW inspector fills out the 'Sample Collection' form in the Booklet and signs it, either as the actual sampler or as witness to the sampling. The identification of the sampler (also if not an OPCW staff member) is documented in the 'Sample Collection' form.

(b) The sample is sealed and the seal number(s) recorded on the 'Sample Collection' form.

(c) In case that the sample is split at the point of collection, the individual seal numbers of the eight split vials are recorded on the 'Splitting' form in the Booklet. Alternatively, all split vials may be stored in one sealed container. The seal number of the container is recorded in the Notes section of the Booklet (there is no table for this option on the 'Splitting' form).

(d) When the sample is split or portions are taken out of the original sample, the 'Sample Splitting' form is filled out. Splitting is performed in accordance with the OPCW procedure (QDOC/LAB/WI/SC2). Portions of solvents/reagents and equipment used to prepare the method blank sample may be handed over to the ISP if requested.

Note: This form can be finalized only at the end of the inspection

(e) The sample splits which are used on-site are coded and labelled according to the instructions given in the 'Sample Splitting' form. The sample splits which are reserved for off-site analysis are not coded; they are identified only by their seal numbers.

(f) The amount (in grams) of each sample split reserved for off-site analysis is recorded in the 'Sample Splitting' form. Vials are weighted together with the tape and the frangible seal.

Note: Weighing is not required for the split samples which have been prepared and packed at the sampling point, i.e. for toxic samples.

9. Issues in relation to preparation and analysis of samples

(a) Preparation and analysis of the samples is performed in accordance with the appropriate OPCW procedures (QDOC/LAB/WI/SP2, and GCMS10) and

documented using the 'Sample Preparation and Analysis' form in the Booklet. If seals have been applied they are examined and any observations noted on the form.

(b) Every analysis of a sample is recorded on the 'Sample Preparation and Analysis' form and also in the logbook of the analytical instrument. The time of the injection is recorded in the logbook. The 'Analysis Summary' form is filled out for all those sample fractions for which the analysis resulted in an identification by AMDIS.

(c) The information to be written in the logbook is listed in detail in QDOC/LAB/WI/GCMS10.

(d) All inspectors performing sample preparation and analysis activities document their particular involvement in an activity with their initials on the form.

10. Issues in relation to preparation of samples for transportation off-site

(a) The ITL notifies the Director-General immediately about the intention to send samples off-site and asks for approval. The samples are packed as soon as the approval is granted.

(b) The sample split vials are packed according to the instructions in QDOC/LAB/WI/OSA4. No method blank samples will be sent off-site.

(c) The transportation container and the inner containers are sealed/tagged with wire tags or frangible seals and the numbers are recorded on the 'Packing of Sample Splits' form of the Booklet.

(d) ISP may place its own security seal on the transportation container if it deems it necessary for reasons of confidentiality.

(e) The intermediate packaging is sealed with fibre optical seals. Three photographs are taken of each end pattern of those seals. One set of photographs is handed to the ISP with a C16 recording the transfer. The second set is brought to the OPCW Headquarters by the inspection team. The third set is given to the escort (appointed by the Director-General) who will accompany the transport to the OPCW Laboratory.

(f) A C16 form is prepared containing

(i) the weights of the vials;

(ii) all seal numbers on the primary, secondary and intermediate packaging;

(iii) the identification number/tag on the outer transport container;

(iv) the number of photographs of the fibre optical pattern of seals on the intermediate packaging handed over with the transport container(s).

This C16 form is used to hand-over the transport container(s) to the OPCW Laboratory and will be carried by the sample escort. In addition the escort brings the original equipment content list(s) for the sample transport container(s) to TSB. No documents are to be packed in the transportation container.

(g) After packing the samples for transport the IT will, in secure mode, request OPB to organise the transport of the sample and provide any information required in this regard [see Annex 1].

(h) The information needed for the preparation of control samples at the OPCW Laboratory shall be communicated to the Head of the OPCW Laboratory via the secure telephone equipment located in the OPCW Operations Centre. This information includes:

(i) the number of different samples to be sent off-site,

(ii) the type of each sample (e.g.. solid, liquid, soil, water, organic extract),

(iii) the results of on-site analysis, if applicable, concerning chemistry and estimated concentration of suspected scheduled chemicals and/or degradation products. For instance the schedule number: Sched. 1 A(1), Sched.2 B(4)) etc., concentration range: ppm range, 50% etc.,

(iv) information about primary containers of the sample splits, i.e. “8 ml vials, containing 3 ml liquid”.

Annex 1

NOTIFICATION TO THE DIRECTOR-GENERAL (EXAMPLE)

ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS

MEMORANDUM

To :	Director-General	**Date :**
Copy to :	Head of OPB Head of the OPCW Laboratory	**Number of pages:**
From :	ITL [*name, mission code*]	
Subject :	Sending samples off-site	

Please be informed that [*number*] samples from the inspection site have been prepared for off-site analysis. The samples are packed in [*number*] *large/small* sample transport containers.

The samples have to be sent under IATA provision A106. Please provide the necessary approval. The samples are *environmental/organic/neat agent* samples and have to be handled as toxic chemicals. Detailed information about the suspected composition of the samples will be provided separately.

The samples will be transported inside the ISP by *road/train/air* to the Point of Entry. Please arrange the transport from the POE to the OPCW Laboratory and provide the necessary information about shipping arrangements to the ITL.

Please provide the name of the appointed OPCW staff member/team member to escort the containers and arrange his/her travel to the OPCW Laboratory.

Please arrange secure telephone contact with the Head of the OPCW Laboratory to provide information about on-site analysis results and hazards of the samples.

ITL's name
Inspection Team Leader,
Inspection (Code)

Annex 2

NON-CONFORMITY REPORT

ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS

Non-conformity Report

Inspection Code: Date:

Team Leader

Sub-team Leader of the on-site laboratory

Non-conformity related to QDOC number

Location/time of non-conformity action

Reported by name/function

Description of the non-conformity*

Reason for deviation*

.....
Signature of reporting team member

* Include further pages if necessary

Annex 3

ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS

TECHNICAL SECRETARIAT

ON-SITE SAMPLING AND ANALYSIS BOOKLET

	#	#	T	T	P
Sample Code [1]:					

	Date
Opening Date of Booklet:	
Closing Date of Booklet:	

[1] ## : chronological sample number, TT : sample type identifier according to table on Sample Collection form, P: parallels (S for sample; B for method blank),

Initials / signatures

Sub-team leader: _____ ISP representative: _____

SAMPLE COLLECTION

SAMPLE IDENTIFICATION

	D	D	M	M	Y	Y	H	H	M	M		#	#	T	T	P
Date and time											Code [1]					

Seal Number:

The sample was split at the collection site, seal numbers of individual split vials are recorded in the Splitting form ❑

SAMPLE TYPE

Environmental: ❑ Aqueous (AQ) ❑ Soil (SL) ❑ Air (AR) ❑ Solid (SD)

Bulk: ❑ Solid (BS) ❑ Liquid (BL) ❑ Neat Agent (NA)

Wipe: ❑ Dry wipe (WP) ❑ With dichloromethane (WP) ❑ With methanol (WP)

Additional Information:

SAMPLING EQUIPMENT

❑ Spatula, Spoon ❑ Bowl ❑ Syringe _____ml ❑ Pipette ❑ Scissors
❑ Vacutainer ❑ Wipe with wire ❑ Wipe with haemostat
Other, describe:

SAMPLE CONTAINER

❑ 250 ml Bottle ❑ 100 ml Bottle ❑ 25 ml Bottle ❑ 10 ml Bottle ❑ Wipe in _____ml Bottle
Additional Information:

ENVIRONMENTAL CONDITIONS

Temp: _____ °C _____ % rel. Humidity ❑ Sunny ❑ Cloudy ❑ Rain ❑ Snow
Additional information:

DESCRIPTION OF THE SAMPLING LOCATION

CAM: _____bars ❑ H mode ❑ G mode AP2C: _____bars ❑ H mode ❑ G mode

WORK INSTRUCTION FOLLOWED

QDOC/LAB/WI/SC1 issue____ revision ____ (toxic) QDOC/LAB/WI/SC2 issue____ revision ____ (non-toxic)

NAME AND SIGNATURE of OPCW INSPECTORS:

Sampler ❑ / Witness ❑ : _____

If witness, the sample was taken by : _____

Cold person : _____

[1] ## : chronological sample number, TT : sample type identifier according to table above, P: parallels (**S** for sample; **B** for method blank)

Initials / signatures
Sub-team leader: _____ ISP representative: _____

PERSONNEL HANDLING THE SAMPLE

Function	Name and signature
Inspection team leader	
Sampler / Witness	See 'Sample collection' form
Sampling sub-team leader (Warm person 1)	
Sampling assistant (Warm person 2)	
Sampling assistant (Warm person 3)	
Sample operator at CCS	
Inspector taking notes (Cold person)	See 'Sample collection' form
Sample transporter	
Sub-team leader of the on-site laboratory	
Analytical chemist	
Analytical chemist	
Analytical chemist	

EXTRACTIONS OF WIPE/SOLID SAMPLES BEFORE SPLITTING

Original sample

Sample code: (##TTPFf [1])

					--	--

Seal # _____

Removal and confirmation of the seal
Correct and intact (Y/N) date, time and signature**:** _____

Preparation

##TTPFf [1]

					--	1
					--	3

CH_2Cl_2 extraction

Water extraction

Date, time and initials

_____

_____

Work instruction followed: QDOC/LAB/WI/SP2 issue_____ revision _____ (sample preparation)

Seals applied for the extracted samples (if applicable)

##TTPFf [1]

					--	1
					--	3

Seal # _____

_____

Date, time and signature _____

_____

[1] ##TTPFf : ##: sample number, TT: sample type letters, P: parallels (**S:** sample; **B**: method blank), F: sample splitting fraction number, f: sample preparation fraction number

Initials / signatures

Sub-team leader: _____ ISP representative: _____

SAMPLE SPLITTING

Sample code (##TTPFf)

					--	

THE ORIGINAL SAMPLE or THE EXTRACTED SAMPLE

Record of the removal or application (R/A) of seals and confirmation of the intactness and correctness (Y/N) of seals

Seal #	R/A	Y/N	Date and time	Signature	Split fractions prepared

SPLIT FRACTIONS (the sample code is not given to samples reserved for off-site analysis)

Fraction 1, code/seal #: _____ **During inspection:** On-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑	**Fraction 2**, code/seal #: _____ **During inspection:** ISP reference ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑	**Fraction 3**, code/seal #: _____ **During inspection:** On-site analysis ❑ Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____	**Fraction 4**, seal #: _____ **During inspection:** Joint custody ❑ Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Under joint custody ❑ Sent off-site ❑ weight _____ g preservative _____
Fraction 5, seal #: _____ **During inspection:** Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____	**Fraction 6**, seal #: _____ **During inspection:** Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____	**Fraction 7**, seal #: _____ **During inspection:** Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____	**Fraction 8**, seal #: _____ **During inspection:** Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____

Work Instruction QDOC/LAB/WI/SC1 or SC2, issue no ____ revision no ____ was followed for splitting.

HANDOVER OF SAMPLE FRACTION DURING INSPECTION

Fraction number ___ has been handed over to ISP

Date	Signature of ISP representative	Witness

AT THE END OF THE INSPECTION

the entire sample was split ❑

the remaining of the sample was given to ISP ❑

Date	Signature of ISP representative	Witness

the remaining of the sample was destroyed ❑

CERTIFICATION OF DESTRUCTION

The split fractions and remaining of the original sample marked 'Destroyed' above have been destroyed.

Date	Signature of the sub-team leader	Signature of the ITL

Initials / signatures

Sub-team leader: _____ ISP representative: _____

SAMPLE SPLITTING

Sample code (##TTPFf)

					--	

THE ORIGINAL SAMPLE or THE EXTRACTED SAMPLE

Record of the removal or application (R/A) of seals and confirmation of the intactness and correctness (Y/N) of seals

Seal #	R/A	Y/N	Date and time	Signature	Split fractions prepared

SPLIT FRACTIONS (the sample code is not given to samples reserved for off-site analysis)

Fraction 1, code/seal #: _____ **During inspection:** On-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑	**Fraction 2**, code/seal #: _____ **During inspection:** ISP reference ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑	**Fraction 3**, code/seal #: _____ **During inspection:** On-site analysis ❑ Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____	**Fraction 4**, code/seal #: _____ **During inspection:** Joint custody ❑ Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Under joint custody ❑ Sent off-site ❑ weight _____ g preservative _____
Fraction 5, seal #: _____ **During inspection:** Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____	**Fraction 6**, seal #: _____ **During inspection:** Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____	**Fraction 7**, seal #: _____ **During inspection:** Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____	**Fraction 8**, seal #: _____ **During inspection:** Off-site analysis ❑ **At the end of inspection:** Given to ISP ❑ Destroyed ❑ Sent off-site ❑ weight _____ g preservative _____

Work Instruction QDOC/LAB/WI/SC1 or SC2, issue no ____ revision no ____ was followed for splitting.

HANDOVER OF SAMPLE FRACTION DURING INSPECTION

Fraction number ___ has been handed over to ISP

Date	Signature of ISP representative	Witness

AT THE END OF THE INSPECTION

the entire sample was split ❑

the remaining of the sample was given to ISP ❑

Date	Signature of ISP representative	Witness

the remaining of the sample was destroyed ❑

CERTIFICATION OF DESTRUCTION

The split fractions and remaining of the original sample marked 'Destroyed' above have been destroyed.

Date	Signature of the sub-team leader	Signature of the ITL

Initials / signatures

Sub-team leader: _____ ISP representative: _____

SAMPLE PREPARATION and ANALYSIS of ENVIRONMENTAL & CW TYPE SAMPLES

Split sample

#	#	T	T	P	F	f

Seal number: _____

Removed, correct and intact (Y/N), date, time and signature: _____

WORK INSTRUCTIONS

Work instruction followed: QDOC/LAB/WI/SP2, issue no _____ revision no _____ (sample preparation)
QDOC/LAB/WI/GCMS10, issue no _____ revision no _____ (analysis)

Sample code[1] ##TTPFf		Date, time and initials:	**Analysis,** file number:
	1 CH_2Cl_2 extraction/direct analysis		
—"—	2 CH_2Cl_2 extraction/concentrated		
—"—	3 Water extraction/fraction		
—"—	4 Evaporation/derivatisation		
—"—	5 SCX/evaporation/derivatisation		
—"—	6 SAX/evaporation/derivatisation (BSTFA)		
—"—	7 SAX/evaporation/TMPAH (methylation)		
—"—	8 SAX/evaporation/TMPAH/BSTFA		
—"—	9 1% TEA-MeOH extraction/derivatisation		
—"—	10 Lewisite procedure		
—"—	11 Bulk sample procedures		
—"—	12 Other: _____		

[1] ##: sample number, TT: sample type letters, P: parallels (**S**: sample; **B**: method blank), F: sample splitting fraction, f: sample preparation fraction number

AT THE END OF THE INSPECTION

The prepared sample fractions were given to ISP ❑

Date _____ Signature of ISP representative _____ Witness _____

The prepared sample fractions were destroyed ❑

CERTIFICATION OF DESTRUCTION

All prepared sample fractions have been destroyed.

Date _____ Signature of the sub-team leader _____ Signature of the inspection team leader _____

Initials / signatures

Sub-team leader: _____ ISP representative: _____

SAMPLE PREPARATION and ANALYSIS of ENVIRONMENTAL & CW TYPE SAMPLES

Split sample

#	#	T	T	P	F	f

Seal number: _____

Removed, correct and intact (Y/N), date, time and signature: _____

WORK INSTRUCTIONS

Work instruction followed: QDOC/LAB/WI/SP2, issue no _____ revision no _____ (sample preparation)
QDOC/LAB/WI/GCMS10, issue no _____ revision no _____ (analysis)

Sample code[1] ##TTPFf							Date, time and initials:	**Analysis**, file number:
						1	CH_2Cl_2 extraction/direct analysis	
—"—						2	CH_2Cl_2 extraction/concentrated	
—"—						3	Water extraction/fraction	
—"—						4	Evaporation/derivatisation	
—"—						5	SCX/evaporation/derivatisation	
—"—						6	SAX/evaporation/derivatisation (BSTFA)	
—"—						7	SAX/evaporation/TMPAH (methylation)	
—"—						8	SAX/evaporation/TMPAH/BSTFA	
—"—						9	1% TEA-MeOH extraction/derivatisation	
—"—						10	Lewisite procedure	
—"—						11	Bulk sample procedures	
—"—						12	Other: _____	

[1] ##: sample number, TT: sample type letters, P: parallels (**S**: sample; **B**: method blank), F: sample splitting fraction, f: sample preparation fraction number

AT THE END OF THE INSPECTION

The prepared sample fractions were given to ISP ❑

Date _____ Signature of ISP representative _____ Witness _____

The prepared sample fractions were destroyed ❑

CERTIFICATION OF DESTRUCTION

All prepared sample fractions have been destroyed.

Date _____ Signature of the sub-team leader _____ Signature of the inspection team leader _____

Initials / signatures

Sub-team leader: _____ ISP representative: _____

SAMPLE PREPARATION and ANALYSIS of INDUSTRIAL TYPE SAMPLES

Split sample	#	#	T	T	P	F	f

Seal number: _____

Removed, correct and intact (Y/N) date, time and signature: _____

WORK INSTRUCTIONS

Work instruction followed: QDOC/LAB/WI/SP2, issue no _____ revision no _____ (sample preparation)
QDOC/LAB/WI/GCMS10, issue no _____ revision no _____ (analysis)

Sample code[1] ##TTPFf							**Sample Preparation Method**	Date, time and initials:	**Analysis,** file number:
						13			
—"—						14			
—"—						15			
—"—						16			
—"—						17			
—"—						18			
—"—						19			
—"—						20			
—"—						21			
—"—						22			
—"—						23			
—"—						24			

[1] ##: sample number, TT: sample type letters, P: parallels (**S**: sample; **B**: method blank), F: sample splitting fraction, f: sample preparation fraction number

AT THE END OF THE INSPECTION

The prepared sample fractions were given to ISP ❑

Date	Signature of ISP representative	Witness

The prepared sample fractions were destroyed ❑

CERTIFICATION OF DESTRUCTION

All prepared sample fractions have been destroyed.

Date	Signature of the sub-team leader	Signature of the inspection team leader

Initials / signatures

Sub-team leader: _____ ISP representative: _____

SAMPLE PREPARATION and ANALYSIS of INDUSTRIAL TYPE SAMPLES

Split sample	#	#	T	T	P	F	f

Seal number: _____ **Removed,** correct and intact (Y/N) date, time and signature: _____

WORK INSTRUCTIONS

Work instruction followed: QDOC/LAB/WI/SP2, issue no _____ revision no _____ (sample preparation)
QDOC/LAB/WI/GCMS10, issue no _____ revision no _____ (analysis)

Sample code[1] ##TTPFf		**Sample Preparation Method**	Date, time and initials:	**Analysis,** file number:
	13			
—"—	14			
—"—	15			
—"—	16			
—"—	17			
—"—	18			
—"—	19			
—"—	20			
—"—	21			
—"—	22			
—"—	23			
—"—	24			

[1] ##: sample number, TT: sample type letters, P: parallels (**S**: sample; **B**: method blank), F: sample splitting fraction, f: sample preparation fraction number

AT THE END OF THE INSPECTION

The prepared sample fractions were given to ISP ❑

Date	Signature of ISP representative	Witness

The prepared sample fractions were destroyed ❑

CERTIFICATION OF DESTRUCTION

All prepared sample fractions have been destroyed.

Date	Signature of the sub-team leader	Signature of the inspection team leader

Initials / signatures

Sub-team leader: _____ ISP representative: _____

ANALYSIS SUMMARY

FOR THE SAMPLE

#	#	T	T	P	F

Compound name:

Schedule	CAS number (if available)	Sample preparation fraction (f)	Analysis file number	QA/QC ok (Y/N)

Compound name:

Schedule	CAS number (if available)	Sample preparation fraction (f)	Analysis file number	QA/QC ok (Y/N)

Compound name:

Schedule	CAS number (if available)	Sample preparation fraction (f)	Analysis file number	QA/QC ok (Y/N)

Compound name:

Schedule	CAS number (if available)	Sample preparation fraction (f)	Analysis file number	QA/QC ok (Y/N)

Compound name:

Schedule	CAS number (if available)	Sample preparation fraction (f)	Analysis file number	QA/QC ok (Y/N)

Initials / signatures

Sub-team leader: ________________________________ ISP representative: ______________________________

PACKING of SAMPLE SPLITS

Primary containers

The seal numbers and the weight of the primary containers
(with tape and seal) are recorded in the sample splitting form on page(s) _____

Secondary packaging

Frangible seal number	
Frangible seal number	
Frangible seal number	
Frangible seal number	

Intermediate packaging

Fibre optic seal number	
Fibre optic seal number	
Fibre optic seal number	

OICMR code of the photographs of the fibre optic seal end patterns _____

Outer packaging

S/N number	
Transport tag number	
Transport tag number	
Transport tag number	
Transport tag number	

Work instruction followed: QDOC/LAB/WI/OSA4, issue no ____ revision no ____

Packing was performed by

Packed by, name and signature	
Date and time	

Initials / signatures

Sub-team leader: _____ ISP representative: _____

NOTES

Initials / signatures

Sub-team leader: _____ ISP representative: _____

Annex 4

ANALYTICAL REPORT

CONTENTS

I. LIST OF INSPECTORS INVOLVED IN ANALYTICAL TASKS:

	Name	Function / Task
1.		
2.		

II. ACRONYMS:

insert text

III. EQUIPMENT:

Insert text on the set-up of the on-site laboratory, GC/MS equipment, software and database

IV. ACCEPTANCE CRITERIA FOR GC/MS ANALYSES

IV.1. GC/MS tuning

The acceptance criteria in [reference SOP/WI] were met? Yes/No

The system was found suitable for analyses? Yes/No

The tune report is in [reference to attachment].

IV.2. Performance test and retention indices calibration

Run date and time	File number	System was suitable for analysis in accordance with [reference SOP/WI]
[date]	[insert number here]	[Yes/No]

V. SAMPLES

V.1 Authentic Sample [insert sample code]

Sample & Analysis Booklet, DCN: [*insert number here*]

Brief explanation of what type of sample, sample identification, physical description, location where sample was collected and any other relevant information about the sample.

V.2 Method Blank Sample [insert sample code]

Sample & Analysis Booklet, DCN: [*insert number here*]

Brief explanation of what type of method blank, identification, physical description, and any other relevant information about the method blank.

V.3 Summary of Samples Collected

Sample ID	Sampling point	Sample type	Date/time samples obtained	Confidentiality Classification
[insert code here]	[insert text]	[insert text]	[insert text]	[insert text]

V.4 Sample preparation

Brief explanation of what WI/SOPs were used and details (preferably in tabular format) of sample preparations for each sample fraction type.

Sample ID	Method/fraction	Sample preparation details	Analysis particulars
[insert code here]	[insert text]	[insert text]	[insert text]

VI. RESULTS OF ANALYSIS

VI.1 Library matches reported by AMDIS*

Sample ID	Sampling point	Analytical method used	Compound reported	Identification accepted as valid [Y/N]	Comments**
[insert code here]	[insert text]	[insert text]	[insert text]	[insert text]	[insert text]

*** Report in this table all AMDIS hits ** only if an identification is not accepted use this column to give a very brief rationale**

VI.2 Result of on-site analysis

Sample ID	Analytical method used	Date/time sample obtained	Result	Confidentiality Classification	Reference
[insert code here]	[insert text]	[insert text]	[insert text]	[insert text]	[insert text]

VI.3 Discussion of results

[*Insert here text on reasons for excluding compounds reported in table VI.1 above but not in VI.2*]

VI.4 Validity of the results

[*Insert here text on the QC measures and criteria which were met or, if not met, why the system/results are considered to be valid. Insert also text on any problems associated with the analysis, deviations from the instructions and reasons for them.*]

VII. RECOMMENDATION FOR OFF-SITE ANALYSIS

[*Insert text on the need and reasons for sending authentic samples for off-site analysis*]

VIII. PROTECTION OF INTEGRITY OF THE SAMPLES

[*Insert text here*]

IX. SIGNATURES

This Analytical Report has been printed in [number] copies on [date] in the following language(s):

[Insert Name], Analytical Sub-team Leader: _____

(Signature, Date)

SUPPORT DOCUMENTATION

Documents	Number of pages	DCN number
On-site instrument logbook		[insert number here]
QA/QC Reports {i.e. tune, performance test}		[insert number here]
GC/MS reports of Authentic Samples & Method Blank Samples		[insert number here]
Equipment lists and Certificates for all analytical equipment associated with the on-site laboratory (this could be a CD of the documentation in pdf format).		[insert number here]