DGQA STANDARD OPERATING PROCEDURE ON TESTING OF SAMPLES

AUTHORITY:- (a) DGQA Standing Orders Technical Vol-II: 2010
(b) DGQA/PP&T letter No: 93244/TOS/DGQA/ADM-19 dt 28 Jan 2019 and
(c) DGQA/PP&T letter No: 93244/TOS/DGQA/ADM-19 dt 27 April 2020.

1. BACKGROUND.

A Board of Officers was ordered by DG QA to examine the issue of testing of samples, holistically. Accordingly, a Standard Operating Procedure (SOP) for drawing of samples for testing and timelines to be followed for various activities involved in testing of samples in DGQA/Non-DGQA NABL Labs has been incorporated. The SOP also lays down procedure to be followed under various contingencies and procedure for payment of testing charges at Non-DGQA NABL Labs.

2. PURPOSE.

This SOP aims to streamline the procedure for drawing & receiving the samples from QA establishments at DGQA Laboratories, forwarding the samples to different laboratories, testing of samples, standardization of test reports and final disposal of the samples, in a holistic manner in accordance with policies and orders in vogue in DGQA.

3. SCOPE.

This procedure is applicable for testing of samples by DGQA organization to have uniform testing procedure across all tech Directorates.

4. RESPONSIBILITY.

Heads of Establishment of respective AsHSP and SQAEs / QAEs.

5. PROCEDURE.

5.1 **INSTRUCTIONS GOVERNING THE SAMPLES**: - There are different types of samples as per the DGQA Standing Orders and there are specific instructions governing these samples. This SOP lays down procedure to be adopted for testing of Bulk Supply Samples (BSS).

5.2 **SAMPLE SIZE**: - Number of samples to be drawn from a lot is known as sample size, generally represented by the letter ‘n’. The sample size and sentencing of the lot is generally determined based on statistical sampling tables as laid down in IS-2500. QA plans for each store will invariably be laid down by the AHSP and accordingly finalized.

5.3 BULK SUPPLY SAMPLES (BSS):

5.3.1 BSSs are drawn on the instruction of SQAO/ Inspecting Officer concerned. These samples must be true representative of the offered lot. However, audit samples/vigilance samples/surveillance samples/ correlating samples/ confirmatory samples can also be drawn during this stage of supply and can be tested simultaneously before the confirmation of the store. These samples can be drawn with an aim to ensure that a uniform standard of supplies is being received. AsHSP/ a rep from nominated establishment will draw these samples. Vigilance samples will be drawn by vigilance officer of any Quality Assurance establishments/ HQ as per the instructions. But under no circumstances because of processing of these samples, sentencing of BSS will be delayed. In case this happens, the AHSP will investigate such delay and will take corrective action.

5.3.2 Bulk supply samples are samples that are drawn from the bulk tendered for Quality Assurance. They are drawn where it is necessary to send them for test or examination in a laboratory for any particular advice before proceeding with Quality Assurance or final sentencing of the lot. The sentencing of a tendered lot depends on the correct and true representative bulk samples drawn for test. Hence, they must be drawn in correct proportion as laid down by the AHSP through the medium of specification/ Quality Assurance instruction/ Quality Assurance criteria. In case of simple items where sentencing of a tendered lot can be done without subjecting bulk supply to test, AHSP will instruct local Quality Assurance Estt to finalize Quality Assurance without calling for bulk samples. Bulk samples must be drawn at random in such a way that they truly represent the tendered lot. Before carrying out sampling the bulk, Quality Assurance Officer should visually examine the tendered lot to find out whether it is homogeneous, i.e., in so far as it can be ascertained from such factors as the source of production, date of manufacture and any features which can be visually ascertained by spot testing. If the supply is homogeneous, it may be dealt as one lot for the purpose of drawing samples. Otherwise the bulk supply will be segregated into different lots, each lot being of the same source of production, date of manufacture and homogeneous in all visually / locally ascertainable characteristics. Each lot so categorized will be

treated as a separate lot for the purpose of drawing samples and for deciding the number of samples to be drawn.

5.3.3 In addition to sample size required as per specification/ instruction/ Quality Assurance criteria, AHSP may authorize drawing of additional samples for further reference, re-testing, correlation testing etc if and when required for stores of their responsibility. Such samples will be treated as bulk samples for all purposes and will be accounted accordingly. Detailed instructions on the procedures and period for retention and disposal of such additional/ reference sample from bulk supplies will also be laid down by AHSP.

5.3.4 Bulk samples may be tested by an AHSP Laboratory or by an Establishment Laboratory of the Quality Assurance Estt as authorized by the HQ Defence Quality Assurance Organisation. In order to avoid delays in Quality Assurance, utmost care should be taken to test and report bulk samples most expeditiously. Testing and reporting of bulk supply samples should be given the highest priority. Laboratories located at local DGQA Estt should be organized such that they can undertake testing of all bulk samples drawn in their areas. Wherever samples are required to be sent to the AHSP Laboratories, sending of samples as well as transmission of test reports will be done by the fastest practicable means.

5.3.5 Samples drawn from the bulk should be as per random sampling plan as enunciated in IS-2500 wherever applicable and of adequate size so that they are true representative and would on testing indicate the standard of the bulk within the necessary assurance limits.

5.3.6 Appropriate record of sampling should be made available in the relevant cases and any conclusion drawn in respect of acceptance or otherwise of the tendered lot are duly argued and recorded to arrive at rational conclusions and decisions.

5.3.7 Format of all test reports will indicate on the top, the specification against which samples are tested and statement that, these particulars govern the supply under the terms of the contract.

5.3.8 Factual results on bulk supply samples will be rendered by the local Laboratories to the Quality Assurance Wings/ Groups who will sentence the lot. In case of any difference of opinion over the findings, clarification should be obtained from the AHSP.

5.3.9 Bulk samples will be treated as a part of the bulk supply, unless otherwise is provided in the contract. If samples are found acceptable but destroyed during testing, these will be treated as accepted stores and shown accordingly in Quality Assurance documents.

5.3.10 Supplies, from which bulk samples are drawn, will be bonded till the bulk is finally sentenced.

5.4 PROCEDURE FOR DRAWING OF SAMPLES FOR TESTING IN DGQA/NON-DGQA NABL ACCREDITED LABS:

5.4.1 Drawing of samples is a very important QA activity and hence must be carried out strictly in accordance with laid down QA plans and specifications. Incorrect sampling may result into acceptance of sub-standard/ non-homogenous stores leading to acceptance of a store which should normally have been rejected.

5.4.2 The samples must be drawn by the Quality Assurance officer as per the relevant guidelines applicable to the store. Since sentencing of a lot often depends on test results of bulk samples drawn, sampling should be carried out personally or under the personal supervision of a Gazetted Officer or any other NGO authorized, who will himself seal/ nominate the packages from which the samples will be drawn and the method of extracting samples. The Officer will also ensure himself that the forwarding note is correctly prepared giving all relevant information concerning the delivery as the total quantity in the delivery, number of packages, quantity per package, number of packages opened for drawing/ extracting samples, quantity drawn from each package and linking of package sampled with the sample label for identification. He/ She will also ensure that the samples are properly sealed, labeled and signed.

5.4.3 Sampling Officer must, as a rule, bring the samples drawn by him/ her along with him/ her. Under any circumstance, he will not leave the samples with the supplier for dispatch or transport. In case of bulky items, the samples and their packages duly sealed and labeled may be handed over to supplier for delivery. In such cases, on receipt of these packages, they will be checked for non-tampering of seal to intactness of samples and it will be recorded about intactness, on receipt.

5.4.4 Officer Commanding the unit may authorize Senior NGOs to draw bulk samples in exceptional cases, at their own discretion, for sampling.

5.4.5 In the normal course of Quality Assurance, samples for lab testing are drawn in accordance with the quoted sampling plan as per IS 2500 (Part 1) after satisfactory results of the evaluation of the stores examined for visual and/or physical parameters as applicable. The samples for lab testing should be drawn adopting random sampling techniques given in 'Stipulated Specification as per drawing' or IS 4905 or IND/SL/ 8900(b) [for sampling of stores by CQA(M) and CQA(PP)] or any other relevant standard indicated by AHSP in the authorization. The adoption of ibid random sampling plan ensures true representation of the lot for lab testing. Further, labs should also exercise applicable random methods of drawl of sub-samples from the total number of samples given to the lab so as to complete all required tests.

5.4.6 The test procedures should ensure that specimens taken out from main sample further ensures the true representation of the available sample area/ volume. In this entire exercise of drawing of samples from the main lot, followed by drawing of sub-samples and preparation of specimen from each sample, the crucial aspects of taking care of proper identification mark should also be well laid out in each test method/ protocol. The test method should also provide details of the recording of determinations, their exploration and computation which finally culminates in concluding the results.

5.5 PROCEDURE FOR SEALING/ CODIFICATION OF SAMPLES:

5.5.1 Sealing and codification of samples for lab testing involves the aim of confidentiality to avoid any element of bias in the entire lab testing activity, which may lead to influence the reliability and reproducibility of test results. The sealing of samples is the activity where the identification of the same is done to establish the traceability of the samples/ store at a later stage. Further, codification also adds value to ensure conceal the identity of the manufacturer. While marking and sealing of samples is being done, due care needs to be taken to the extent possible to conceal/ eliminate the identity of the manufacturer. It may, however, not be possible to maintain the confidentiality and secrecy of the samples and obliterate the vendor markings on the samples because of the marking requirements specified in the Supply Order or in the Contract.

5.5.2 Sealing of samples needs to be carried out, keeping the following aspects in view: -

(i) Sealing of samples should not cause inconvenience to the lab in preparation of specimens.

(ii) Sealing should not influence the characteristics under test in any manner.

(iii) Sealing should sufficiently support the test procedure to maintain traceability of the store at a later stage.

5.5.3 Codification should be done to withdraw all traces of identity in the incoming samples to the lab. In order to establish an effective codification system adoption of Bar code method is strongly recommended for feasible stores. Explosive stores be excluded from Bar code system to maintain safety.

5.5.4 Influence of the vendor on testing can be prevented by isolating the vendor and the testing unit. To maintain this, the respective Estt to adopt codification system for the store under QA. A section/ wing/ group in an Estt should be entrusted with codification of samples and onward transmission to the testing lab. The procedure of codification must be followed strictly to draw the benefits desired to be accrued out of it.

5.5.5 Samples along with three copies of the forwarding note received from the sample forwarding agency should be codified as per random number sheet (IS-4905). The record of the same should be maintained in the codification register. The system of codification must be properly documented in the lab procedures. Sealing/ coding and due-to be coding of the samples for the lab testing is done by sample forwarding agency.

5.5.6 Samples as per AHSP instructions/ specifications should be selected and sealed as under: -

(i) Sample number to be marked

(ii) QA Officer's personal seal to be stamped.

(iii) Signature of the QA officer on a paper to be affixed on the sample.

(iv) After packing, again sample No, Personal seal of QA officer and signature of QA officer to be stamped/ affixed on the package.

(v) Photograph of marking/ sealing/ signature on samples as well as package to be taken by the QA officer. Store not permitted for photograph such as explosive stores are exempted.

(vi) NABL Accredited Lab to be instructed to take photograph of marking/ sealing/ signature on samples as well as package before commencement of the test and forwarding the same along with the NABL report to the concerned SQAE. This will provide a gross check on the tampering of the sample.

(vii) Tag with basic details of randomly selected samples may be tight/affixed, for identification at AHSP/ Test Lab as under:-

(a) Supply order No. & Date…….
(b) Quantity on Order…….
(c) Manufacturer…….
(d) Challan No. & Date……...

(e) Date of Drawing of Sample…….
(f) Total No. of Samples & Sample No…..
(g) Dt of Manufacturing & Dt of Expiry…….
(h) Remark if any…….
(j) Inspection Mark……Signature of QA Officer….

5.5.7 Codified samples along with forwarding note should be forwarded to the lab for testing. Lab retains two copies of the forwarding note and returns third copy of forwarding note acknowledging the receipt of the sample.

5.5.8 On receipt of the samples in the lab office, the samples must be scrutinized for all completeness as per the forwarding note. The details of these samples should then be entered in the sample register.

5.5.9 Allotment of Lab number/ Serial Number (SR No) and Unique Lab Report number (ULR No) should be carried out.

5.5.10 Assignment of random sampling for testing and further forwarding to the lab concerned.

5.5.11 Test report along with the unexpended samples, if any, received from the lab are de-codified, entry made in codification register and forwarded to the wing/ lab concerned.

5.6 **PRIORITY OF SEQUENCE OF SELECTION OF LABS AND TESTING OF SAMPLES.**

5.6.1 The samples are to be tested at various labs by adopting following priority sequence, based on the test facility and test requirements, as details given Letter No: 93244/ TOS/ DGQA/ Adm-19 Dated 27 April 2020. Lower priority option is to be chosen only in case the higher priority lab not available, while maintaining laid down timelines. The testing lab so selected shall be a NABL accredited lab in respect of each testing parameter. In order to exercise any other option other then priority 1 to priority 4, the

approval of AHSP concerned shall be taken by Quality Assurance officer for each specific case. In any case, the vendor shall not have option to choose any of the testing labs, though they may indicate lab details for the information of Inspecting officer.

(i) Priority 1: Testing at In-House lab/ facility of the Supplier and testing must be witnessed by DGQA QA personnel. Witnessing rep from DGQA shall ensure that the test arrangements are calibrated and valid.

(ii) Priority 2: Local DGQA Lab

(iii) Priority 3: Any other Local Govt Lab in station

(iv) Priority 4: Any other Local Private Lab

5.6.2 In order to meet the exigencies, provision of prioritizing certain tests already exists with DGQA labs, wherein the user/ purchaser/ OPA seeks from the lab to accord priority. In case of testing of samples to be carried out at Non-DGQA NABL accredited labs also, the same efforts are to be made to expedite testing based on QA requirements.

5.6.3 Priority of testing of samples should be as under: -

5.6.3.1 **First-In and First-Out:** - Samples received for testing in DGQA NABL accredited labs should ideally be tested on 'First In First Out' basis. While it may be possible to ensure in DGQA labs that the first received samples are put in first for testing, it may not always be possible to have all the first received samples go out first because of the time taken to test these may be more compared to the later received samples. In such case, the results of later received samples may go out first without waiting for the completion of the earlier received samples. Testing of later received samples must not be delayed just because the testing of earlier received samples have not been completed.

5.6.3.2. **Priority testing of samples in DGQA Labs**: - In certain cases, the samples may be required to be tested on priority over others because these have been received with such markings. In such cases, executive written approval of the Controller/ Additional Controller/ HoE should be mandatory and the Officer-In-Charge of Lab must ensure priority testing of such samples. The reason for priority testing must invariably be mentioned in the written request. The date by which the test results are required must also be mentioned in such cases. Interim progress reporting of such testing should be done by the Lab in-charge.

5.6.3.4. **Priority Testing of Samples in Non-DGQA NABL accredited labs**: - While this priority testing of samples can be ensured in DGQA Labs, it may not be possible in Non-DGQA NABL accredited labs because they are serving other customers also. However, the possibility of getting the samples tested on priority may be explored with the Non-DGQA NABL accredited labs. The priority testing of samples by paying additional higher testing charges must be explored at the Non-DGQA Labs. The priority testing of samples at additional cost may be justified with adequate reasoning. The higher cost of the testing where it is required to be paid by the vendor must be acceptable to the vendor. For priority testing of samples in Non-DGQA NABL accredited labs, a special written request should be forwarded along with the samples along with a personal liaison by the Officer-In-Charge of Lab on telephone or through a personal visit to such lab. The reason for priority testing may be mentioned in the written request, but the date by which the test results are required must invariably be mentioned. If required, an interim reporting on progress of testing should be checked.

5.7 PROCEDURE FOR SELECTION OF NON-DGQA NABL ACCREDITED LABS FOR TESTING OF SAMPLES.

5.7.1. A database shall be maintained in each estt with respect to the test facility availability at their end, at other DGQA estt and also for the local

Non-DGQA NABL accredited labs so that the samples may be immediately forwarded, avoiding delay.

5.7.2 In the event of non-availability of test facilities in DGQA Labs, samples are required to be tested at Non-DGQA NABL accredited labs, as priority indicated already in the preceding paragraphs. In such cases, the testing charges are to be borne by the firms. It is however, important to consider the selection of lab from which such testing needs to be carried out. It is imperative that availability of more than one such labs will enable the establishments to afford choice of lab.

5.7.3 In stations where more than one labs are available for testing of samples, the option must be exercised to get the samples tested at different labs, rather than patronizing just one lab.

5.7.4 While the option to get the samples tested in a different stations remains with the AHSP/ the concerned SQAEs, in order to cut down on the testing time and receipt of test results as also to minimize the administrative hassles in receipt and dispatch of samples to such labs, ideally the samples should be got tested in the local Non-DGQA NABL accredited labs.

5.7.5 In stations where multiple options for selection of labs are available the grading of reliability of labs should be maintained by the DGQA establishments. The testing of samples must be done from the more reliable labs. A database should as far as possible be maintained at the establishment level of the test facilities available at the various labs in station along with the time taken for various tests and the differential charges for normal and priority testing charges.

5.7.6 The issue of selection of lab is also related to the maintenance of confidentiality of the samples as to which lab the samples can be sent for testing. With passage of time and experience of dealing with the different labs in the same station, it may be possible to rate the Non-DGQA labs as far as maintenance of confidentiality is concerned. The critical samples/

samples to be tested for critical parameters must be sent to and got tested at those labs which give more reliable results, take less waiting time while ensure confidentiality of results.

5.8 PROCDEURE FOR DISPATCH OF SAMPLES TO NON-DGQA NABL ACCREDITED LABS.

5.8.1 The procedure of dispatch of samples to Non-DGQA NABL accredited Labs for testing plays very important role and vital requirement of maintaining 'confidentiality & secrecy'. Accordingly, the procedures for dispatch of samples to Non-DGQA Labs vary because of a number of reasons viz availability of labs in the same station, the credibility of the labs, the test facilities available with labs, the proximity/ distance from the DGQA establishments, the size/ volume of samples, location of selection of samples and the arrangements/ facilities available with the DGQA establishments for dispatch of samples etc.

5.8.2 There are very limited facilities available with the DGQA establishments to dispatch of samples to the Non-DGQA NABL accredited labs especially if these are located outstation and, in some cases, out of their resident state. In such cases, the establishments may depend on the firm/ vendor to dispatch the samples to the selected labs while ensuring all requirements.

5.8.3 In case of the bulky and voluminous samples also, the establishments may rely on firm/ vendor for dispatch.

5.8.4 Notwithstanding the problem of dispatch of samples to the non-DGQA labs, the confidentiality must as far as possible be maintained by properly marking the samples with the signatures and the unique identification stamp/ marking of the sampling officer. Photographs of the samples and the markings of the sampling officer may also be resorted to.

5.8.5 In case the samples are to be sent to outstation labs including out of the state, the possibility of sending samples through the courier must be explored and option adopted, in all feasible cases.

5.8.6 Sampling officer must, as a rule, bring the samples drawn by him/ her along with him/ her. Under any circumstance, he/ she will not leave the samples with the supplier/ any other party for dispatch or for carrying. However, in case of bulky stores where carrying samples is not all feasible at all, with due permission of the HoE, the same shall be handed over to the supplier for delivery to the nominated NABL Lab, duly marked/ labeled and properly sealed and secured so that no tempering can take place. Photographs of marking/ labeling/ sealing will be taken by the QA officer.

5.8.7 On receipt of samples at the Non-DGQA NABL accredited lab, the lab should confirm receipt of correct samples and report on status that no tampering with marking/ labeling/ sealing has taken place. Besides, NABL accredited lab should also take the photograph of the marking/ labeling/ sealing and make it part of the NABL test report.

5.9 DGQA TESTING FACILITIES:

5.9.1 It shall be the personal responsibility of the HoE (through Officer in Charge test laboratories) to ensure that the testing facilities for the stores of his testing responsibility are available and are in working condition.

5.9.2 To this extent, he/ she will ensure issue of separate standing instructions/ operating procedure pertaining to maintenance of test equipment, indenting of chemicals/ stores and equipment, issue of costly and poisonous stores, breakage of glass apparatus and such other important aspects, which may be relevant to his laboratory. AMC, preferably from OEM or his authorized agencies, may also be entered into wherever deemed fit.

5.10 DGQA LABORATORY PROCEDURE.

5.10.1 To have one standard procedure for testing of samples of all the Directorates of DGQA was not possible because of the nature of stores being dealt by different Directorates vastly vary in size, shape, nature, basic material, manufacturing technology and manufacturing process etc.

5.10.2 There can be appropriately justified differences in the procedures for handling and testing of samples dealt by different Directorates because of the size and the number of samples being tested and also because of the facilities available with the DGQA establishments to test/ handle these samples.

5.10.3 Another reason why all the samples being handled/ tested by DGQA establishments could not be treated in the identical manner was the availability of NABL accredited 'Testing Labs' and 'facilities' with the establishments for testing of samples.

5.10.4 The primary function of the laboratory is to test samples which are forwarded to them. Such samples may be representing a bulk consignment under QA activities for its release. Alternatively, samples may be sent to laboratory for the purpose of technical evaluation as a part of conformity assessment undertaken for stores under procurement. It is the duty of all individuals employed in a laboratory to test and report on the samples they receive with reliability, integrity and with utmost speed.

5.10.5 Repeatability and reproducibility of test data and reports is the responsibility of each functionary of a laboratory. All the test equipment of the lab must be calibrated and traceability must be ensured to national/International standard.

5.10.6 It is not possible to layout every action in detail to be carried out by all categories in a laboratory but certain basic and essential requirements of procedure which must be followed by each laboratory are indicated below on which a detailed procedure must be drawn up and

issued by the various establishments for their respective laboratories for their smooth, expeditious testing and reporting on samples.

5.10.7 The Laboratory procedure shall be as per the guidelines laid down in ISO/ IEC 17025, which is also adopted by NABL authority for the criteria for Lab accreditation. All DGQA Laboratories shall also endeavour/ strive to comply with the lab procedure and related documents issued by NABL (for example, on attributes and parameters such as Accuracy, Repeatability, Uncertainty measurement, Calibration etc).

5.11 TIMELINES FOR VARIOUS ACTIVITIES INVOLVED IN TESTING OF SAMPLES.

5.11.1 Testing of samples involves the following three stages: -

5.11.1.1 **Pre-testing activities**: These activities to a large extent are fixed which include the following: -

(i) Scrutiny of forwarding note.

(ii) Registrations of samples in Samples register.

(iii) Allotment of Lab No, SR No and ULR No.

(iv) Assigning of random sampling number etc.

5.11.1.2 Preparation of test pieces to be completed preferably within 03 working days.

5.11.1.3. **Actual testing of samples**: - This will depend on the longest duration test of the parameter involved. This varies from store to store. Each lab will prepare timelines for all types of tests and take approval from technical Directorate concerned. Approved/ updated timelines shall be displayed at respective labs as Citizen Charter.

5.11.1.4 **Post testing activity involves the following**: -

(i) Preparation of Test report which depends upon the number of parameters to be tested shall be completed, preferably within 02 days.

(ii) Scrutiny of Test reports before finalizing shall be completed in 01 day.

5.12 PROGRESS OF TESTING IN DGQA LABORATORIES.

5.12.1 Daily sample position chart will be prepared and submitted to the officer-in-charge by the concerned Group Officer/ section officer indicating there in the category of sample, receipt, clearance, outstanding, date of oldest samples and reasons thereof along with PDC. The outstanding will be further sub-divided into 'under 7 days', 8 to 14 days, 15 to 21 days and 'more than 21 days' categories.

5.13 PROCEDURE FOR DELIVERY OF TEST RESULTS BY NON-DGQA NABL ACCREDITED LABS.

5.13.1 The test results may be delivered by Non-DGQA NABL accredited Labs through their personal courier/ by laboratory rep in sealed cover.

5.13.2 It is preferred that the test results be forwarded by the concerned Non-DGQA NABL accredited lab on the official e-mail id of the establishment and subsequently follow up with hard copy by Dak/ courier.

5.14 RETENTION AND DISPOSAL OF SAMPLES.

5.14.1 AHSP and SQAOs/ Officer-in-Charge laboratories will issue suitable instructions covering individual items/ groups of stores of their responsibility and for different categories of samples viz. bulk, control, advance, vigilance etc. in respect of the following: -

5.14.1.1 Number of additional samples to be drawn for retention for future reference re-testing, correlation testing etc. if and when required. These should be sufficient for repeat testing.

5.14.1.2 Period upto which each type of samples is to be retained, in case of any dispute or need for retesting, the availability of retained

samples during currency of the contract/ SO and sometime even afterwards, in case of any eventuality, normally should be at least 12 months from date of issue of 'Test Report'.

5.14.1.3 Method and responsibility for retention and accounting of various types of samples.

5.14.1.4 In addition, clear-cut instructions shall be issued, regarding retention and returning unexpended and partially destroyed samples to the sender after testing is completed.

5.14.2 It will be ensured that identity of retained samples of all types (i.e. unexpended/ partially destroyed after testing and additional samples to be tested) is maintained for the entire period of retention and that these can be easily retrieved for re-evaluation when required.

5.14.3 To the extent possible, identity of sample will be maintained during testing, i.e. identification marks/ labels/ seals will be kept intact.

5.14.4 Wherever necessary unexpended and partially destroyed samples will be duly relabeled/ resealed by the laboratories, with suitable explanatory notes in the Note/ Test Report.

5.14.5 Additional samples specifically drawn for retention and unexpended/ partially destroyed samples after testing will be retained/ returned, counted for strictly as per the instructions stated above.

5.14.6 Non-DGQA NABL accredited labs shall be allowed to follow the NABL guidelines/ instructions given for their accreditation.

5.15 RE-TESTING OF SAMPLES.

5.15.1 In case of disputes, where vendors disagree with test results of bulk supplies done by DGQA laboratories, re-testing may be done in the presence of vendors (or their authorised representatives) under the authority of AHSP or concerned SQAO, who will examine and decide each

case based on its merits. In such cases, following guidelines will be adopted: -

5.15.1.1 Such a request is to be received in writing from the vendor.

5.15.1.2 Sample size for retest shall be in accordance with governing specifications/ standards. In case of non-availability of the same, it should be carried out in the same samples size of original testing.

5.15.1.3 To the extent possible, unexpended/ partially destroyed samples should be re-tested to verify/ confirm original results. Retained samples may be used in case testing is not established with the unexpended/ partially destroyed samples or these are not available for any valid reason, which will be duly recorded by the officer in charge laboratory.

5.16 PROCEDURE FOR PAYMENT OF TESTING CHARGES AT NON-DGQA NABL ACCREDITED LABS.

5.16.1 The procedure for the payment of testing charges shall be as given in succeeding paragraphs.

5.16.2 Whenever samples are required to be sent to non-DGQA lab, the samples should be coded at the unit level as being done for testing at the DGQA lab.

5.16.3 The forwarding note should mention all the parameters/ Paper Particulars for the tests required to be carried out and a copy be endorsed to the firm. The firm concerned/ Vendor be intimated to deposit the testing charges with the identified lab. No amount should be received at the unit regarding testing charges.

5.16.4 The firm/ Vendor is intimated to pay the testing charges to the identified lab at the earliest so as to start the testing.

5.16.5 The authorities of lab should satisfy themselves that they will get the full testing charges before they release the testing results. NABL accredited lab may receive of complete charges for the testing envisaged before commencing of testing or during the ongoing testing. In all cases,

they should release the Test report only after getting full charges for testing. Requisite details given in the forwarding note.

5.16.6 Direct interaction by the vendor with the lab, with regard to tests being conducted, is to be avoided to maintain secrecy and confidentiality of the testing of samples.

5.16.7 After the complete testing, the firm is to forward the authorized tests reports to the inspecting officer, with a copy to the vendor.

5.17 MAINTENANCE OF CONFIDENTIALITY OF THE TEST REPORTS.

5.17.1 Test reports and all documents related to the testing including information provided by the sample forwarding agency, if any, are to be treated as confidential and should not be divulged to any other party during testing stage.

5.17.2 Access to the stored electronic test reports should be restricted to the Group Officer of the concerned lab and OIC Lab only, through an suitable Access Control Mechanism.

5.17.3 FAX transmission of test reports should be restricted to the OIC Lab and to be resorted to as last option.

5.17.4 It must be maintained by the labs that the disclosure of results of the tests/ parameters should not be made to anybody other than the authorized person of DGQA. The concerned QA establishment would make necessary arrangement to provide copy of test reports to the vendor, whenever a written request is made by the vendor for the same.

5.18 SURPRISE CHECK.

5.18.1 HoE will organize a system of surprise checks on testing of samples. For surprise checks the samples will be selected at random and will be so arranged that at least one sample pertaining to each group is taken up each fortnightly. The results of surprise check will be properly recorded in a separate register along with the results obtained earlier in

normal testing. The surprise check samples may be sent to any other DGQA NABL accredited lab for testing.

5.18.2 In case of any disparity observed between the check sample and earlier tested samples, necessary investigative actions followed by appropriate remedial actions be carried out. Procedure for surprise check shall be followed as per SOP on preventive vigilance.

5.19 CO-RELATION TESTING (INTER LABORATORY TESTING).

5.19.1 To ascertain the accuracy and precision of testing, it is necessary to get certain percentage of same sample counter-tested at various DGQA Labs. The frequency and number of samples to be cross-tested will be as per the instructions issued from time to time by the AHSP. This will ensure uniformity and standardization of testing equipment and testing methods all throughout DGQA Labs.

5.20 PREVENTIVE VIGILANCE/ SURPRISE CHECK AT VARIOUS LABS.

5.20.1 Preventive vigilance/ surprise checks of various types of testing at the DGQA labs should continued to be done, as being done from time to time by the designated authorities.

5.20.2 However, preventive Vigilance/ surprise checks at the Non-DGQA NABL accredited labs may not be possible, for the reasons given below: -

5.20.2.1 Non-DGQA NABL Lab is not testing samples of DGQA alone.

5.20.2.2 It might amount to interfering in their privacy and their work.

5.20.2.3 Similar requests being received from other clients and inability of these labs to agree to everybody's requests.

5.20.2.4 However, in certain cases joint testing of certain samples may be agreed to by the Non-DGQA Labs which should be explored and availed.

5.21 DIGITISATION OF DATA AND PUTTING IT UP ONLINE.

5.21.1 The test reports are forwarded to the sample forwarding agency in Hard copy form after completion of the test and preparation of results.

5.21.2 Online monitoring of progress of testing is not being done because the facilities do not exist in all labs. Such infrastructure should be created at the earliest.

5.21.3 Presently no online portal exists for giving real time progress of testing/ results to the vendor. DQA(N) is in the progress of developing an online portal for the same.

5.21.4 Vendor will be provided with copy of schedule of testing through e-mail. Progress of testing is to be monitored daily by OIC Lab and weekly progress is to be communicated by HoE to Controllerate and Directorate.

6. CONCLUSION:

Testing of samples plays a vital role in correct sentencing of lot offered for QA. It also provides inputs to ensure manufacturing in compliance with Defence Standards & supply of quality products to Armed Forces. It is therefore imperative to follow due testing procedures as laid down in this SOP meticulously. This SOP will be reviewed periodically based on experience and feedback.