

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	1 of 13

N.B. Notification of OSTs instructions to approved samplers requires confirmation of receipt and acknowledgement that the outdated papers have been destroyed.

Changes to this document issue are in highlighted text

1 Introduction

The Official Seed Testing Station at Cambridge is ISTA Designated Laboratory GBDL01. The Chief Officer of the OSTs is the 'Designated Member' for ISTA for England and Wales and can therefore, if required, vote at ISTA meetings on behalf of DEFRA.

To allow the issue of an ISTA OIC (Orange International Certificate) seed lot certificate the sampling and testing need to be under the control of the ISTA laboratory. In this case the sampling operations are included in the audit of ISTA laboratory. For the purposes of ISTA sampling the OSTs approved Official ISTA sampler is working for the OSTs and not their employers, e.g. The Animal and Plant Health Agency - APHA (previously Fera) or other bodies or companies.

2 ISTA Rules and sampling

ISTA rules define sampling procedures, maximum seed lot sizes and minimum submitted sample weights, these procedures take precedence over any PHSI sampling documents when sampling for the purpose of issuance of OIC's. The OSTs hold current up to date ISTA rules and can always be contacted for advice, see CERT 9 form for contact details. The OSTs paper **SAM/03** contains the lot weights and submitted sample weights on selected species for ISTA certificates. In certain circumstances the weight of a submitted sample can be reduced, e.g. when no other seed determination test is required, OSTs should be contacted for advice. See item 14 Submitted sample sizes.

Statutory Certification:*

Where testing for statutory certification is also required the category and level must be specified and the **greater submitted sample weight for certification must be met**. Refer to the submitted sample weights as listed in Instructions to Licensed and Official Seed Samplers in England and Wales.

OECD Certification:*

If the seed lot is being tested for OECD certification then to provide sufficient seed for sowing of a verification plot it is recommended that the submitted sample weight is the same as for statutory certification.

*Please note only one submitted sample is required when sampling seed lots that require OIC and also need Statutory certification & OECD certification. The other seed determination (OPS) for plant health purposes may also be carried out on the same sample. Where freedom from *Orobanche* spp. is needed a separate sample is required, see item 10.

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	2 of 13

3 One lot, one sample, one ISTA certificate

An ISTA Seed Lot Certificate refers to the lot as a whole, at the time of sampling. This means the seed lot is described as a defined weight and number of containers, which is identified by bag labels with the mark of the lot. This **mark of lot** must provide a unique identification (numbers, characters or a combination of both) and may also be used on its own on a label or together with sequential label numbers.

The ISTA certificate generally refers to the whole lot and not just a part of a lot. Requests for sampling a part lot must be refused. In special circumstances applicants can request sampling of a seed lot that is to be split into sublots, but no sampling of a subplot is required as the results from the original ISTA certificate and the subplot certificates use the same test information. Applicants have to meet certain requirements for minimum size of the sublots (minimum 20%) and the information provided to OSTs. Applicants who wish to have subplot certificates issued must contact OSTs for advice before requesting sampling. See the following extract from '*ISTA rules 2.5.4.4 Sampling from the seed lot*'

An Orange *ISTA International seed lot certificate* issued on a seed lot (see 2.2.1) is still valid after re-packaging the seed lot in new containers provided that:

- a) The identity of the seed in the initial seed lot is preserved.
- b) The seed lot designation (see 2.2.11) is not changed.
- c) The moving of the seed into new containers is done under the control of an ISTA seed sampler.
- d) There is no processing of the seed during the filling of the new containers.

The ISTA system does not normally allow re-cleaning, re-packing, re-labelling and re-sealing without re-sampling and the issue of a new ISTA certificate. In general where re-packaging has occurred, a new lot is created, with a new identity altogether, in which case sampling starts from scratch. Sampling of the bulk seed lot before packaging (*see ISTA Rules 2.5.4.4 above*) is often preferable and allowed under the ISTA rules. If the samples are taken from the bulk before repackaging an approved ISTA sampler (e.g. PHSI) must be present to observe the packaging, sealing and labelling process.

ISTA Rules permit re-sampling of the original seed lot and a new original certificate may be issued for the same seed lot, provided that a new submitted sample from that lot is taken. Any previous certificate is cancelled by the latest certificate issued on the same seed lot under the same reference, i.e. seed lot seal and identification for the same particular test(s). Any request for re-sampling should be referred to the OSTs so the earlier 'ORIGINAL' certificate can be withdrawn/cancelled and the link made between the samples. Two 'ORIGINAL' ISTA certificates must not exist at the same time for one seed lot.

IF ANY OF THE CONDITIONS FOR ISTA SAMPLING ARE NOT MET THEN SAMPLING MUST BE REFUSED. CONTACT OSTs FOR ADVICE.

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	3 of 13

4 Documentation - CERT 9 and 9A

Only the approved APHA current version of the CERT9 & CERT9A should be used. The CERT9 version referred to in this document is 01/20

See **5 Application procedures**

- The form CERT9 (TO BE COMPLETED BY THE APPLICANT) is the application for sampling, sealing and testing with the issue of an ISTA seed lot certificate. The notes on the reverse of the form should be referred to.
- Approved samplers must check the CERT9 form before sampling and also ensure that the Declaration by Exporter with reference to Genetically Modified Organism has been completed, signed and dated.
- The form CERT 9A is the self-adhesive submitted sample bag label and duplicates information on the CERT 9, points **1-10**. Samplers must check the CERT9 form and CERT9A agree BEFORE SAMPLING.
There must be no discrepancies between them.
- Completion of all sections of the form CERT 9 points **1-26** and where relevant form CERT 9A, points **1-10** is mandatory, except where indicated in the following comments which relate to the numbered boxes on the form.
- **Samples submitted for OIC testing cannot be accepted by OSTs without the CERT9A attached.**

CHECKING THE COMPLETED CERT 9 (points 1-26) & CERT 9A (points 1-10)

CERT 9 – Part 1

1. Name and address of Exporter:

To be completed in full including the contact telephone number in case of queries. Completed ISTA certificates are always sent to the name and address entered at 1 unless we receive written confirmation for a different address.

2. Is Exporters Name to be omitted from the ISTA Certificate?

YES or NO tick box should be completed. If left blank then the applicants name and address details will be entered on the Certificate.

3. Species and variety of seed:

Normally both species (kind) and variety are stated but if the variety is not stated the form can still be processed. There may be a statement such as ‘parent line for...’ The species name should preferably be recorded by the scientific name, e.g. ‘*Hordeum vulgare*’, the English common name, e.g. ‘Barley’ may also be used.

4. Country where seed originated:

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	4 of 13

4 cont.

Applicants are permitted to request omission of the country of origin for ‘commercial’ reasons but it should be stated where possible.

5. Mark of lot: Crop identity or seed lot reference number

- (i) This is interpreted as being the unique Mark of lot, i.e. the seed lot identification reference not how the seed lot is sealed. The reference number for the seed lot may be in the form of the UK certification reference number. **It may be in other formats but cannot be blank.**
- (ii) Where an OECD reference, issued by the NIAB, Agricultural Crops Characterization team (ACC), see Part 2 point 21 and OECD label numbers have been used these should be stated on the CERT 9 and CERT9A sample bag label.
- (iii) N.B. Where only a mark of lot is used as the seed lot reference then the sampler must satisfy themselves that no other containers with the same reference (mark of lot) exists.

6. Label numbers:

- (i) The convention of the OSTs is to positively identify seed lots by means of label number sequences such that each bag carries a label with a unique number wherever possible. Thus it is the label number sequence together with the mark of the lot and not the reference number alone, which acts as the traceable reference for the lot.
- (ii) UK certification, OECD and OIC labels all fulfil these requirements individually. Other countries’ labels may do so but care needs to be taken to ensure that the sequences of numbers indicated are actually those applied to the seed lot.
- (iii) Where the label does not use sequential number sequences see item **5 (iii)**.

7. Weight of lot:

The weight of the lot (specify net or gross) must agree with that which is calculated from the number and type (weight) of the containers at 8. The weight of the lot should still be stated even if there is additional information about the number of seeds (e.g. 900,000 seeds) or number of seeds and packets (e.g. 20 foil packets x 100,000 seeds = 2,000,000 seeds).

8. Number & type (weight) of containers: The sampler must confirm this information agrees with the weight of the lot stated at point 7.

9. (a) & (b). Tests required.

It is the applicant’s responsibility to state the specific tests required; just stating ‘OIC’ does not provide guidance as to what tests are to be reported on the certificate. The request for tests should be in the abbreviated form, such as, P (purity), G (germination), other seed count (OPS), M (moisture) and *Orobanche*.

It is acceptable to request tests ‘To satisfy a specified country’s regulations’ but it must be made as clear as possible what is required. For example, P, G, OPS & Orobanche to meet New Zealand requirements. In the case of USA or Australia, different states may

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	5 of 13

4 cont.

have different regulations. For Canada there are different grades of seed recognised; so the specific state or grade of seed should be specified.

Statutory Certification may also be carried out at the same time, when YES entered at 9(b), the category and level must be specified. The sampler must ensure that the correct submitted sample weight for Certification is taken. In many cases this is **more than** the ISTA submitted sample weight. For a guide to statutory certification weights refer to the weights as listed in 'Instructions to Licensed and Official Seed Samplers in England and Wales'. See Gov.uk: www.gov.uk/government/publications/seed-sampling-instructions

OECD. If OECD certification is also being requested then it is recommended that the submitted sample weight is the same as for Statutory Certification (this provides sufficient seed for sowing of a verification plot).

10. Seed treatment:

Any seed treatments as stated by the applicant. A statement of the exact identity of chemical seed treatment(s) is important for health and safety as well as selection of appropriate germination media. Samplers must ensure that where seed is known to be treated the applicant specifies the information.

11. Moisture content test?

YES / NO boxes should be completed as appropriate. A separate sample labelled with a copy of the CERT9A is required for moisture testing, it must be sampled and packaged according to ISTA rules in an appropriate sealed moisture proof container from which as much air as possible has been excluded. Submitted sample weights for limited species are as specified in SAM/03 or contact OSTs for more information from the ISTA rules.

12. Premises where seed is stored (if different from 1)

'PHSI/Official Sampler's use only' boxes on CERT9 & CERT9A

A date of sampling and signature **must** be completed by sampler on both documents at time of sampling. Where the sampler uses a sample bag number it should be recorded here. Additional information about the time taken to carry out the sampling may also be entered.

13. Date seed will be ready for sampling, if known

14. Date of shipment, if known

15. Country of destination.

This should be stated by the applicant but is not used to interpret the testing requirements that must be specified in detail at point 9.

16. OECD certificate? The applicant should tick Yes or No as appropriate. See comments under point 9.

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	6 of 13

4 cont. 17. Is an Orange International Certificate required?

The applicant should tick Yes or No as applicable. On request only, a provisional interim certificate may be requested. This refers to issuing an interim report when not all testing is complete. There is normally an additional charge for provisional certificates.

18. Is a 'health' certificate required?

N.B. Only PHSI are permitted to take samples for plant health purposes.

N.B.: Testing options for where the Plant Health testing may be carried out have changed and since May 2015 ALL plant health testing is carried out by the Fera lab at York. The OSTs will not carry out any testing for Plant health purposes without prior approval from the PHSI (Michael Brown or Richard Vennelle). The current CERT9 form will be amended in due course.

19. Number of additional copies of OIC certificates required.

The customer may request duplicate certificates to be issued for which there will be an additional charge.

21 Part 2. OECD related information.

This section **MUST** be completed & signed by the NIAB team responsible for Certification, **BEFORE** sampling occurs. NIAB will then send (normally by fax or email) the request for sampling form to the relevant sampler. Please note OECD labels are no longer supplied by NIAB.

22 to 26 Part 3. To be completed and signed by PHSI/Official sampler.

The sampler must sign and date this section and complete the information requested.

22. The tick boxes to be completed as necessary by the sampler, e.g. I have drawn samples for OIC, OECD, Moisture, Other.

23. Method of sealing seed lot to be stated by PHSI/Official sampler at time of sampling

24. Sampler to check that OECD label number agrees with those stated in Part 1, under point 6. on the form.

25. & 26. Refer to OECD details on the containers & label that the sampler must confirm at time of sampling.

Sampler must Sign and date Part 3 as well as the 'PHSI/Official Samplers use only' box on the front of the form.

5 Application procedures

Forms CERT 9 and 9A are completed by the applicant and are available through the APHA website links,

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	7 of 13

Declaration by Exporter

Form CERT 9 must be completed and signed by the applicant including the declaration on Genetically Modified Organism. The applicant thereby accepts responsibility for the work required and its cost and sends the form to the PHSI or official sampler.

In the case of OECD certification, the applicant must send the form to:

NIAB, Agricultural Crops Characterization team (ACC), Barn 1, Park Farm, Villa Road, Impington, Cambridge, CB24 9NZ. NIAB will send the CERT 9 form & information to the PHSI as soon as the OECD Seed lot identification has been issued.

Forms CERT 9A, the submitted sample bag labels which are to be completed by the applicant should in all cases be handed directly to the PHSI/official sampler at the time of sampling.

If the CERT 9 is incomplete, or has been completed or amended by a third party, it is necessary to obtain the applicants agreement to the document, the work being commissioned and costs involved. This may involve unavoidable delay. It is imperative that the applicant accepts responsibility to ensure that sampling and testing is as requested and fees are paid.

PHSI/official sampler to provide *Orobanche* and moisture bags.

ISTA seals – for information regarding sourcing ISTA seals contact OSTs - OSTs, NIAB, Barn 1, Park Farm, Villa Road, Impington, Cambridge, CB24 9NZ, e-mail: linda.maile@niab.com.

Any corrections to the form by the sampler must be initialled & dated.

In the event of any anomaly occurring in the documentation or sampling, This must be notified by the sampler to OSTs by e-mail or in writing.

6 OECD procedures

Each consignment must have an OECD seed lot reference issued by the NIAB team responsible for Certification. The labels bear unique serial numbers and will be given a unique OECD reference number commencing with the letters 'GBR or GB'. See also item 4 points 9 and 21. The applicant is responsible for providing the OECD label number sequence and for printing the labels.

7 Types of label

- UK or EC statutory certification labels
- OECD labels (as described in item 6 above)
- Suppliers labels (with unique mark of lot, and with or without label number sequence)

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	8 of 13

- Other countries labels as used for their certification schemes, or OECD seed lots

8 Labelling and sealing of seed lots

- Sealing principles are as for certification.
- Sealing must be carried out before the PHSI/official sampler arrives, or in the presence of the sampler, at the time of sampling.
- Seed containers must not be left open after sampling.
- Seed lots must be labelled at the time of sampling.
- The label numbers must match the details on the forms CERT 9 and CERT9A.

9 Sampling

Sampling must be carried out by the PHSI/official sampler following the instructions in this paper. Guidance on sampling frequencies is as stated in the APHA 'Instructions to Licensed and Official Seed Samplers in England and Wales'. Only the ISTA samplers approved by OSTs are permitted to carry out sampling of seed lots for ISTA certificate. The current ISTA Rules and any documentation provided by OSTs, such as seed lot and sample weights, or sampling procedures take precedence over any other instructions.

All submitted samples must be labelled (CERT 9A) and securely tied/closed in such a way that it is obvious if the seal has been tampered with. Normal convention is to seal the bag with an 'ISTA' orange and green, or an official APHA black seal. Where the submitted sample is hermetically sealed after sampling, it should be labelled (using a CERT9A) and may be submitted and accepted as sealed, it may also be enclosed in a cloth bag sealed with an ISTA or an APHA official black seal.

10 *Orobanche* sampling for ISTA testing

On a customer's request the OSTs will carry out an examination for seeds of *Orobanche* spp. Only special paper bags or foil bags should be used for submitting *Orobanche* samples. These are provided by the PHSI/official sampler and must carry a CERT9A label, or the same information written on the pre-printed on the bag. The entire sample is examined and seed is normally discarded after testing. Recommended sample weights are those based on the ISTA rules as for other seed count. See SAM/03 Checklist of seed lot and submitted sample weights when sampling for issuance of ISTA Orange International Certificates (OIC) (selected species only).

11 Moisture sampling for ISTA Certificate

Special moisture-proof bags (provided by the OSTs) are used for moisture samples. A separate sample of the appropriate weight is required; these must carry a CERT9A label. Sample weights for moisture samples are given in OSTs document SAM/03.

To obtain the submitted sample for moisture content determination, subsamples must be taken as follows:

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	9 of 13

- First mix the composite sample
- Take a minimum of three samples from different positions and combine them to create the subsample for moisture of the required size.
- The subsample for moisture must be taken as soon as possible to avoid changes in moisture content.

12 Disease test sampling for ISTA Certificate

If disease tests are requested for reporting on an ISTA certificate, the sample should be packaged and submitted in a manner which will not alter its seed health status. The diseases which OSTs are accredited to report on ISTA certificates are those conducted using the following ISTA methods:

7-004 *Leptosphaeria maculans* and *Plenodomus biglobosus* on *Brassica* spp.

7-005 *Ascochyta pisi* in *Pisum sativum*

7-007 *Alternaria linicola*, *Botrytis cinerea* and *Colletotrichum lini* in *Linum usitatissimum*

7-013a *Ustilago nuda* in *Hordeum vulgare* subsp. *vulgare*

7-019a *Xanthomonas campestris* pv. *campestris* and *Xanthomonas campestris* pv. *raphani* in *Brassica* spp.

For methods 7-004, 7-005, 7-007 and 7-013a a portion for the disease test can be taken from the submitted sample after receipt at OSTs. Please contact OSTs for information on additional weight required in order to have sufficient sample size for all required tests.

For method 7-019a a separate sample will be required for the disease test. This must be of sufficient weight to include at least 30000 seeds and should be submitted in a cloth bag and have a CERT9A label attached.

13 Duplicate sample retention by applicant

The applicant may request a duplicate sample for their retention. The PHSI/official samplers are authorised to draw enough material and divide it representatively to produce such a sample using normal ISTA sample division/preparation procedures.

14 Submitted sample sizes

Sample sizes are as prescribed in the ISTA Rules and a list of selected species is tabulated in OSTs document SAM/03. The samplers should ensure that the samples meet the minimum weights specified. It is worthwhile aiming to provide samples that are 10 to 15% heavier than prescribed to allow for some moisture loss in transport. **UNDER WEIGHT SAMPLES will be refused for testing.**

Samples of reduced sizes can be accepted only in special circumstances, e.g. where no other seed count determination (OPS) is required the ISTA Rules permit a submitted

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	10 of 13

sample of not less than the purity weight, contact OSTS for advice.

For PELLETTED SEED, ENCRUSTED SEED AND SEED GRANULES there are different submitted sample requirements based on a minimum number of pellets, and the tests required. See ISTA Rules and SAM/03 or contact OSTS for advice.

On request the residues of samples after testing can be returned to the applicant (with the exception of 25 seeds that are must be retained and any *Orobanche* sample, the seed of which is normally discarded after testing). There is normally a charge by OSTS for the return of seed samples after testing to cover the handling, postage and packing. N.B. seed returned can not be added back to the sealed ISTA seed lot.

15 Sampling before and after treatment

By prior arrangement only with OSTS, ISTA Rules permit testing of a sample of chemically treated seed for germination in addition to a sample of untreated seed for purity and other seed count. This is an unlikely occurrence, contact OSTS for advice.

16 Response time to request for sampling

Be on site for sampling as soon as possible after the requested time and date for sampling, recommendation is within five working days.

17 Response time for sample submission

The PHSI/official sampler will be responsible for arranging for prompt delivery of the seed samples to OSTS as soon as practically possible. The expected time frame is within one working day from the time of completion of sampling by a delivery method that will achieve delivery to the OSTS within one further working day and by five working days at the most.

18 Fees for sampling and time allocation

The PHSI/official sampler may charge the applicant direct for sampling and sample dispatch to the OSTS. This rate can be reviewed annually and any change shall be communicated to the OSTS by 30th April in any year and brought into effect only on 1st July in the same year.

The charge for sampling for ISTA certificates should be based on the direct time involved in this work as a proportion of the total time spent on all activities at the applicant's premises. In the event of additional time for sampling being necessary due to a sampling error that results in an inability to issue an ISTA certificate, or in the event of damage in transit or the failure of delivery of a sample, there will be no charge from the PHSI/official sampler.

19 Automatic sampling

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	11 of 13

Currently there are no arrangements for on-stream automatic sampling of seed lots for ISTA certificates and all sampling is by manual methods. **Please contact OSTs for advice.**

20 Sampling efficiency

Sampling shall be carried out in an efficient manner with respect to reasonable times needed for the taking of samples.

21 Seed lot presentation

Seed lot presentation, accessibility and the warehouse environment must not affect validity of sampling. Reasonable access to the seed lot must be possible to allow representative sampling, i.e. to at least one face of each pallet, to satisfy prescribed sampling frequencies. It is unacceptable for samplers to be expected to work in dangerous or difficult conditions. **The sampler may refuse to take samples if circumstances do not permit safe sampling.**

22 OSTs approved ISTA samplers

In co-operation with OSTs, the PHSI/official sampler or company sampler will maintain appropriate levels of training and competence together with records of these.

- Only those samplers successful in the APHA licensed seed sampler exam, ISTA course and re-assessments will be eligible to sample for ISTA certificate.
- Samplers that fail the re-assessment, or are found to be deficient in any ISTA sampling operations, will be required to attend for appropriate re-training or be subject to additional audits.
- Samplers will be removed from the list of OSTs approved ISTA samplers if their re-training is unsuccessful; also if they are no longer practicing ISTA samplers.

To be approved by the OSTs the PHSI/official samplers must attend courses arranged by the OSTs. These will comprise successful completion of:

- The APHA official examination in licensed seed sampling
- A one day qualifying OSTs course in ISTA sampling
- Attend a yearly audit and refresher training course for ISTA sampling

23 Co-operation with OSTs/external auditors in the monitoring of sampling and samplers

PHSI/official samplers will co-operate with OSTs staff in the monitoring of individual samplers with respect to adherence to the ISTA Rules and Accreditation Standard, such as through auditing and/or check sampling, and that provisions exist to cancel the recognition of individual samplers who for any reason fail to meet the standard.

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	12 of 13

PHSI/official sampler will co-operate with ISTA accreditation auditors.

24 Maintain a job description

The PHSI/official sampler will include in their job descriptions the duties relating to being ISTA samplers.

25 Work instructions and manuals

All necessary work instructions and manuals will be accessible to ISTA samplers when sampling. This includes procedures/information issued by OSTs, e.g.

A copy of the ISTA Chapter 2: Sampling (which is updated annually, effective as from 1st January and available as a free download from the ISTA website).

SAM/01 - Overview of the sampling of seed lots for ISTA Certificates in England & Wales

SAM/02 – OSTs Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OICs)

SAM/03 - Checklist of seed lot and submitted sample weights when sampling and testing for issuance of ISTA Orange International Certificates (OIC) (selected species only)

The current ISTA Rules are also available at OSTs, contact the OSTs for advice.

26 Equipment

Approved samplers must provide all necessary instruments and consumable materials needed to take and prepare samples, including sample bags and *Orobanche* envelopes. Ensure that the sampling equipment is uniquely labelled, & retains a record of the equipment and if using third party equipment ensure it is fit for purpose.

Maintain records relating to equipment, i.e. an equipment inventory, recording where possible the names of the manufacturer, supplier and service agent, the date received and date placed in service, date last checked for suitability of use.

27 ‘Other’ equipment

The use of non-calibrated equipment, or that of unknown status, is prohibited for sampling for ISTA certificate.

28 Monitoring the uniformity of seed lots

ISTA Rules state that ‘... the seed lot ... shall be as uniform as practicable. There shall be no documentary or other evidence of heterogeneity....’

Detection of non-uniformity by a sampler is often difficult but can occur, e.g. different coloured seed treatments, **if evidence of heterogeneity is found then sampling should be stopped** and the options discussed with the OSTs.

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/02
Sampling	OSTS Guidance on the requirements to be met when sampling seed lots for the issuance of ISTA Orange International Certificates (OIC)			
Date of first issue	Author	Issue Date	Issue No.	Page
25 January 2010	E J Taylor, Revised L Maile/M Watson	18 January 2022	6	13 of 13

29 Health and safety

The PHSI/official or company sampler's own management are responsible for ensuring that the legal requirements for health and safety are followed whilst sampling for ISTA certificates.