

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/03
Document Title:	Standard Operating Procedure – Sample Handling OSTS Checklist of seed lot and submitted sample weights when sampling and testing for issuance of ISTA Orange International Certificates (OIC) (selected species only)			
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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Notification of OSTS instructions to approved samplers requires confirmation of receipt and acknowledgement that the outdated papers have been destroyed.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

If this procedure requires updating please inform your line manager

1 Scope and purpose of procedure

1.1 Scope

- a) To provide a reference document for use by OSTS approved samplers, which defines the maximum seed lot weights and minimum submitted sample weights required when sampling seed lots for testing and issuing of ISTA Orange International Certificates only. N.B should statutory certification be required at the same time then larger submitted sample weight will be required to meet Statutory /certification requirements, in these cases refer to the weight specified in the Instruction to Licensed and Official Seed Samplers in England & Wales.
- b) The checklist is a point of reference for the OSTS staff and for persons approved by OSTS as ISTA samplers, e.g. the technical personnel such as approved company samplers or Plant Health Seeds Inspectors (PHSI) working under the authority of the OSTS when sampling seed lots for export purposes.
- c) The checklist is arranged by scientific names of species selected from the ISTA Rules for the most frequently tested species, the common name is also provided for reference. For species not included in this document reference must be made directly to the current version of ISTA rules.

1.2 Purpose

The purpose of this checklist is to ensure that:

- a) the weight of maximum lot size can be checked
- b) the correct submitted sample weight is taken for the tests requested
- c) appropriate action is taken when samples are underweight

2 Persons responsible for action

OSTS approved ISTA Samplers (PHSI/official samplers or company samplers) and OSTs are responsible for ensuring that the minimum submitted sample weights are met / checked and for taking the appropriate action on underweight samples. The current version of the ISTA rules will always take precedence over the information in this paper. Any discrepancies between this list and the current weights specified in the current version of the ISTA Rules or the Seed Regulations (England) and must be brought to the attention of the Chief Officer of the OSTs for England and Wales.

3 Related documents

The OSTs Quality Manual
ISTA Rules (current version)

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Chapter 2: Sampling of the ISTA Rules (please note Chapter 2 Sampling is available as a free download from the ISTA website and is updated annually, check that you are using the latest version)

Instructions to Licensed and Official Seed Samplers in England and Wales

Available through the links on <https://www.gov.uk/government/organisations/animal-and-plant-health-agency>

DOC/SH/03.10 Checklist of seed lot and submitted sample weights when sampling and testing species covered by the Seeds (England) Regulations.

4 Health and safety

Samplers must take the appropriate actions and precautions when sampling chemically treated seed lots. Please ensure that the name of the chemical treatment is shown on the documentation and submitted samples bags.

For OSTS normal laboratory precautions should be taken (refer to SAF/01).

OSTS staff should take the precautions prescribed in SAF/CH/12 when handling chemically treated seed samples.

5 Procedure

- a) The submitted sample weights refer to the minimum weight of seed required **excluding any packaging**.
- b) The checklist is arranged by scientific names, a common name is also provided for reference.
- c) Under weight samples will not be accepted for testing unless authorised by the OSTS Chief Officer/Quality Manager. **In some cases for ISTA samples only, where no other plant species examination is required, e.g. when testing for Purity only or Purity & Germination only, a smaller submitted sample is permitted, please contact the OSTS for advice.**
- d) When sampling for statutory certification as well as for ISTA Certificates (OIC) the submitted sample must meet the appropriate statutory certification weight if this is greater. Refer to Instructions to Licensed and Official Seed Samplers in England and Wales (current version available on the APHA website)
- e) For the species selected from the ISTA Rules care must be taken that the correct scientific name / common name is used for the species being sampled. Samplers must check that the genus and species name is correct for the variety name before sampling as submitted sample weights vary. Problems are often found in the following genera *Brassica*, *Allium* and *Cucurbita*.
- f) If a species is not listed in this paper consult the ISTA Rules directly or contact OSTS for advice.
- g) Moisture samples must be submitted in a sealed **bag provided by OSTS** (not paper or cloth bags) from which as much air as possible has been excluded.

6 Appendix

NIAB/OSTS	DOCUMENT UNCONTROLLED WHEN PRINTED			SAM/03
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- 6.1 Checklist for seed lot and submitted sample weights for selected species from the ISTA rules. Weights for moisture samples are given only for cereal and beet species, for all other species contact OSTs for advice.
- 6.2 Check list for pelleted / coated seeds is an *Extract from the ISTA Rules* of Table 2D Part 1. **For sample sizes of seed tapes & seed mats please contact OSTs for advice.**

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6.1 Checklist for seed lot and submitted sample weights for selected species from the ISTA rules

Scientific name	Common name	ISTA weights	
		Maximum lot size kg	Minimum submitted sample weight (see 5c & 5d) g
<i>Agrostis canina</i>	Velvet bentgrass	10000	5
<i>Agrostis capillaris</i>	Brown top	10000	5
<i>Agrostis gigantea</i>	Red top	10000	5
<i>Agrostis stolonifera</i>	Creeping bent	10000	5
<i>Allium cepa</i>	Onion (inc. shallot)	10000	80
<i>Allium fistulosum</i>	Japanese bunching onion, Welsh onion	10000	50
<i>Allium porrum</i>	Leek	10000	70
<i>Allium schoenoprasum</i>	Chives	10000	30
<i>Allium tuberosum</i>	Chinese chives	10000	100
<i>Anethum graveolens</i>	Dill	10000	40
<i>Anthriscus cerefolium</i>	Chervil	10000	60
<i>Apium graveolens</i>	Celery / Celeriac	10000	10
<i>Arrhenatherum elatius</i>	Tall oat-grass	10000	80
<i>Asparagus officinalis</i>	Asparagus	20000	1000
<i>Avena sativa</i>	Oat	30000	1000 Moisture test 100**
<i>Beta vulgaris</i>	All Beets: Fodder beet (inc Mangel) Sugar beet, Red beet or beetroot Spinach beet, leaf beet or chard	20000	500 Moisture test 50**
<i>Borago officinalis</i>	Borage	10000	450
<i>Brassica juncea</i>	Brown mustard	10000	40
<i>Brassica napus</i>	Swede rape (Inc. Fodder rape & Oilseed rape)	10000	100
<i>Brassica napus</i> L.var. <i>napobrassica</i>	Swede	10000	100
<i>Brassica nigra</i>	Black mustard	10000	40

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Scientific name	Common name	ISTA weights	
		Maximum lot size kg	Minimum submitted sample weight (see 5c & 5d) g
<i>Brassica oleracea</i>	Brussels sprouts Cauliflower Curly kale Kale Kohl rabi Red cabbage Savoy cabbage White cabbage Sprouting broccoli or calabrese	10000	100
<i>Brassica rapa</i> L. (includes: <i>B. campestris</i> <i>B. chinensis</i> <i>B. pekinensis</i> <i>B. perviridis</i> <i>Brassica rapa</i> L. var. <i>sylvestris</i>)	Turnip Chinese cabbage Turnip rape	10000	70
<i>Bromus catharticus</i>	Rescue grass	10000	200
<i>Bromus sitchensis</i>	Alaska brome-grass	10000	200
<i>Camelina sativa</i>	Gold of pleasure (Camelina)	10000	40
<i>Cannabis sativa</i>	Cannabis / Hemp	10000	600
<i>Capsicum</i> spp.	Capsicum Sweet pepper Green/red pepper	10000	150
<i>Carum carvi</i>	Caraway	10000	80
<i>Cichorium endivia</i>	Endive	10000	40
<i>Cichorium intybus</i>	Chicory	10000	50
<i>Citrullus lanatus</i>	Water melon	20000	1000
<i>Coriandrum sativum</i>	Coriander	10000	400
<i>Cucumis melo</i>	Melon	10000	150*
<i>Cucumis sativus</i>	Cucumber/Gherkin	10000	150*
<i>Cucurbita maxima</i>	Gourd (Squash & Pumpkin)	20000	1000
<i>Cucurbita moschata</i>	Squashes (Winter), butternut & some pumpkins	10000	350*

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		Maximum lot size kg	Minimum submitted sample weight (see 5c & 5d) g
<i>Cucurbita pepo</i>	Marrow, zucchini, some pumpkin and squashes)	20000	1000
<i>Cynara cardunculus</i>	Artichoke	10000	900
<i>Dactylis glomerata</i>	Cocksfoot	10000	30
<i>Daucus carota</i>	Carrot	10000	30
<i>Echinacea purpurea</i>	Purple cone flower	5000	20*
<i>Echium plantagineum</i>	Purple vipers bugloss	5000	40*
<i>Eruca vesicaria</i> subsp. <i>sativa</i> (Syn. <i>E. sativa</i>)	Rocket (NOT wild rocket <i>Diplotaxis</i> spp.)	10000	40
<i>Festuca arundinacea</i>	Tall fescue	10000	50
<i>Festuca filiformis</i>	Fine-leaved sheep's fescue	10000	25
<i>Festuca ovina</i>	Sheep's fescue	10000	25
<i>Festuca pratensis</i>	Meadow fescue	10000	50
<i>Festuca rubra</i>	Red & Chewing's, (Inc.: Creeping Red, Slender Creeping Red & Strong Fescue (Fine fescues)	10000	30
<i>Festuca trachyphylla</i> (synonym <i>F. brevipila</i> , previously included under <i>F. ovina</i>)	Hard fescue	10000	25
<i>Glycine max</i>	Soya bean	30000	1000
<i>Helianthus annuus</i>	Sunflower	25000	1000
<i>Hordeum vulgare</i> subsp. <i>vulgare</i>	Barley	30000	1000 Moisture test 100**
<i>Lactuca sativa</i>	Lettuce	10000	30
<i>Lepidium sativum</i>	Cress	10000	60
<i>Linum usitatissimum</i>	Flax & Linseed	10000	150
<i>Lolium multiflorum</i>	Italian Ryegrass (Inc. Westerwolds)	10000	60
<i>Lolium perenne</i>	Perennial Ryegrass	10000	60
<i>Lolium x hybridum</i> (previously <i>Lolium x boucheanum</i>)	Hybrid Ryegrass	10000	60
<i>Lotus corniculatus</i>	Birdsfoot trefoil	10000	30

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Scientific name	Common name	ISTA weights	
		Maximum lot size kg	Minimum submitted sample weight (see 5c & 5d) g
<i>Lupinus albus</i>	White lupin	30000	1000
<i>Lupinus angustifolius</i>	Narrow-leaved (Blue) lupin	30000	1000
<i>Lupinus luteus</i>	Yellow lupin	30000	1000
<i>Medicago lupulina</i>	Trefoil, Black medick	10000	50
<i>Medicago sativa</i>	Lucerne	10000	50
<i>Melilotus albus</i>	White sweetclover	10000	50
<i>Melilotus officinalis</i>	Yellow sweetclover	10000	50
<i>Nasturtium officinale</i>	Watercress	10000	5
<i>Ocimum basilicum</i>	Basil	10000	40
<i>Oenothera biennis</i>	Evening primrose	10000	10
<i>Onobrychis viciifolia</i>	Sainfoin – fruit	10000	600
	Sainfoin – seed	10000	400
<i>Origanum majorana</i>	Marjoram	10000	5
<i>Origanum vulgare</i>	Oregano	10000	5
<i>Pastinaca sativa</i>	Parsnip	10000	100
<i>Petroselinum crispum</i>	Parsley	10000	40
<i>Phaseolus coccineus</i>	Bean, Runner	30000	1000
<i>Phaseolus vulgaris</i>	Bean, French	30000	1000
<i>Phleum nodosum</i>	Timothy, Small	10000	10
<i>Phleum pratense</i>	Timothy	10000	10
<i>Pisum sativum</i>	Pea (Field/Fodder & vegetable)	30000	1000
<i>Poa annua</i>	Annual Meadowgrass	10000	10
<i>Poa nemoralis</i>	Wood Meadowgrass	10000	5
<i>Poa pratensis</i>	Smooth-stalked Meadowgrass	10000	5
<i>Poa trivialis</i>	Rough-stalked Meadowgrass	10000	5
<i>Raphanus sativus</i>	Radish	10000	300
<i>Salvia officinalis</i>	Sage	5000	30
<i>Secale cereale</i>	Rye (Inc. Hybrids)	30000	1000 Moisture 100**
<i>Sinapis alba</i>	White mustard	10000	200
<i>Solanum lycopersicum</i> (previously <i>Lycopersicon esculentum</i>)	Tomato	10000	15*

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<i>Solanum melongena</i>	Aubergine/eggplant	10000	150
<i>Spinacia oleracea</i>	Spinach	10000	250
<i>Thymus vulgaris</i>	Thyme	10000	5
<i>Trifolium hybridum</i>	Alsike clover	10000	20
<i>Trifolium pratense</i>	Red clover	10000	50
<i>Trifolium repens</i>	White clover	10000	20
x <i>Triticosecale</i>	Triticale	30000	1000 Moisture 100**
<i>Triticum aestivum</i> subsp. <i>aestivum</i> (previously <i>T. aestivum</i>)	Wheat (common)	30000	1000 Moisture 100**
<i>Triticum aestivum</i> subsp. <i>spelta</i> (previously <i>T. spelta</i>)	Wheat, spelt	30000	1000 Moisture 100**
<i>Triticum turgidum</i> subsp. <i>durum</i> (previously <i>T. durum</i>)	Wheat, durum	30000	1000 Moisture 100**
<i>Valerianella locusta</i>	Corn salad / Lamb's lettuce	10000	70
<i>Vicia faba</i>	Field/Fodder & Broad bean	30000	1000
<i>Vicia pannonica</i>	Hungarian vetch	30000	1000
<i>Vicia sativa</i>	Common vetch	30000	1000
<i>Vicia villosa</i>	Hairy vetch	30000	1000
x <i>Festulolium</i>	Festulolium	10000	60
<i>Zea mays</i>	Maize, Sweetcorn / popcorn	40000	1000

* For ISTA tests on these species there is no weight specified for the other seed determination by number count (OPS search), if required a minimum of 25,000 seeds should be submitted. Contact OSTS for advice.

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6.2 Submitted sample sizes for pelleted seeds, encrusted seed and seed granules as a number. (Information extract from ISTA rules of Table 2D Part 1)

Determinations	Submitted samples not less than
Purity analysis (including verification of species)	2500
Thousand seed weight	2500
Germination	2500
Determination of other seeds (Pelleted seed)	10000
Determination of other seeds (encrusted seeds and seed granules)	25000

For sample sizes for seed tapes and seed mats please contact OSTs.