



INTERNATIONAL SEED TESTING ASSOCIATION (ISTA)

Secretariat, Zürichstrasse 50, 8303 Bassersdorf, CH-Switzerland
 Phone: +41-44-838 60 00, Fax: +41-44-838 60 01, Email: ista.office@ista.ch, <http://www.seedtest.org>

Annex 3 - Crop groups for purity, other seed determination and germination tests; Group 1 to 8 cover species/genera of Table 2C, Part 1, 2 and 3

Crop group	Species belonging to the following genera
1 (grasses)	<ul style="list-style-type: none"> • <i>Agrostis, Anthoxanthum, Agropyron, Alopecurus, Arrhenatherum, Andropogon, Astrebla, Avenella, Axonopus, Beckmannia</i> • <i>Bothriochloa, Bouteloua, Bromus</i> • <i>Cenchrus, Chloris, Cynodon, Cynosurus</i> • <i>Dactylis, Deschampsia, Dichanthium, Digitaria</i> • <i>Echinochloa, Ehrharta, Eleusine, Elymus, Eragrostis</i> • <i>Festuca, xFestulium</i> • <i>Holcus,</i> • <i>Koeleria</i> • <i>Lolium</i> • <i>Megathyrsus, Melini,</i> • <i>Oloptum</i> • <i>Panicum, Paspopyrum, Paspalum, Pennisetum, Phalaris, Phleum, Poa, Psathyrostachys Pseudoroegneria</i> • <i>Schizachyrium, Setaria, Sorghastrum</i> • <i>Thinopyrum, Trisetum</i> • <i>Urochloa</i> • <i>Zoysia</i>
2 (cereals)	<ul style="list-style-type: none"> • <i>Avena</i> • <i>Hordeum</i> • <i>Oryza</i> • <i>Secale, Sorghum</i> • <i>Triticum, xTriticosecale</i> • <i>Zea</i>
3 (small legumes)	<ul style="list-style-type: none"> • <i>Aeschynomene, Alysicarpus, Anthyllis, Astragalus</i> • <i>Calopogonium, Centrosema, Chamaecrista, Crotalaria</i> • <i>Desmodium</i> • <i>Galega</i> • <i>Hedysarum</i> • <i>Kummerowia</i> • <i>Lespedeza, Leucaena, Listia, Lotus</i> • <i>Macroptilium, Macrotyloma, Medicago, Melilotus</i> • <i>Onobrychis, Ornithopus</i> • <i>Securigera</i> • <i>Trifolium, Trigonella</i>
4 (pulses)	<ul style="list-style-type: none"> • <i>Arachis</i> • <i>Cajanus, Cicer, Cyamopsis</i> • <i>Glycine</i> • <i>Lablab, Lathyrus, Lens, Lupinus</i> • <i>Mucuna</i> • <i>Neonotonia, Neustanthus</i> • <i>Phaseolus, Pisum, Psophocarpus, Pueraria</i> • <i>Vicia, Vigna</i>
5 (other agricultural species)	<ul style="list-style-type: none"> • <i>Beta, Brassica</i> • <i>Cannabis, Carthamus, Crambe</i> • <i>Dichondra</i> • <i>Fagopyrum</i> • <i>Gossypium</i> • <i>Helianthus, Hibiscus</i> • <i>Linum</i> • <i>Nicotiana</i>

	<ul style="list-style-type: none"> • <i>Plantago, Phacelia</i> • <i>Raphanus</i> • <i>Salvia, Sinapis, Spergula</i>
6 (vegetables, spices, herbs, and medicinal species)	<ul style="list-style-type: none"> • <i>Abelmoschus, Achillea, Allium, Anethum, Anthriscus, Apium, Arctium, Asparagus, Atriplex, Atropa</i> • <i>Beta, Borago, Brassica</i> • <i>Camelina, Campanula, Cannabis, Capsicum, Carum, Chrysanthemum, Cichorium, Citrullus, Claytonia, Corchorus, Coriandrum, Cucumis, Cucurbita, Cuminum, Cynara</i> • <i>Datura, Daucus</i> • <i>Eruca</i> • <i>Fragaria, Foeniculum</i> • <i>Gossypium, Glebionis</i> • <i>Ipomoea</i> • <i>Lactuca, Lagenaria, Lepidium, Levisticum, Luffa</i> • <i>Malva, Marrubium, Matricaria, Melissa, Mentha, Momordica</i> • <i>Nasturtium, Nicotiana</i> • <i>Ocimum, Oenothera, Origanum</i> • <i>Papaver, Pastinaca, Petroselinum, Phacelia, Physalis, Pimpinella, Portulaca</i> • <i>Raphanus, Rheum, Ricinus, Rosmarinus, Rumex</i> • <i>Salvia, Sanguisorba, Satureja, Scorzonera, Sesamum, Silybum, Solanum, Spinacia, Stylosanthes</i> • <i>Taraxacum, Tetragonia, Thymus, Tragopogon</i> • <i>Valerianella, Valeriana, Verbena</i>
7 (forest species)	<ul style="list-style-type: none"> • <i>Abies, Acacia, Acer, Aesculus, Ailanthus, Alnus, Amorpha</i> • <i>Berberis, Betula</i> • <i>Calocedrus, Caragana, Carica, Carpinus, Castanea, Catalpa, Cedrela, Cedrus, Chamaecyparis, Cornus, Corylus, Corymbia, Cotoneaster, Crataegus, Cryptomeria, Cupressus, Cydonia, Cytisus</i> • <i>Elaeagnus, Eucalyptus, Euonymus</i> • <i>Fagus, Fraxinus</i> • <i>Ginkgo, Gleditsia</i> • <i>Ilex</i> • <i>Juniperus</i> • <i>Koelreuteria</i> • <i>Laburnum, Larix, Ligustrum, Liquidambar, Liriodendron</i> • <i>Malus, Morus</i> • <i>Nothofagus</i> • <i>Picea, Pinus, Platanus, Platycladus, Populus, Prunus, Pseudotsuga, Pyrus</i> • <i>Quercus</i> • <i>Robinia, Rosa</i> • <i>Salix, Senegalia, Sequoia, Sequoiadendron, Sorbus, Spartium, Styphnolobium, Syringa</i> • <i>Taxodium, Taxus, Tectona, Thuja, Tilia, Tsuga</i> • <i>Ulmus</i> • <i>Vachellia, Viburnum</i> • <i>Zelkova</i>
8 (flower species)	<ul style="list-style-type: none"> • <i>Abutilon, Achillea, Adonis, Ageratum, Agrimonia, Alcea, Althaea, Alyssum, Amaranthus, Amberboa, Ammobium, Anchusa, Anemone, Angelica, Antirrhinum, Aquilegia, Arabis, Arctotis, Armeria, Artemisia, Asclepias, Asparagus, Aster, Aubrieta, Aurinia</i> • <i>Bassia, Begonia, Bellis, Betonica, Brachyscome, Briza, Browallia, Brunnera</i> • <i>Calceolaria, Calendula, Callistephus, Campanula, Celosia, Centaurea, Cerastium, Chelidonium, Chrysanthemum, Clarkia, Cleome, Cleretum, Cobaea, Coix, Coleostephus, Consolida, Convolvulus, Coreopsis, Cosmos, Cyclamen, Cymbalaria, Cynoglossum</i> • <i>Dahlia, Datura, Delphinium, Dianthus, Digitalis, Dimorphotheca, Doronicum</i> • <i>Echinacea, Echinops, Echium, Erigeron, Erysimum, Eschscholzia, Eustoma</i> • <i>Fatsia, Felicia, Freesia</i> • <i>Gaillardia, Galega, Galeopsis, Gazania, Gentiana, Geranium, Gerbera, Geum, Gilia, Glandularia, Glebionis, Gomphrena, Goniolimon, Grevillea, Gypsophila</i> • <i>Helenium, Helianthemum, Helianthus, Heliopsis, Heliotropium, Hesperis, Heteranthesis, Heuchera, Hibiscus, Hippeastrum, Hypericum, Hyssopus</i> • <i>Iberis, Impatiens, Inula, Ipomoea</i> • <i>Jacobaea</i> • <i>Kalanchoe, Kniphofia</i> • <i>Lathyrus, Lavandula, Lavatera, Legousia, Leontopodium, Leonurus, Leucanthemum, Levisticum, Liatris, Lilium, Limonium, Linaria, Linum, Lobelia, Lobularia, Lomelosia, Lonas, Lunaria, Lupinus, Lysimachia</i> • <i>Malcolmia, Malope, Malva, Marrubium, Matricaria, Matthiola, Melissa, Mentha, Mimosa, Mimulus, Mirabilis, Moluccella, Myosotis</i>

	<ul style="list-style-type: none"> • <i>Nemesia, Nemophila, Nepeta, Nicotiana, Nierembergia, Nigella</i> • <i>Oenothera</i> • <i>Papaver, Pelargonium, Penstemon, Pericallis, Perilla, Petunia, Phacelia, Phlox, Pholistoma, Physalis, Pimpinella, Plectocephalus, Plectranthus, Portulaca, Primula, Psephellus, Psylliostachys</i> • <i>Ranunculus, Reseda, Rheum, Rhodanthe, Rudbeckia, Ruta</i> • <i>Saintpaulia, Salpiglossis, Salvia, Sanvitalia, Saponaria, Scabiosa, Schefflera, Schizanthus, Senecio, Silene, Silybum, Sinningia, Solanum, Symphyotrichum</i> • <i>Tagetes, Tanacetum, Thunbergia, Thymus, Torenia, Tripleurospermum, Tropaeolum</i> • <i>Vaccaria, Valeriana, Verbascum, Verbena, Vinca, Viola</i> • <i>Xeranthemum, Xerochrysum</i> • <i>Zinnia</i>
--	--

Annex 4 - Crop groups for viability tests using the tetrazolium method

Crop groups	Species belonging to the following genera
1 (grasses)	<ul style="list-style-type: none"> • <i>Agropyron, Agrostis, Alopecurus, Anthoxanthum, Arrhenatherum, Avenella</i> • <i>Bromus</i> • <i>Chloris, Cynosurus</i> • <i>Dactylis, Deschampsia</i> • <i>Elymus, Eragrostis</i> • <i>Festuca</i> • <i>Holcus</i> • <i>Lolium</i> • <i>Megathyrsus</i> • <i>Panicum, Pascopyrum, Phalaris, Phleum, Poa, Pseudoroegneria</i> • <i>Setaria</i> • <i>Thinopyrum, Trisetum</i> • <i>Urochloa</i>
2 (cereals)	<ul style="list-style-type: none"> • <i>Avena</i> • <i>Hordeum</i> • <i>Oryza</i> • <i>Secale, Sorghum</i> • <i>Triticum, XTriticosecale</i> • <i>Zea</i>
3 (small legumes)	<ul style="list-style-type: none"> • <i>Lotus</i> • <i>Medicago, Melilotus</i> • <i>Onobrychis, Ornithopus</i> • <i>Trifolium</i>
4 (pulses)	NA
5 (other agricultural species)	<ul style="list-style-type: none"> • <i>Helianthus</i> • <i>Brassica</i>
6 (vegetables, spice, herbs, and medicinal species)	<ul style="list-style-type: none"> • <i>Allium, Arctium</i> • <i>Brassica</i> • <i>Cucumis</i> • <i>Lactuca</i> • <i>Solanum</i> • <i>Ocimum</i> • <i>Malva</i>

Crop groups	Species belonging to the following genera
7 (forest species)	<ul style="list-style-type: none"> • <i>Abies, Acer, Amorpha</i> • <i>Berberis</i> • <i>Calocedrus, Carpinus, Chamaecyparis, Chameacyparis, Cornus, Corylus, Cotoneaster, Crataegus, Cupressus</i> • <i>Elaeagnus, Euonymus</i> • <i>Fagus, Fraxinus</i> • <i>Ginkgo</i> • <i>Ilex</i> • <i>Juniperus</i> • <i>Koelreuteria</i> • <i>Ligustrum, Liriodendron</i> • <i>Malus</i> • <i>Pinus, Prunus, Pseudotsuga, Pyrus</i> • <i>Rosa</i> • <i>Styphnolobium, Sorbus</i> • <i>Taxodium, Taxus, Tilia</i> • <i>Viburnum</i>
8 (flower species)	<ul style="list-style-type: none"> • <i>Helianthus</i> • <i>Malva</i> • <i>Solanum</i>