

Amphasys Pollen Analysis Instructions

September 2019



The following recommendations for measurement of pollen or microspores are best practice suggestions. They are most likely to produce good results for viability, development stages and ploidy measurements. It is recommended to use fresh samples, if possible and to filter the samples before use and measure immediately. Dried pollen samples should be rehydrated before measurement. Pollen and microspores are complex particles influenced by many factors that can have an effect on the outcome of the measurements (stability at the flowers/anthers, in AF buffer, pollen/flower storage etc.). Please refer to our QuickGuides for more details.

Overview General information

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| Measurement templates: | Templates for various species can be found at the Amphasys webpage, for other pollen or special applications please contact Amphasys support team. |
| Pollen size: | Pollen size can vary about 20% or even more! Polyploidy influences pollen size. Please contact Amphasys support for special applications. |
| AmphaFluid (AF) buffer recommendations: | Pollen viability: column "AF buffer pollen" Microspores: column "AF buffer microspore" |
| | Further purposes: also try "alternative AF buffers" |
| Sample preparation: | Please refer to the Quickguides |
| Dried, stored pollen: | Rehydration of pollen |
| Sticky or oily pollen: | Add 0.05% Tween 20 or 80 |
| Contact: | For any questions, assistance and templates: support@amphasys.com |

| Species | English | Family | Class Group | Pollen-Size (µm) | Form | Ampha-Chip | Filter size | AF buffer pollen | Additional infos | AF buffer microspores | alternative AF buffers |
|------------------------|------------------|----------------|-------------|------------------|-------------|------------|-------------|------------------|------------------|-----------------------|------------------------|
| Acer campestre | field maple | Sapindaceae | Dicots | 40 | triangular | D | 100 | | | 6 | 5 |
| Acer platanoides | sycamore maple | Sapindaceae | Dicots | 35 | triangular | D | 100 | | | 6 | 5 |
| Acer pseudoplatanus | norway maple | Sapindaceae | Dicots | 40 | triangular | D | 100 | | | 6 | 5 |
| Actinidia deliciosa | kiwi fruit | Actinidiaceae | Dicots | 25 - 50 | triangular | D | 100 | | | 5 | 6 |
| Aesculus hippocastanum | buckeye | Sapindaceae | Dicots | 26 | round | D | 50 | | | 6 | 5 |
| Aesculus pavia | red buckeye | Sapindaceae | Dicots | 30 | round | D | 50 | | | 6 | 5 |
| Agapanthus | lily of the Nile | Amaryllidaceae | Dicots | 55 | prolate | E | 100 | | | 6 | 5 |
| Althaea rosea | hollyhock | Asteraceae | Dicots | 140 | round spiny | E/G | 200 | | | 9 | |
| Allium cepa | onion | Amaryllidaceae | Monocots | 30 | prolate | D | 100 | | | 6 | 4 |
| Allium giganteum | giant onion | Amaryllidaceae | Monocots | 35 | prolate | D | 100 | | | 6 | 4 |
| Allium porrum | leek | Amaryllidaceae | Monocots | 30 | prolate | D | 50 | | | 6 | 4 |
| Allium schoenoprasum | chive | Amaryllidaceae | Monocots | 26 | prolate | D | 50 | | | 6 | 4 |
| Allium ursinum | wild garlic | Amaryllidaceae | Monocots | 30 | prolate | D | 100 | | | 6 | 4 |
| Alnus glutinosa | alder | Betulaceae | Dicots | 25 | round | D | 50 | | | 6 | 5 |
| Aloe vera | aloe | Aloaceae | Monocots | 38 | prolate | D | 100 | | | 6 | |
| Astroemeria | Peruvian lily | Liliaceae | Monocots | 50x120 | prolate | E | 50 | | | 6 | |
| Amaryllis | amaryllis | Amaryllidaceae | Monocots | 90 | prolate | E | 150 | | | 6 | 4 |
| Amelanchier ovalis | snowy mespilus | Rosaceae | Dicots | 32 | triangular | D | 100 | | | 6 | |
| Anemone hupehensis | Japanese anemone | Ranunculaceae | Dicots | 22 | round | F | 50 | | | 6 | |
| Anemone nemorosa | anemone | Ranunculaceae | Dicots | 30 | round | D | 50 | | | 6 | |
| Anthemis tinctoria | mayweed | Asteraceae | Dicots | 30 | round spiny | D | 50 | | | 6 | |
| Anthurium | flamingo flower | Araceae | Monocots | 15-20 | round | F | 50 | | | 6 | |
| Aquilegia vulgaris | columbine | Ranunculaceae | Dicots | 25 | triangular | F | 100 | | | 6 | |
| Arabidopsis thaliana | mouse-ear cress | Brassicaceae | Dicots | 15x30 | prolate | F | 50 | | | 7 | 3 / 5 |

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|-----------------------------------|----------------------|---------------|-------------|------------------|-------------|------------|-------------|------------------|---------------------------------------|-----------------------|------------------------|
| Asparagus | asparagus | Asparagaceae | Monocots | 20 - 25 | prolate | F | 50 | | | | 6 |
| Aster amelius | aster | Asteraceae | Dicots | 32 | round spiny | D | 100 | | | | |
| Aubrieta | aubrieta | Brassicaceae | Dicots | 30 | prolate | D | 50 | | | 3 | 3 / 5 |
| Avena sativa | oat | Poaceae | Monocots | 40-50 | round | E | 100 | | | 6 | |
| Averrhoa carambola | carambola | Oxalidaceae | Dicots | 28 | round | D | 50 | | | | |
| Bellis perennis | daisy | Compositae | Dicots | 20 | round spiny | F | 50 | | | | 4 |
| Begonia spec | begonia | Begoniaceae | Dicots | 10-25 | prolate | F | 50 | | | | 5 |
| Berberis thunbergii | red barberry | Berberidaceae | Dicots | 35 | round | D | 50 | | | | |
| Beta vulgaris | sugar beet and other | Amaranthaceae | Dicots | 25 | round | D | 100 | | | 4 | 6 |
| Betula spec | birch | Betulaceae | Dicots | 18 - 30 | round | F/D | 50 | | | | 5 |
| Betula pendula | birch | Betulaceae | Dicots | 22 | round | F | 50 | | | | 5 |
| Brassica napus | rape seed / canola | Brassicaceae | Dicots | 20-25 | prolate | F/D | 50 | | measure immediately after sample prep | 3 | 3 / 5 |
| Brassica napus rapifera | swede | Brassicaceae | Dicots | 20-26 | prolate | F/D | 50 | | | 3 | 3 / 5 |
| Brassica oleracea var. botrytis | cauliflower | Brassicaceae | Dicots | 20-25 | prolate | F/D | 50 | | | 3 | 3 / 5 |
| Brassica oleracea var. gongylodes | kohlrabi | Brassicaceae | Dicots | 20-25 | prolate | F/D | 50 | | | 3 | 3 / 5 |
| Brassica oleracea var. gemmifera | Brussels sprouts | Brassicaceae | Dicots | 20-26 | prolate | F/D | 50 | | | 3 | 3 / 5 |
| Brassica oleracea var. italica | broccoli | Brassicaceae | Dicots | 20-25 | prolate | F/D | 50 | | | 3 | 3 / 7 |
| Brassica oleracea cultivar | other cultivars | Brassicaceae | Dicots | 20-25 | prolate | F/D | 50 | | measure immediately after sample prep | 3 | 3 / 5 |
| Brassica rapa chinensis | Chinese cabbage | Brassicaceae | Dicots | 20-25 | prolate | F/D | 50 | | | 3 | 3 / 5 |
| Bougainvillea glabra | bougainvillea | Nyctaginaceae | Dicots | 35 | round | D | 50 | | | | 5 |
| Calendula officinalis | marigold | Astereaceae | Dicots | 30 | round spiny | D | 50 | | | | 5 |
| Calluna vulgaris | common heather | Ericaceae | Dicots | 20 - 30 | tetrad | D | 50 | | | | |
| Camellia japonica | camellia | Theaceae | Dicots | 45 | triangular | D | 100 | | | | |
| Campanula spec. | bell flower | Campanulaceae | Dicots | 20 - 35 | round | D | 50 | | | | 6 |
| Capsicum annuum | sweet pepper | Solanaceae | Dicots | 25 - 30 | triangular | D | 50 | | | 4 | 4 |
| Capsicum frutescens | chilli | Solanaceae | Dicots | 30 - 35 | triangular | D | 50 | | | 4 | 4 |
| Capsicum spec. | pepper | Solanaceae | Dicots | 20 - 35 | triangular | D | 50 | | | 4 | 6 / 4 |
| Cardamine pratense | lady's smock | Brassicaceae | Dicots | 32 | round | D | 50 | | | | 5 / 6 |
| Carica papaya | papaya | Caricaceae | Dicots | 36 | round | D | 100 | | | | 5 / 3 |
| Carpinus betulus | common hornbeam | Betulaceae | Dicots | 30 - 40 | round | D | 100 | | | | 5 |
| Carya illinoensis | pecan | Juglandaceae | Dicots | 30x60 | prolate | E | 50 | | | | |
| Castanea sativa | chestnut | Fagaceae | Dicots | 16 | triangular | F | 50 | | | | |
| Cenchrus ciliaris | buffel-grass | Poaceae | Monocots | 60 | round | E | 100 | | | | |
| Centaurea montana | mountain bluet | Asteraceae | Dicots | 36 | round spiny | D | 100 | | | | |
| Cercis canadensis | eastern redbud | Fabaceae | Dicots | 25 | triangular | D | 50 | | | | 6 |
| Chelidonium majus | greater celandine | Papaveraceae | Dicots | 27 | triangular | D | 50 | | | | 5 |
| Chrysanthemum frutescens | Paris daisy | Astereaceae | Dicots | 42 | round spiny | E | 100 | | | | 5 |
| Chrysanthemum grandiflorum | chrysants | Astereaceae | Dicots | 35 | round spiny | D | 100 | | | | 5 |
| Chrysanthemum spec. | chrysants | Astereaceae | Dicots | 30 - 45 | round spiny | D/E | 100 | | | | 5 |
| Cichorium endivia | endive | Astereaceae | Dicots | 80-100 | round spiny | E | 150 | | | | 4 |
| Cichorium intybus | chicory | Astereaceae | Dicots | 40 | round spiny | D/E | 100 | | | 3 | 5 / 3 |
| Cirsium vulgare | spear thistle | Astereaceae | Dicots | 40 | round spiny | D/E | 100 | | | | 5 |
| Citrullus lanatus | water melon | Cucurbitaceae | Dicots | 40x60 - 60x90 | prolate | E | 150 | | 5 + Tween | 5 | 9 |
| Citrus x limonia | rangpur | Rutaceae | Dicots | 35 | round | D | 50 | | | 6 | 5 |
| Citrus x sinensis | orange | Rutaceae | Dicots | 32 | round | D | 50 | | | 6 | 5 |
| Clematis cultivars | clematis | Ranunculaceae | Dicots | 28 | round | D | 50 | | | | |
| Clematis vitalba | old man's beard | Ranunculaceae | Dicots | 22 | round | F/D | 50 | | | | |
| Coffea arabica | coffee | Rubiaceae | Dicots | 36 | round | D | 50 | | | 6 | |

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| Colutea arborescens | bladder-senna | Fabaceae | Dicots | 38 | triangular | D | 100 | | | | 6 |
| Coriandrum sativum | coriander | Apiaceae | Dicots | 15x30 | prolate | F/D | 50 | | | | |
| Cornus sanguinea | common dogwood | Cornaceae | Dicots | 58 | round | E | 100 | | | | |
| Cortaderia selloana | pampas grass | Poaceae | Monocots | 50 | round | E | 100 | | | | |
| Corylus avellana | hazelnut | Corylaceae | Dicots | 20 - 30 | round | F | 50 | | | | 5 |
| Couroupita guianensis | cannonball tree | Lecythidaceae | Dicots | 20x50 | triangular | D | 100 | | | | |
| Cucumis melo | melon | Cucurbitaceae | Dicots | 50 | round | E | 100 | | | 5 | 8 |
| Cucumis sativus | cucumber | Cucurbitaceae | Dicots | 60 | round | E | 100 | | 5 +Tween | 5 +Tween | 9 |
| Cucurbita maxima | squash, pumpkin | Cucurbitaceae | Dicots | 150-200 | round spiny | G | 300 | | frequency 2 at 12MHz | | |
| Cucurbita moschata | butternut squash | Cucurbitaceae | Dicots | 150-200 | round spiny | G | 300 | | frequency 2 at 12MHz | | |
| Cucurbita pepo | courgette, marrow, zucchini | Cucurbitaceae | Dicots | 150-200 | round spiny | G | 300 | | frequency 2 at 12MHz | | |
| Cuphea hyssopifolia | false heather | Lythraceae | Dicots | 22 | round | F | 50 | | | | |
| Cyclamen persicum | cyclame | Primulaceae | Dicots | 15-20 | round | F | 100 | | | | 4 |
| Cynara cardunculus | artichoke | Asteraceae | Dicots | 65 | round spiny | E | 100 | | | | 6 / 9 |
| Dahlia cultivars | dahlia | Asteraceae | Dicots | 45 | round spiny | E | 100 | | | 5 | 5 / 3 |
| Daucus carota | carrot | Umbelliferaceae | Dicots | 15x30 | prolate | F/D | 50 | | | 4 | 4 / 5 / 6 |
| Delosperma | ice plant | Aizoaceae | Dicots | 20 | round | F | 50 | | | | 6 |
| Dianthus cultivars | pink | Caryophyllaceae | Dicots | 30 - 50 | round | D | 100 | | | | 5 |
| Echium vulgare | blueweed | Boraginaceae | Dicots | 17 | round | F | 50 | | | | |
| Elaeis guineensis | oil palm | Arecaceae | Monocots | 30 | triangular | D | 50 | | | | |
| Erica gracilis | heath | Ericaceae | Dicots | 30-40 | tetrad | D | 100 | | | | |
| Erigeron karvinskianus | Mexican fleaban | Asteraceae | Dicots | 25 | round spiny | F | 50 | | | | |
| Eucalyptus spec | Eucalyptus | Myrtaceae | Dicots | 26 | triangular | F/D | 50 | | | | |
| Euphorbia verrucosa | spurge | Euphorbiaceae | Dicots | 50 | round | E | 100 | | | | |
| Eruca sativa | rucola | Brassicaceae | Dicots | 20 | triangular | F | 50 | | | 3 | 3 / 5 |
| Fagus sylvatica | common beech | Fagaceae | Dicots | 50 | round | D/E | 100 | | | | |
| Festuca arundinacea | tall fescue | Poaceae | Monocots | 40 | round | D/E | 100 | | | | 4 |
| Foeniculum vulgare | florence fennel | Umbelliferaceae | Dicots | 30 | prolate | D | 50 | | | 3 | 3 / 5 / 6 |
| Forsythia intermedia | Forsythia | Oleaceae | Dicots | 25-30 | round | D | 100 | | | | 5 |
| Fragaria magna | strawberry | Rosaceae | Dicots | 25 | triangular | D | 50 | | | 6 | |
| Fragaria vesca | strawberry | Rosaceae | Dicots | 23 | triangular | F/D | 50 | | | 6 | |
| Fraxinus excelsior | ash | Oleaceae | Dicots | 22 | triangular | F/D | 50 | | | | |
| Fraxinus ornus | flower ash | Oleaceae | Dicots | 22 | triangular | F/D | 50 | | | | |
| Gaillardia | blanket flower | Asteraceae | Dicots | 30 | round spiny | D | 50 | | | | |
| Gaura lindheimeri | gaura | Onagraceae | Dicots | 150 | triangular | E/G | 200 | | | 9 | |
| Gazania spec | ganzania | Asteraceae | Dicots | 30 - 40 | round texturec | D | 100 | | | 6 | 5 |
| Geranium spec | cranesbill | Geraniaceae | Dicots | 70-120 | round | E | 150 | | | 5 | 8 |
| Gerbera spec | gerbera | Asteraceae | Dicots | 50 | round spiny | E | 100 | | | 5 | 6 |
| Gladiolus × hortulanus | gladiolus | Iridaceae | Monocots | 80 | round | E | 150 | | | 6 | 9 |
| Gloriosa superba | flame lily | Colchicaceae | Dicots | 40 | prolate | D | 100 | | | 6 | |
| Glycine max | soy bean | Fabaceae | Dicots | 20 | round | F | 50 | | | 6 | 5 |
| Gossypium hirsutum | cotton | Malvaceae | Dicots | 150+ | round spiny | G | 300 | | | 9 | |
| Guizotia abyssinica | noog, ramtilla | Asteraceae | Dicots | 30 | round spiny | D | 50 | | | 6 | |
| Helianthus annuus | sunflower | Asteraceae | Dicots | 45 | round spiny | D/E | 100 | | | 5 | 4 / 6 |
| Helleborus spec | christmas rose | Ranunculaceae | Dicots | 25 - 40 | triangular | D | 50 | | | 6 | 4 |
| Hemerocallis | spider lily | Amaryllidaceae | Monocots | 80 | round | E | 150 | | | 6 | 9 |
| Hibiscus syriacus | hibiscus | Malvaceae | Dicots | 150-200 | round spiny | G | 300 | | | 9 | 5 |
| Hippeastrum gracilis | amaryllis | Amaryllidaceae | Monocots | 90 | round | E | 150 | | | 6 | |

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|---------------------------------|-------------------|----------------|-------------|------------------|--------------|------------|-------------|------------------|-------------------------------------|-----------------------|------------------------|
| Hordeum vulgare | barley | Poaceae | Monocots | 45 | round | E | 100 | 6 | mature pollen short viability <0.5h | 6 | 4 |
| Hyacinthus orientalis | hyacinths | Asparagaceae | Monocots | 40-60 | prolate | E | 100 | 6 | | | 4 |
| Hydrangea macrophylla | hydrangea | Hydrangeaceae | Dicots | 20 | round | F | 50 | 5 | | | 6 |
| Hydrangea paniculata | hydrangea | Hydrangeaceae | Dicots | 20 | round | F | 50 | 5 | | | 6 |
| Hypericum | St John's wort | Guttiferaeae | Dicots | 20 - 25 | round | F/D | 50 | 6 | | | 3 |
| Ilex aquifolium | holly | Aquifoliaceae | Dicots | 35 | round | D | 50 | 6 | | | |
| Impatiens x neuguninea | Impatiens | Balsaminaceae | Dicots | 20x60 | prolate | E | 100 | 6 | | | 5 |
| Juglans regia | walnut | Juglandaceae | Dicots | 40 | round | D | 100 | 6 | | | |
| Justicia adhatoda | Malabar nut | Acanthaceae | Dicots | 20x50 | prolate | D | 100 | 6 | | 6 | |
| Lactuca sativa | lettuce | Astereaceae | Dicots | 30 | round spiny | D | 50 | 3 | short flower time | 3 | 6 |
| Lampranthus spec | | Aizoaceae | Dicots | 20 | round | F | 50 | 6 | | | |
| Larix | larch | Pinacea | Pinopsida | 40-60 | spherical | E | 100 | 6 | | | |
| Lavandula officinalis | lavender | Lamiaceae | Dicots | 40 | prolate | D | 100 | 6 | | | 5 |
| Leucanthemum vulgare | oxeye daisy | Asteraceae | Dicots | 30 | round spiny | D | 50 | 6 | | | 5 |
| Lilium spec | lily | Liliaceae | Monocots | 100 | prolate | E | 150 | 6 | | | 9 |
| Lolium multiflorum | Italian rye-grass | Poaceae | Monocots | 40 | round | D/E | 100 | 6 | | | 4 |
| Lolium perenne | German rye-grass | Poaceae | Monocots | 40 | round | D/E | 100 | 6 | | | 4 |
| Magnolia x soulangiana | magnolia | Magnoliaceae | Magnoliids | 65 | prolate | E | 100 | 5 | | | 6 |
| Malus domestica | apple | Rosaceae | Dicots | 38 | round | D | 50 | 6 | | | 5 |
| Malva sylvestris | mallow | Malvaceae | Dicots | 130 | round, spiny | E/G | 200 | 9 | | | |
| Mandevilla | rocktrumpet | Apocynaceae | Dicots | 55 | round | E | 100 | 6 | | | |
| Matricaria chamomille | chamomilli | Asteraceae | Dicots | 25 | round, spiny | F/D | 50 | 6 | | | 5 |
| Mentha x piperita | mint | Lamiaceae | Dicots | 30-40 | prolate | D | 100 | 5 | | | 6 |
| Mentha suaveolens x piperita | mint grapefruit | Lamiaceae | Dicots | 30-40 | prolate | D | 100 | 5 | | | 6 |
| Momordica spec | bittergourd | Cucurbitaceae | Dicots | 80 | round | E | 150 | 5 + Tween | | 5 + Tween | 8 |
| Nicotiana spec | tobacco | Solanaceae | Dicots | 35 | round | D | 50 | 6 | | 4 | 4 |
| Ocimum basilicum | basil | Lamiaceae | Dicots | 60 | round | E | 100 | 6 | | | 5 |
| Oenothera biennis | evening primrose | Onagraceae | Dicots | 160 | triangular | G | 200 | 9 | | | |
| Olea europaea | olive tree | Oleaceae | Dicots | 25 | triangular | D | 50 | 6 | | | 5 |
| Ononis arvensis | field restharrow | Fabaceae | Dicots | 20 | prolate | F | 50 | 5 | | | 6 |
| Oryza sativa | rice | Poaceae | Monocots | 30-45 | round | D/E | 100 | 6 | extreme short viability | 4 | 4 |
| Papaver nudicaule | Island poppy | Papaveraceae | Dicots | 35 | round | D | 50 | 6 | | | 5 |
| Passiflora edulis | passion flower | Passifloraceae | Dicots | 40 - 70 | polygonal | E | 100 | 6 | | | |
| Pentas lanceolata | spruce | Rubiaceae | Dicots | 24 | tetracolpate | F | 50 | 6 | | | |
| Petroselinum crispum | parsley | Apiaceae | Dicots | 23 | prolate | F | 50 | 6 | | | |
| Petunia spec | petunia | Solanaceae | Dicots | 30 | triangular | D | 50 | 6 | | | 4 |
| Phacelia tanacetifolia | blue tansy | Boraginaceae | Dicots | 24 | round | F | 50 | 6 | | | |
| Phalaenopsis | orchids | Orchidaceae | Dicots | 15 | round | F | 50 | 5 | | | |
| Phaseolus spec. | bean | Fabaceae | Dicots | 30 - 45 | triangular | D | 100 | 5 | | | 4 / 6 |
| Phoenix dactylifera | date palm | Arecaceae | Monocots | 10x15 | prolate | F | 50 | 6 | | | |
| Phlox paniculata | phlox | Polemoniaceae | Dicots | 50 | round | E | 100 | 6 | | | |
| Picea abies | pine | Pinacea | Pinopsida | 60-100 | bisaccate | E | 150 | 6 (floating!) | | | |
| Pinus sylvestris | pine | Pinacea | Pinopsida | 60-100 | bisaccate | E | 150 | 6 (floating!) | | | |
| Pistacia vera | pistachio | Anacardiaceae | Dicots | 30 | round | D | 50 | 6 | | | |
| Pisum sativum | pea | Fabaceae | Dicots | 40 - 50 | prolate | D | 100 | 4 | | 4 | 5 / 6 |
| Portulaca grandiflora | rose moss | Portulacaceae | Dicots | 80 | round | E | 150 | 6 | | | |
| Primula vulgaris (syn. acaulis) | primerose | Primulaceae | Dicots | 15-20 | round | F | 50 | 6 | | | 5 |
| Prunus avium | cherry | Rosaceae | Dicots | 40 | triangular | D | 100 | 6 | | | |

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| Prunus dulcis | almond | Rosaceae | Dicots | 32x55 | prolate/tri | D/E | 100 | | 6 | | |
| Prunus spinosa | blackthorn | Rosaceae | Dicots | 44 | triangular | D | 100 | | 6 | | |
| Prunus serrulata | Japanese cherry | Rosaceae | Dicots | 40 | triangular | D | 100 | | 6 | | |
| Punica granatum | pomegranate | Lythraceae | Dicots | 26 | triangular | F | 50 | | 6 | | |
| Pyrus communis | pear | Rosaceae | Dicots | 32 | triangular | D | 50 | | 6 | | |
| Quercus robur | common oak | Fagaceae | Dicots | 38 | triangular | D | 50 | | 6 | | |
| Ranunculus asiaticus | persian buttercup | Ranunculaceae | Dicots | 20 - 30 | round | F/D | 50 | | 6 | | 5 |
| Ranunculus arvensis | corn buttercup | Ranunculaceae | Dicots | 25 | prolate | F | 50 | | 6 | | 5 |
| Raphanus sativus sativus | radish | Brassicaceae | Dicots | 25 | prolate | F | 50 | | 7 | 3 | 3 / 5 |
| Raphanus sativus oleiferus | radish | Brassicaceae | Dicots | 25 | prolate | F | 50 | | 7 | 3 | 3 / 5 |
| Rheum rhabarbarum | rhubarb | Polygonaceae | Dicots | 35 | round | D | 50 | | 6 | | 5 |
| Rhododendron | rhododendron | Ericaceae | Dicots | 40 - 70 | tetradae | E | 100 | | 6 | | 5 |
| Ribes nigrum | blackcurrant | Grossulariaceae | Dicots | 38 | round | D | 50 | | 6 | | |
| Ribes rubrum | redcurrant | Grossulariaceae | Dicots | 33 | round | D | 50 | | 6 | | |
| Rosa canina | dogrose | Rosaceae | Dicots | 40 | round | D | 100 | | 6 | | |
| Rosa indica | tearose | Rosaceae | Dicots | 35 | round | D | 50 | | 6 | | |
| Rosa multiflora | multiflora rose | Rosaceae | Dicots | 35 | round | D | 50 | | 6 | | |
| Rosmarinus officinalis | rosmarine | Lamiaceae | Dicots | 45 | prolate | D/E | 100 | | 5 | | 6 |
| Rubus fruticosus | blackberry | Rosaceae | Dicots | 35 | triangular | D | 50 | | 6 | | |
| Rubus idaeus | raspberry | Rosaceae | Dicots | 30 | triangular | D | 50 | | 6 | | |
| Rubus fruticosus x idaeus | tayberry | Rosaceae | Dicots | 30 | triangular | D | 50 | | 6 | | |
| Rudbeckia hirta | rudbeckia | Asteraceae | Dicots | 35 | round spiny | D | 50 | | 6 | | |
| Saccharum officinarum | sugarcane | Poaceae | Monocots | 40-120 | round | E | 150 | | 6 | | 9 |
| Salix viminalis | basket willow, osier | Salicaceae | Dicots | 20 | round | F | 50 | | 6 | | 5 |
| Salvia farinacea | sage | Lamiaceae | Dicots | 30 | prolate | D | 50 | | 6 | | 5 |
| Salvia officinalis | sage | Lamiaceae | Dicots | 45 | prolate | D | 100 | | 6 | | 5 |
| Salvia pratensis | meadow sage | Lamiaceae | Dicots | 40 - 50 | prolate | D/E | 100 | | 6 | | 5 |
| Sambucus nigra | elder | Caprifoliaceae | Dicots | 22 | round | F | 50 | | 6 | | |
| Saxifraga rosacea | rockfoil | Saxifragaceae | Dicots | 30 | triangular | D | 50 | | 6 | 6 | 5 |
| Secale cereale | rye | Poaceae | Monocots | 50-60 | prolate | E | 100 | | 6 | 6 | 4 |
| Sedum multicolorum | stonecrop | Crassulaceae | Dicots | 24 | triangular | F | 50 | | 6 | | |
| Sedum sieboldii | October stonecrop | Crassulaceae | Dicots | 18 | triangular | F | 50 | | 6 | | |
| Silene vulgaris | bladder campion | Caryophyllaceae | Dicots | 40 - 50 | round | D/E | 100 | | 6 | | |
| Silybum marianum | cardus marianus | Asteraceae | Dicots | 70 | round | E | 100 | | 6 | | 5 |
| Sinapis arvensis | charlock mustard | Brassicaceae | Dicots | 25 | prolate | F/D | 50 | | 7 | 3 | 3 / 5 |
| Solanum lycopersicon | tomato | Solanaceae | Dicots | 25 | round | F/D | 50 | | 6 | 4 | 4 / 2 |
| Solanum melongena | eggplant | Solanaceae | Dicots | 25-30 | round | D | 50 | | 6 | 4 | 4 |
| Solanum quitoense | quito orange | Solanaceae | Dicots | 25 | round | D | 50 | | 6 | 6 | 4 |
| Solanum tuberosum | potato | Solanaceae | Dicots | 20 | round | F/D | 50 | | 6 | 6 | 4 |
| Sonchus arvensis | field milk thistle | Asteraceae | Dicots | 40 | round | D | 100 | | 6 | | 5 |
| Sorghum bicolor | sorghum, dari | Poaceae | Monocots | 40-50 | round | E | 100 | | 6 | 6 | 4 |
| Spinacia oleracea | spinach | Amaranthaceae/C | Dicots | 50 | round | E | 100 | | 4 | 4 | 5 |
| Syringa vulgaris | lilac | Oleaceae | Dicots | 30 | round | D | 50 | | 6 | | 5 |
| Tagetes patula | marigold | Asteraceae | Dicots | 45 | round spiny | D | 100 | | 6 | 5 | 5 |
| Taraxacum officinale | dandelion | Asteraceae | Dicots | 30 | round spiny | D | 50 | | 6 | | 5 |
| Theobroma cacao | cacao | Malvaceae | Dicots | 20 | round | F | 50 | | 6 | 6 | |
| Thymus vulgaris | thyme | Lamiaceae | Dicots | 35 - 45 | prolate | D | 100 | | 6 | | 5 |
| Tilia platyphyllos | largeleaf linden | Tiliaceae | Dicots | 35 | prolate | D | 50 | | 6 | | 5 |

| Species | English | Family | Class Group | Pollen-Size (µm) | Form | Ampha-Chip | Filter size | | AF buffer pollen | Additional infos | AF buffer microspores | alternative AF buffers |
|-------------------------|--------------|----------------|-------------|------------------|------------|------------|-------------|--|------------------|-------------------------------------|-----------------------|------------------------|
| Trifolium | clover | Fabaceae | Dicots | 30 | round | D | 50 | | 5 | | | 6 |
| Triticum spp. | wheat | Poaceae | Monocots | 40 - 70 | round | D/E | 100 | | 6 | mature pollen short viability <0.5h | 6 / 4 | 4 |
| Tullipa cultivars | tulip | Liliaceae | Monocots | 60 | round | E | 100 | | 6 | | 6 | 4 |
| Turnera diffusa | damiana | Passifloraceae | Dicots | 30 | round | D | 50 | | 6 | | | |
| Ulmus glabra | wych elm | Ulmaceae | Dicots | 32 | round | D | 50 | | 6 | | | |
| Viburnum opulus | guelder-rose | Adoxaceae | Dicots | 25 | round | F/D | 50 | | 6 | | | 5 |
| Vicia spec | vetches | Fabaceae | Dicots | 30-40 | round | D | 50 | | 5 | | 5 | |
| Vicia faba | broad bean | Fabaceae | Dicots | 50 | prolate | D/E | 100 | | 5 | | 5 | |
| Vicia villosa | winter vetch | Fabaceae | Dicots | 35 | prolate | D | 50 | | 5 | | | 6 |
| Vinca spec. | vinca | Apocynaceae | Dicots | 60-80 | round | E | 100 | | 5 | | | 6 |
| Viola cornuta | violet | Violaceae | Dicots | 40 | round | D/E | 100 | | 6 | | | |
| Viola wittrockiana | violet | Violaceae | Dicots | 70 | round | E | 100 | | 6 | | | |
| Vitis vinifera | grape | Vitaceae | Dicots | 30 | round | F/D | 50 | | 6 | | | |
| Weigela florida | weigela | Caprifoliaceae | Dicots | 45 | round | E | 100 | | 6 | | | |
| Wisteria sinensis | glycine | Fabaceae | Dicots | 30 | triangular | D | 50 | | 6 | | | 5 |
| Zantedeschia aethiopica | calla | Araceae | Monocots | 50 | round | E | 100 | | 6 | | | |
| Zea mays | corn, maize | Poaceae | Monocots | 80 - 120 | round | E | 150 | | 6 | mature pollen 2 - 4h viability | 6 | 9 |