

Seeds And Fruits - Evaluate

Pericarp

Epicarp

- | | | | |
|--------------------------------------|---------------------------------------|------------------------------------|-----------------------------------|
| ☐ Thin walled | ☐ Thick walled | ☐ Irregular | ☐ Striated |
| ☐ Polygonal | ☐ Stomata | | |

Mesocarp

- | | | | |
|--------------------------------------|---------------------------------------|--------------------------------------|------------------------------------|
| ☐ Thin walled | ☐ Thick walled | ☐ Rectangular | ☐ Polygonal |
| ☐ Reticulate | ☐ Oval | ☐ Colored | |

Endocarp

- | | | | |
|--------------------------------------|---|------------------------------------|------------------------------------|
| ☐ Thin walled | ☐ Sinuous walled | ☐ Elongated | ☐ Polygonal |
|--------------------------------------|---|------------------------------------|------------------------------------|

Testa

Epidermis

- | | | | |
|--|---------------------------------------|------------------------------------|---|
| ☐ Thin walled | ☐ Thick walled | ☐ Colorless | ☐ Striated |
| ☐ Oval | ☐ Elongated | ☐ Hexagonal | ☐ Yellow content |
| ☐ Brown content | ☐ Stomata | | |

Additional layer

- | | | | |
|--------------------------------------|-------------------------------------|--|----------------------------------|
| ☐ Bearer cell | ☐ Spool cell | ☐ Palisade cell | ☐ Arillus |
|--------------------------------------|-------------------------------------|--|----------------------------------|

Endosperm

Occurrence

- | | | | |
|---------------------------------------|--|-------------------------------|--------------------------------------|
| ☐ Absent | ☐ Dominant | ☐ Wide | ☐ Thin walled |
| ☐ Thin layered | ☐ Multi layered | | |

Shape

- | | | |
|-------------------------------|--------------------------------------|------------------------------------|
| ☐ Oval | ☐ Rectangular | ☐ Polygonal |
|-------------------------------|--------------------------------------|------------------------------------|

Parenchyma cell

Occurrence

☐ N/A☐ Few☐ Abundant☐ Groups

Wall

☐ Thin☐ Thickened☐ Uneven☐ Wrinkled☐ Irregular swelling☐ Pitted☐ Slit pits☐ Round pits☐ Lignified☐ Non lignified

Lumen filled with

☐ Aleurone grains☐ Starch granules☐ Mucilage☐ Calcium oxalate crystals☐ Oil globules☐ Brownish secretions☐ Reticulated

Shape

☐ Oval☐ Rounded☐ Elongated☐ Rectangular☐ Polygonal☐ Irregular

Aleurone grains

Occurrence

☐ Endosperm☐ Cotyledons☐ Embryo☐ Distributed throughout tissue

Size

☐ Small☐ Large

Shape

☐ Round☐ Oval☐ Ovate☐ Spherical☐ Globoid☐ Crystalloid☐ Irregular

In association with

☐ Fixed Oil☐ Starch☐ Fat☐ Calcium Oxalate crystal

Starch

Occurrence

☐ NA☐ Few☐ Abundant

Shape

☐ Simple☐ Compound☐ Small☐ Round☐ Oval☐ Spherical☐ Triangular

Type of hilum

☐ Narrow☐ Cleft☐ Radiate☐ Slit☐ Eccentric☐ Centrally located

Calcium Oxalate Crystals

Occurrence

- | | | | |
|--|------------------------------------|---|--|
| ☐ NA | ☐ Testa | ☐ Cotyledons | ☐ Idioblasts (mesocarp) |
| ☐ Aleurone grains | ☐ Perisperm | ☐ Pericarp epidermis | ☐ Seed coat |

Shape

- | | | | |
|------------------------------------|--|---|--|
| ☐ Clusters | ☐ Rosettes | ☐ Acicular | ☐ Microsphenoidal |
| ☐ Sandy | ☐ Needles | ☐ Idioblasts | ☐ Rod shaped |
| ☐ Prismatic | ☐ Crystal layer | ☐ Crystal sheath | |

Stone cells

Occurrence

- | | | | |
|--------------------------------|------------------------------|-----------------------------------|-----------------------------------|
| ☐ N/A | ☐ Few | ☐ Abundant | ☐ Isolated |
| ☐ Group | | | |

Walls

- | | | | |
|---|--|--|---|
| ☐ Thin walled | ☐ Thick walled | ☐ Striated | ☐ Beaded |
| ☐ Crenate margin | ☐ Projections | ☐ Pitted | ☐ Radiating pits |
| ☐ Branching pits | ☐ Transversely pitted | ☐ Distinctly pitted | ☐ Lignified |

Shape

- | | | | |
|-------------------------------------|---------------------------------------|--------------------------------------|-------------------------------------|
| ☐ Oval | ☐ Circular | ☐ Rounded | ☐ Spherical |
| ☐ Oblong | ☐ Isodiametric | ☐ Irregular | ☐ Angular |
| ☐ Triangular | ☐ Squarish | ☐ Rectangular | ☐ Pentagonal |
| ☐ Polyhedral | ☐ Wheel | | |

Lumen

- | | | | |
|------------------------------------|-------------------------------|---------------------------------|---------------------------------|
| ☐ NA | ☐ Wide | ☐ Narrow | ☐ Pitted |
| ☐ Slit like | | | |

Sclereids

Occurrence

- | | | | |
|--------------------------------|------------------------------|-----------------------------------|-----------------------------------|
| ☐ N/A | ☐ Few | ☐ Abundant | ☐ Isolated |
| ☐ Group | | | |

Walls

- | | | | |
|---------------------------------------|---|--|---|
| ☐ Thin walled | ☐ Thick walled | ☐ Three sided thickened | ☐ Beaded |
| ☐ Branched | ☐ Striations | ☐ Projections | ☐ Peg like extension |
| ☐ Pitted walls | ☐ Radiating pits | ☐ Simple pits | ☐ Distinct pits |
| ☐ Lignified | | | |

Walls

- | | | | |
|---------------------------------------|---|--|---|
| ☐ Thin walled | ☐ Thick walled | ☐ Three sided thickened | ☐ Beaded |
| ☐ Branched | ☐ Striations | ☐ Projections | ☐ Peg like extension |
| ☐ Pitted walls | ☐ Radiating pits | ☐ Simple pits | ☐ Distinct pits |
| ☐ Lignified | | | |

Shape

- | | | | |
|---------------------------------------|--------------------------------------|--------------------------------------|-------------------------------------|
| ☐ Oval | ☐ Circular | ☐ Rounded | ☐ Spherical |
| ☐ Isodiametric | ☐ Rectangular | ☐ Polyhedral | ☐ Pentagonal |
| ☐ Triangular | ☐ Cylindrical | ☐ Elongated | ☐ Fibre like |
| ☐ Very long | ☐ Blunt end | ☐ Pointed end | ☐ Oblong |
| ☐ Cone shaped | | | |

Lumen

- | | | | |
|-----------------------------|-------------------------------|---------------------------------|---------------------------------|
| ☐ NA | ☐ Wide | ☐ Narrow | ☐ Pitted |
|-----------------------------|-------------------------------|---------------------------------|---------------------------------|

Vessels

Occurrence

- | | | | |
|--------------------------------|------------------------------|-----------------------------------|-----------------------------------|
| ☐ N/A | ☐ Few | ☐ Numerous | ☐ Isolated |
| ☐ Group | | | |

Walls

- | | | | |
|--|------------------------------------|--------------------------------------|------------------------------------|
| ☐ Thin | ☐ Thick | ☐ Uneven | ☐ Broken |
| ☐ Swollen | ☐ Septate | ☐ Oblique end | ☐ Slit pits |
| ☐ Bordered pits | ☐ Lignified | | |

Shape

- | | | | |
|--------------------------------------|---------------------------------|-------------------------------------|------------------------------------|
| ☐ Annular | ☐ Spiral | ☐ Reticulate | ☐ Elongated |
| ☐ Scalariform | | | |

Lumen

- | | |
|-------------------------------|---------------------------------|
| ☐ Wide | ☐ Narrow |
|-------------------------------|---------------------------------|

Cotyledon

- | | | | |
|--------------------------------------|---------------------------------------|--------------------------------------|------------------------------------|
| ☐ NA | ☐ Oval | ☐ Rectangular | ☐ Polygonal |
| ☐ Thin walled | ☐ Thick walled | | |

Trichomes

- | | | | |
|-------------------------------------|--|---------------------------------------|---------------------------------------|
| ☐ NA | ☐ Simple | ☐ Covering | ☐ Glandular |
| ☐ Bicellular | ☐ Multicellular | ☐ Multiseriate | ☐ Thick walled |
| ☐ Stellate | ☐ Lignified | | |

Mucilage

- | | | | |
|------------------------------------|-------------------------------------|------------------------------------|------------------------------------|
| ☐ NA | ☐ Occurrence | ☐ Epidermis | ☐ Endosperm |
| ☐ Trichomes | | | |

Stomata

- | | | | |
|------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|
| ☐ NA | ☐ Anomocytic | ☐ Anisocytic | ☐ Diacytic |
| ☐ Paracytic | ☐ Actinocytic | ☐ Tetracytic | |

Vittae

- | | | | |
|----------------------------------|---|---------------------------------|-------------------------------------|
| ☐ NA | ☐ Irregular cell | ☐ Yellow | ☐ Dark brown |
| ☐ Septate | | | |

Pigment cell

- | | | | |
|-----------------------------|--------------------------------|---------------------------------|--------------------------------------|
| ☐ NA | ☐ Brown | ☐ Yellow | ☐ Pinkish red |
|-----------------------------|--------------------------------|---------------------------------|--------------------------------------|

Fiber

- | | | | |
|-----------------------------|-------------------------------|---------------------------------------|--|
| ☐ NA | ☐ Long | ☐ Thick walled | ☐ Non lignified |
|-----------------------------|-------------------------------|---------------------------------------|--|

Special features

Tegmen

- ☐ NA

Fatty crystal

- ☐ NA

Sclerenchyma

- ☐ NA

Mesophyll cells

☐ NA

Secretory cells

☐ NA

Silica crystals

☐ NA

Search