

Viola spp. (Violaceae)

True seed with or without strophiole.

General shape: obpyriform or elongated obovoid; cross-section semi-circular.

Normal size: 1.5-1.8 x 0.6-1 mm

Color: yellowish brown or light brown.

Texture: smooth and glossy, with scattered undulate pattern visible under magnification.

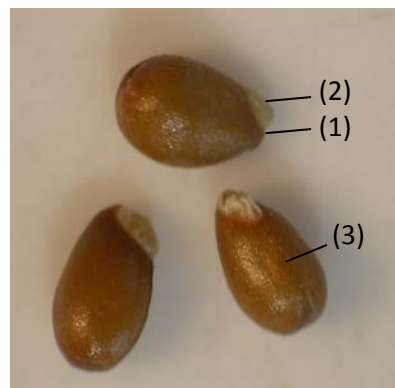
Distinguishing features: base pointed, hilum (1) oblique, covered by whitish strophiole (2); apex rounded to slightly concave, darker than surrounding testa; raphe (3) visible as dark line from hilum to apex.

Embryo: spatulate, straight, embedded in the middle of soft-fleshy endosperm (nutritive tissue) along seed axis.

Note: The seeds of the different Viola species are very similar. There are some differences in size. *Viola odorata* has a bit different seeds with a cover of overlong fine film and very light colour.



Normal size seeds of *V. cornuta* *V. odorata* *V. tricolor*



Viola tricolor seeds under magnification



Seed cross section*

*drawing from ISTA TZ Handbook