



WAS REDUCED POLLEN VIABILITY IN *VIOLA TRICOLOR* L. THE RESULT OF HEAVY METAL POLLUTION OR RATHER THE TESTS APPLIED?

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We used different tests to assess the effect of high soil concentrations of heavy metals on pollen viability in plants from metallicolous (MET) and nonmetallicolous (NONMET) populations. The frequency of viable pollen depended on the test applied: MET plants showed no significant reduction of pollen viability by acetocarmine, Alexander, MTT and X-Gal dye testing, but a drastic reduction of pollen viability in MET flowers (MET 56% vs 72% NONMET) by the FDA test. There was no correlation between pollen viability estimated in histochemical tests and pollen germination *in vitro* or *in vivo*. We discuss the terminology used to describe pollen viability as determined by histochemical tests.

Key words: *Viola tricolor*, pollen viability tests, pollen germination, metalliferous sites, heavy metals, acetocarmine test, Alexander test, X-Gal test, FDA test, MTT test.

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