

## **Long term storing effect on viability and lipid acids profile of *Encyclia adenocarpa* (Lex.) Schltr. seeds**

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Mexico has 6% of the Orchidaceae diversity, one of the most diverse botanic families; however, the habitat loss and the species overexploitation have diminished their populations. Seed banks could be a great option for storing *ex situ* Mexican orchids' germplasm. In this kind of storing, seeds' viability and biochemical profile should be evaluated periodically. In this project *Encyclia adenocarpa* seeds collected in 2007 and 2014, preserved in UNAM FES Iztacala seed bank were aged for 0, 6, 12 and 18 days under 45 °C and 45 % RH conditions. Seeds were germinated in Knudson C (KC) and Phytamax (PH) media (at 25 ± 1 °C with photoperiod light 12h/ dark 12h). Viability was analyzed using tetrazolium blue chloride assay, and the lipid acid profile was determined using GC-MS. Scanning electron microscopy and optic microscopy were used for examining seed morphology. Six days aged seeds grown in Knudson C media showed 95 % of germination, while wild seeds collected in 2007 did not germinate at all. Accelerated and natural ageing of seeds of *E. adenocarpa* reduced unsaturated fatty acid concentration and modified their anatomic and embryonic structure. These damages caused loss of seed viability.