

SEEDS DEHYDRATION AND EMBRYONIC DEVELOPMENT OF *Ilex Paraguariensis*. MIRESKI, M. C.¹; MEDEIROS, A. C. DE S.^{2*}; WENDLING, I.²; PEÑA, M. L. P.³; LAZZAROTTO, M.³ (¹UFSC, Florianópolis - SC, Brasil) (²Embrapa Florestas, Colombo - PR, Brasil) (³UFPR, Curitiba - PR, Brasil) | mariacecilia.agro@gmail.com

Controversial information regarding physiological behavior of *Ilex paraguariensis* St. Hil. seeds has been published. This study evaluated drying effects on embryonic axis morph-physiological development during dehydration. Mature fruits were collected from 15 trees in Ivaí, Parana State, Brazil in March 2015. After pulp removal and preliminary drying, seeds were mixed in equal volumes to form batch of 585g. They were placed in open trays and exposed to dehydration ($10\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ and $25\% \pm 3\% \text{ RH}$) during 0, 7, 14, 21, 28 and 35 days. Experimental design was completely randomized with four replications of 25 seeds for tetrazolium test and three replications of 50 seeds for water content determination. Every 7 days water content, viability and development stages of embryos by the tetrazolium test were evaluated. During this period, moisture content decreased from 10.7% at time 0 to 5.6% after 35 days. Changes in embryonic development from rudimentary to heart and post-heart occurred during increasing exposure to dryness. Thus, embryos passed from globular (30%, 14%, 0% and 0%) to heart shape (52%, 62%, 32% and 20%) at 0, 7, 21 and 35 days, respectively. Post-heart stage increased from 4% in the early evaluation (time 0) to 74% after 35 days. At final observation of exposure to dry chamber conditions, we observed 37% of viable embryos at post-heart stage, however there were no embryos in mature stage. We concluded that *Ilex paraguariensis* seeds are tolerant to dehydration and they are, therefore classified as orthodox. Moreover, embryonic development represented by shape changes increases as exposure to drying in cold environment is extended.

Palavras-chave: orthodox seeds, embryology, tetrazolium, *Ilex paraguariensis*.