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Physiological Quality of Coffee Seeds Submitted to Artificial and Natural Ageing.

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The artificial aging test stands out as an efficient method to evaluate the quality of seed lots, and to estimate its storage potential. The principle of this test is the significant increase in the deterioration rate of the seeds by exposing them to high temperatures and high relative humidity, factors that contribute the deterioration process. Thus, the objective was to evaluate the physiological quality of coffee seeds submitted to different periods of artificial (0, 4, 6, 8 and 10 days) and natural (2, 4 and 6 months) aging. Seeds from four cultivars of Coffea arabica L. (Catuai Amarelo, Arara, Catiguá and Mundo Novo) and one from one cultivar of Coffea canephora Pierre (Apoatã) were used. To obtain different levels of quality, part of recently harvested seeds were artificially aged in a growth chamber, BOD type, under controlled conditions of temperature and humidity (42 °C and 100% RH) for 0, 4, 6, 8 and 10 days. After each period of artificial aging, the seeds were dried until they reached 12% of moisture content and submitted to determination of water content and quality assessment through the germination, tetrazolium and sanity tests. Another part was stored in trifoliate paper packaging for a period of two, four and six months in uncontrolled environment. In general, it was observed that increasing the artificial aging time creates a reduction in the physiological quality of coffee seeds, this reduction being more intense than in the natural aging for two, four and six months under conditions without humidity and temperature control.

Reference

 MARCOS FILHO, J. Teste de vigor: importância e utilização. In: KRYZANOWSKI, F.C.; VIEIRA, R.D.; FRANÇA NETO, J.B. (Ed.) Vigor de sementes: conceitos e testes. Londrina: ABRATES, 1999. P.1-21.