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# Selection of primers for the molecular characterization in the *Etlingera elatior*

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The Etlingera elatior (Etlingera elatior (Jack) R.M Smith) is a rhizomatous, tropical and perennial specie, that pertences at Zingiberaceae family, and possesses beautiful flowers with different colors, presenting great potential for use as ornamental. However, the species still lack of research on the genetic improvement which makes the expression of its potential stay entirety.Thus, this study aimed to select primers for use in the molecular characterization of The Etlingera elatior. For that, initially were selected forty-two plants with different phenotypes among themselves (different colors), kept in storage in the Germplasm Bank of Embrapa Eastern Amazon.The work was divided into two stages: extraction and quantification of DNAs and PCRs selection primers. DNA was extracted from leaves using a predetermined inorganic protocol. After extraction, the DNAs were quantified on agarose gel 1,0%. The interpretation of the gel was based on the intensity of the bands of DNA to the staff of the Etlingera elatior compared with the intensities of the bands of intact DNA of Bacteriophage Lambda (50, 100 and 200 ng / ul). After quantification, they were diluted to the total concentration of 3 ng / microl. The aliquots were stored at -20 ° C. Amplification reactions were carried out according to the protocol of Williams et al. (1990), modified in a final volume of 10 m l containing sterile distilled water, 20 mM Tris-HCl (pH 8.0), 50 mM KCl, 2.0 mM MgCl2, 200 m M of each dNTP, BSA purified (2.5 mg / ml), 1.3 uM arbitrary primer, Taq DNA polymerase 1U.I and 15 ng of genomic DNA. The PCR's were performed in Eppendorf Mastercycler thermocycler, being carried out 40 cycles of 1 'to 94°C, 1' at 37°C and 2 'to 72°C, followed by a further 7 ' to 72° C. The separation of amplified products was performed in horizontal electrophoresis in agarose gel 1.5%. After viewing the gels were photographed in equipment photodocumentation for further counting of total and polymorphic bands.We analyzed four sets of primers (OPG, OPA, and OPJ OPU), considering only the sharp bands, which gave no margin for doubt. Were obtained from one at thirteen total bands, and the maximum of ten polymorphic bands.Were selected primers: OPG 02, 04, 05, 06, 07, 08, 10, 13, 14, 16, 18, OPA 01, 02, 03, 04, 05, 06, 07, 10, 13, 16, 17, OPU 03, 06, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 20 e OPJ 01, 11, 12, 13 ,14, 15, 16, 18, 19, that showed above four polymorphisms and shown to be effective for use in genetic characterization of the Etlingera elatior using RAPD markers (Polymorphic DNA Randomly amplified).