Development of molecular method to detect contaminants in coffee

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The quality of coffee is determined by its purity, which will reflect the sensory attributes adopted by the consumer market. Among the main contaminants of coffee are: soybeans, corn, rice and wheat. Often, traditional physical and chemical methods are not able to detect such contaminants. The objective of this study was to select specific primers to develop a molecular PCR-based method for the detection of aforementioned contaminants. Samples of coffee and roasted and ground coffee, soybeans, corn, rice and wheat were treated for DNA extraction using the CTAB method and DNeasy commercial kit. The primers were designed using the data available in GeneBank. Each pair of primers reacted specifically with its respective target (contaminant). The amplifications were confirmed by real time PCR, using SYBR GREEN system. The results show that it will be possible to develop a method to detect and quantify contaminants in coffee to ensure the quality of products available on the market.