

Title Physical and chemical attributes of defective crude and roasted coffee beans
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Abstract

Defective coffee beans are widely known to negatively affect beverage quality. In Brazil, the defective beans represent a population of about 20% of the total coffee production. These defective beans are separated from the non-defective ones prior to commercialization in the international market and are dumped in the Brazilian internal market, thus depreciating the quality of the roasted coffee consumed in Brazil. In order to offer more attractive alternative uses for these beans, an assessment of their physical and chemical attributes is of relevance. In this study, physical attributes, such as bean and bulk densities, bean volume and colour, and also chemical attributes, such as caffeine, trigonelline and chlorogenic acids, were evaluated in defective and non-defective coffee beans, both in the crude and roasted state. With the determined physical and chemical attributes, it was possible to differentiate the types of defective beans, and it was also demonstrated that both black and sour beans roast to a lesser degree than the other types of beans, under the same roasting conditions.