

CYANOGENIC COMPOUNDS FROM MESOCARP AND EPICARP FLOURS OF PASSION FRUIT (*Passiflora edulis flavicarpa*)

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The passion fruit (*Passiflora edulis flavicarpa*) juice industry generates large amounts of agroindustrial residues, since peel and seeds represent about 70 % of the fruit. The peel is rich in dietary fiber and can be used for food applications, as an alternative to expand the use of these agroindustrial residues, providing new products with higher added value and reducing the environmental impact of this production chain. However, the development of technological processes for these byproducts is hampered due to food safety issues, provided that passion fruit peel products may contain cyanogenic glycosides, which produce hydrogen cyanide, a highly toxic compound. This class of compounds did occur in *P. edulis* leaves and stems. Therefore, the objective of this study was to evaluate the presence of cyanogenic glycosides in mesocarp (white fraction) and epicarp (yellow fraction) flours obtained from passion fruit. A method was developed and cyanogenic compounds were analyzed by ultra-performance liquid chromatography coupled to tandem mass spectrometry (UPLC-MS/MS), using MRM (multiple reaction monitoring) mode for quantification. The main cyanogenic glycoside found in the evaluated samples was prunasin, with average contents of 48 mg/g and 495 mg/g in epicarp and mesocarp flours, respectively. Traces (less than 23 ng/g, the limit of quantification of the method) of linamarin, amygdalin, and mandelonitrile-rhamnoside were also detected. The content of cyanogenic compounds found is within the safe range for intake according to *Codex Alimentarius*.