

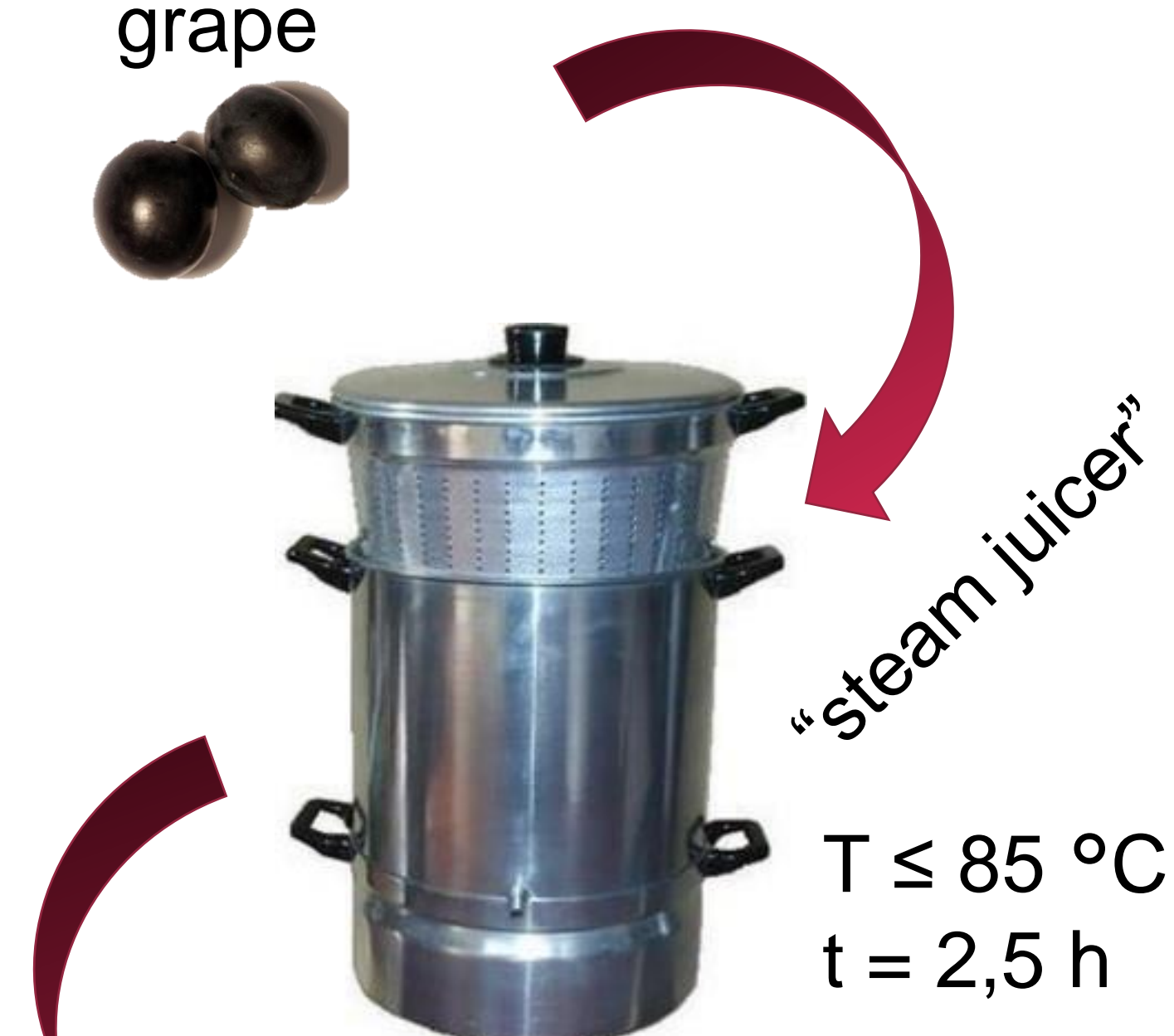
BRS Violeta grape: anthocyanins profile after the processes of making a gummy

INTRODUCTION

The development of products based on Brazilian grapes is important to satisfy the macro trends of the market and develop the valorization of national fruits. The BRS Violeta grape is a teinturier cultivar and shows itself as an interesting source for the development of a natural coloring in foods. In addition, several studies have been looking for the development of gummies fortified or enriched with natural alternatives. Therefore, this work aimed to use the grape juice of BRS Violeta grape for the preparation of a gummy containing gelatin and honey.

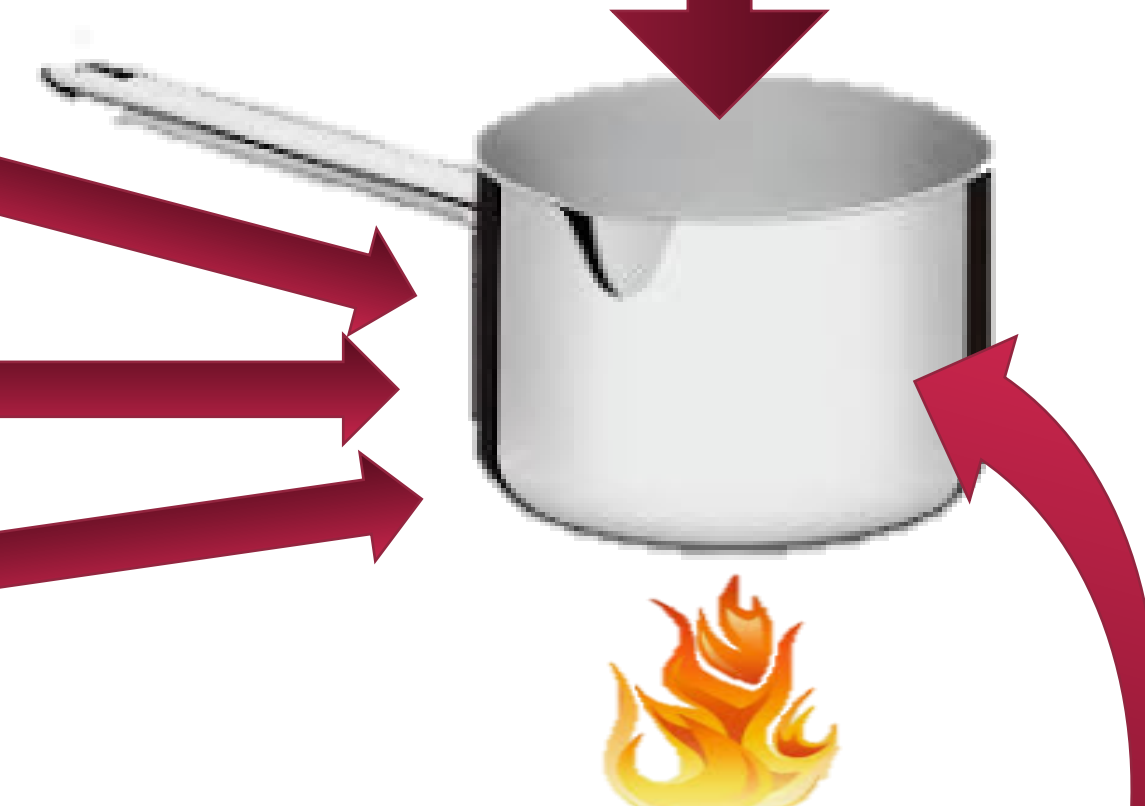
MATERIALS AND METHODS

BRS Violeta
Brazilian
grape

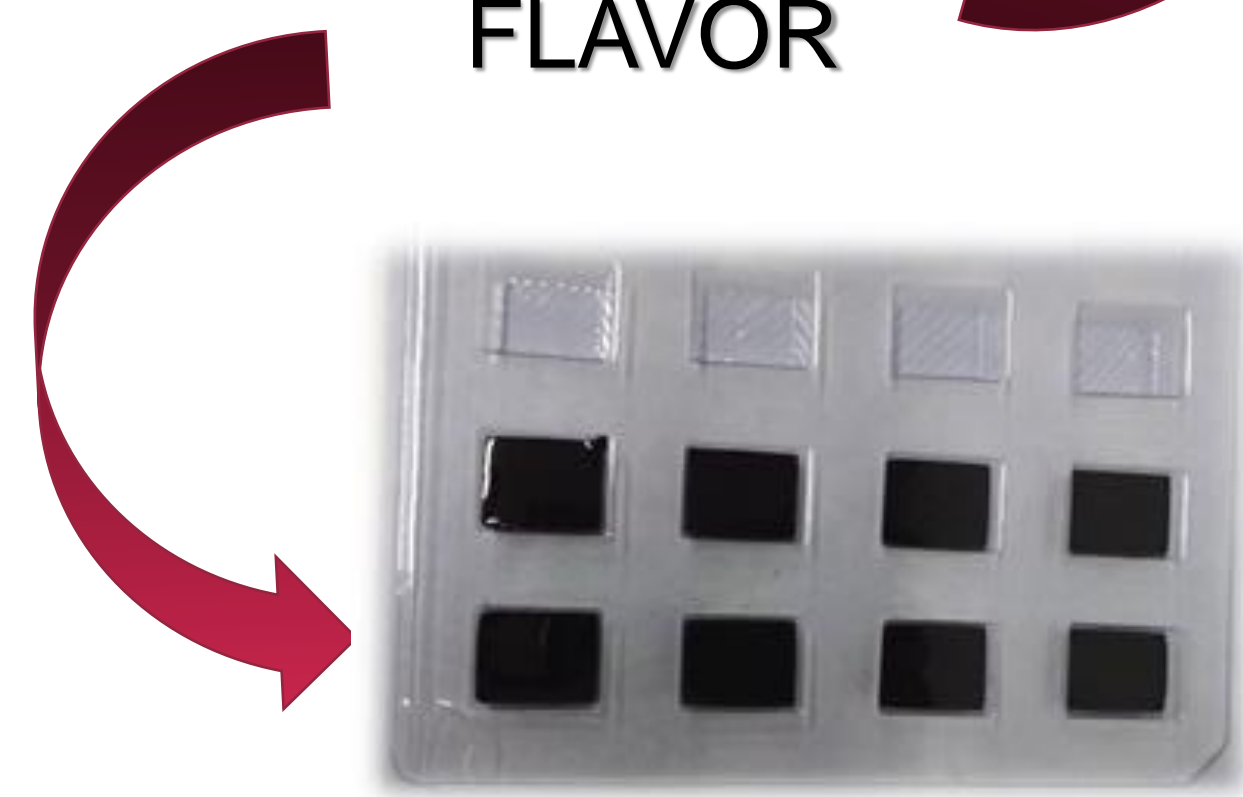


JUICE

GELATIN
HONEY
AGAR



NATURAL
GRAPE
FLAVOR



2 a 8 °C/24h



GUMMY

The profile of grape, juice and gummy were determined using HPLC-DAD-ESI-MS/MS

RESULTS AND DISCUSSION

The anthocyanin profiles were composed of monoglycosilated (3-glc) and diglycosilated (3,5-glc) anthocyanins. A total of 26 anthocyanins were detected in grape and juice and 18 in the gummy.

Table 1: Types of anthocyanins present in grape, grape juice and gummy made from BRS Violeta Brazilian grape.

Anthocyanins type ¹	Grape	Juice	Gummy
3,5-glc	68%	61%	66%
3-acglc-5-glc	1%	1%	0%
3-cmglc-5-glc	31%	38%	34%
3-glc	53%	48%	48%
3-acglc	2%	5%	0%
3-cmglc	45%	47%	52%
% diglycosilated	81%	85%	93%
% monoglycosilated	19%	15%	7%

¹3,5-glc, 3,5-diglucosides; 3-acglc-5-glc, 3-(6"-acetyl)-glucoside-5-glucoside; 3-cmglc-5-glc, 3-(6"-p-coumaroyl)-glucoside-5-glucoside; 3-glc, 3-glucoside; 3-acglc, 3-(6"-acetyl)-glucoside; 3-cmglc, 3-(6"-p-coumaroyl)-glucoside.

All samples showed the presence of non-acylated and coumarylated anthocyanins in both 3-glc and 3,5-glc forms. But the acetylated 3-glc and 3,5-glc anthocyanins were reported just for the grape and juice. In the gummy, these anthocyanins were degraded.

The grape presented a total of 81% of 3,5-glc anthocyanins, while the juice and the gummy showed 85% and 93%, respectively.

It's demonstrates that after the processing of obtaining juice and gummy there was an increase in 3,5-glc anthocyanins concentration as well as a reduction of 3-glc anthocyanins concentration.

Therefore, during obtaining the gum candy, there was mainly the degradation of 3-glc and acetylated anthocyanins, thus increasing the proportion of 3,5-glc anthocyanins.

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