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Evolution of physicochemical parameters during ripening of grapes (*Vitis vinifera* cv. Sarba)

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Abstract: Sarba is a Romanian variety of white grapes obtained at the Research-Development Station for Viticulture and Winery Odobesti by crossing two very valuable varieties: Tămăioasă Românească and Italian Riesling.

• Introduction

The purpose of this study was to investigate the evolution of physicochemical parameters during ripening of flavoured white grapes (Sarba variety) during the vintage of 2019-2020 period.

• Material and method

Grapes Sarba variety were obtained from private vineyard in Odobesti vineyard during the period 2019-2020. A quantity of 10 kg grapes has been harvested periodically, at time intervals of 5 days during the ripeness stage, full maturity and respectively, technological maturity. All grapes were manually destemmed and randomly grouped and used immediately for standard measurements.

For ripening characterisation the physicochemical analysis of main composition characteristics of grapes (sugar content, titrable acidity, the weight of 100 berries,) was carried out.

Two hundred grape berries were weighted and used for determining the sugar content, the titratable acidity according with the analytical methods recommended by the OIV. Sugar concentration was measured using a refractometer. The titratable acidity was measured by titrimetry using NaOH 0.1 N and Bromothymol blue as indicator.

• Results and discussions

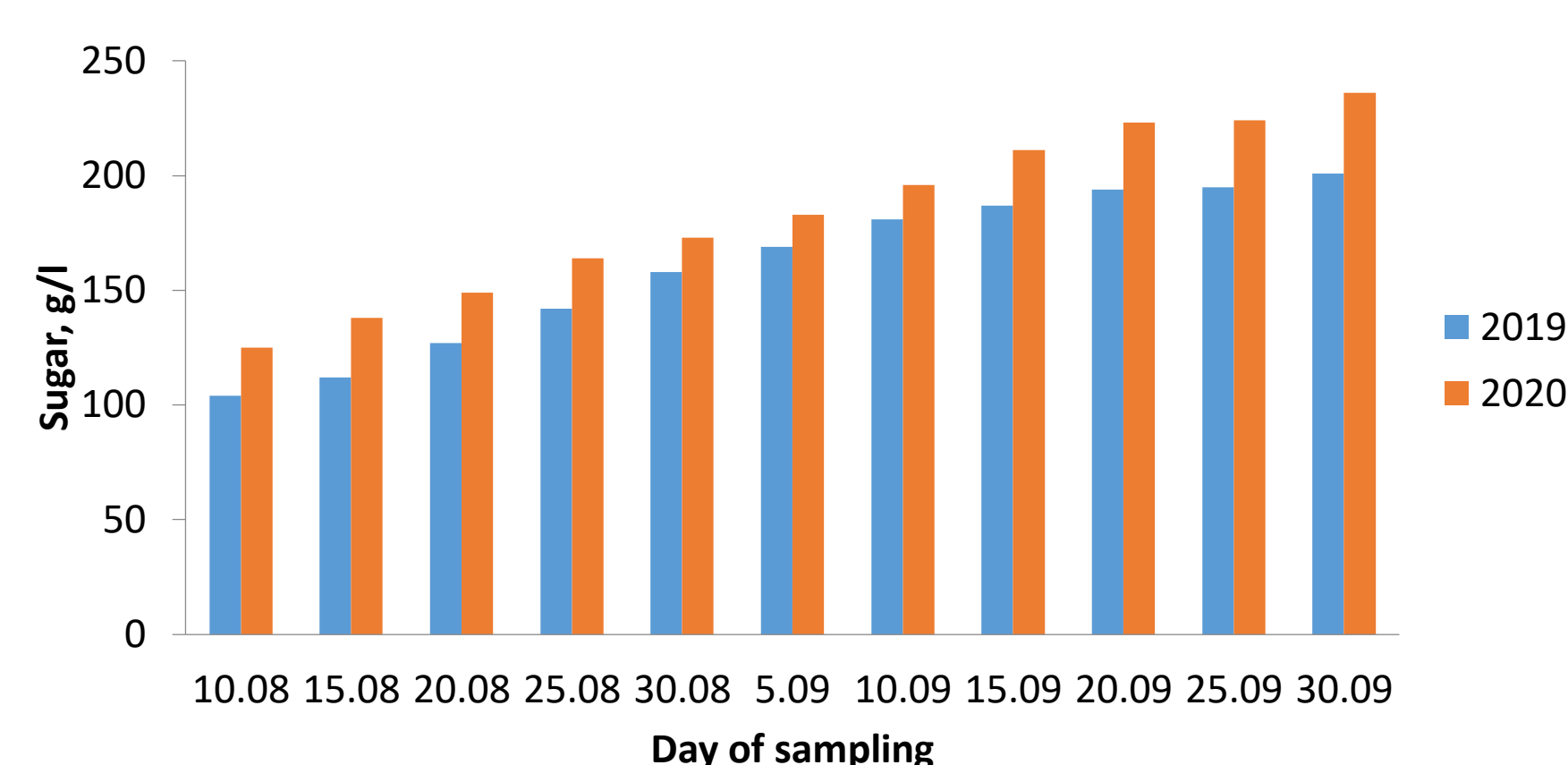


Figure 1. Evolution of sugar content during grapes maturation (2019-2020)

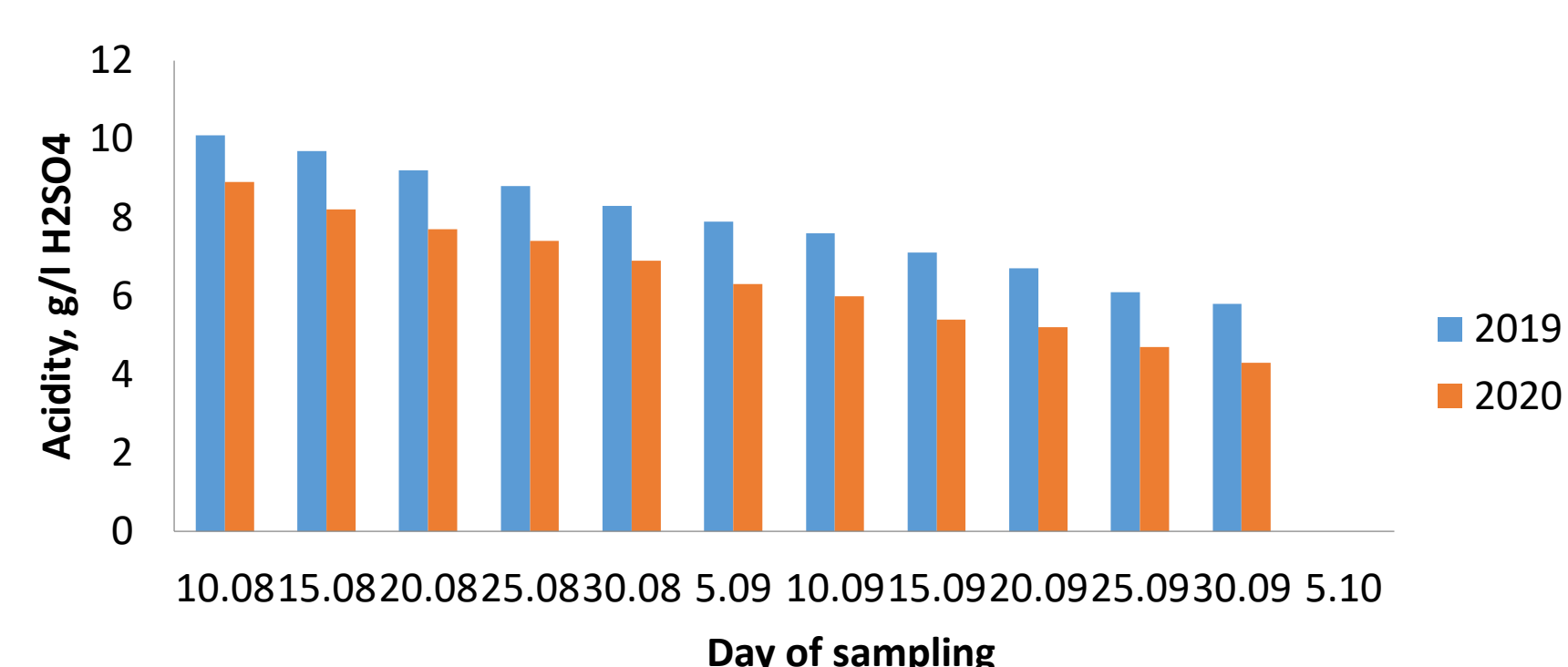


Figure 2. Evolution of acidity content during grapes maturation (2019-2020)

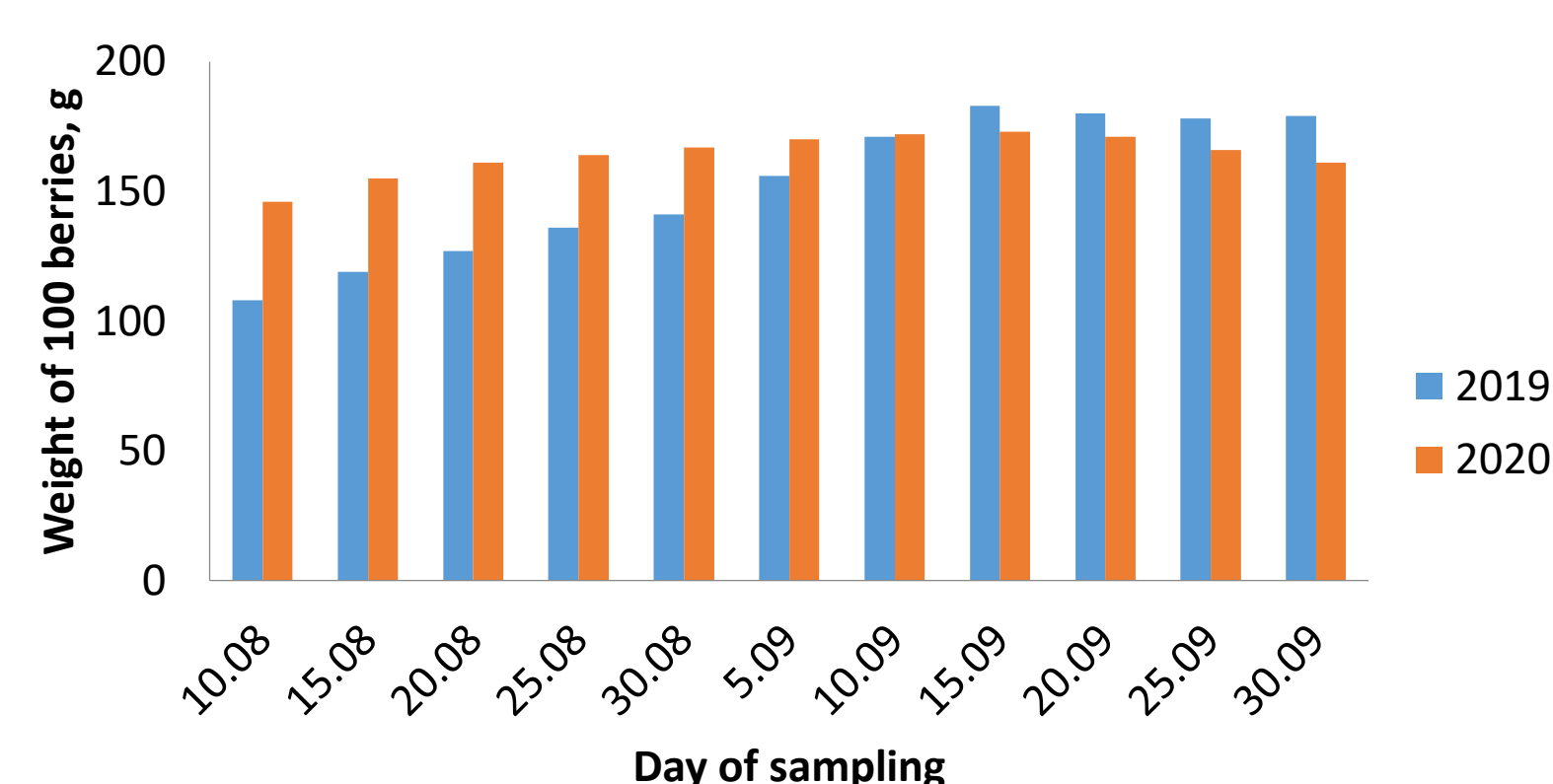


Figure 3. Evolution of weight of 100 berries during grapes maturation (2019-2020)

Conclusions: The results revealed that sugar content of the Sarba grapes variety at full maturity ranged from 200-241 g/L, the total acidity of grapes at full maturity recorded values between 3.6 to 5.5 g/L expressed in sulfuric acid, while the weight of 100 berries gives values ranging from 161-173 g. The polyphenolic content of the grapes at full maturity ranged between 2.2 to 2.80 g/kg, increasing from veraison to full maturity and then after a slight decrease was registered.

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