

**Sensory evaluation**  
**Microvinification of *Vitis vinifera* cv. Zweigelt with and without**  
**inoculation of Botector (active substance: *Aureobasidium pullulans*)**

**Wein- und Obstbauschule Krems, 2018 / 2019**

Test facility: Amt der NÖ Landesregierung  
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Implementation after GEP and EPPO PP 1/268 (3)

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## Aim of study

The aim of the study is to show a possible influence from the plant protection product Botector (active ingredient: *Aureobasidium pullulans*) to the alcoholic and malolactic fermentation in a microvinification. The used grapes come from *Vitis vinifera* cv. Zweigelt (Austrian autochthonous red variety).

The grapes were machine picked and promptly delivered to the microvinifikation of the School of Viticulture and Pomology, Krems. There, the grapes were mashed and divided into two 180l stainless steel tanks. Before starting the alcoholic fermentation, one tank was inoculated with the plant protection product Botector. Afterwards, both tanks were inoculated with the yeast Lalvin Rhône 2056. At the end of the alcoholic fermentation both treatments were inoculated with the lactic acid bacteria *Oenococcus oeni* Lalvin VP41.

Multiple analysis took place during the fermentations and of the final wines. Tasting evaluations took place in April and August 2019. (See attached document)

## Record of proceedings for the control treatment without Botector

(batch number V2018\_047)

- 17.09.2018:  
Harvest and delivery of grapes  
Mashing  
Division into two tanks  
Must analysis
- 18.09.2018:  
Addition of Trenolin Rot DF  
Inoculation with the yeast Lalvin Rhône 2056
- 03.10.2018: Pressing of the mash
- 04.10.2018: Inoculation with LAB *Oenococcus oeni* Lalvin VP41
- 21.11.2018: Wine was removed from the lees, SO<sub>2</sub> was added
- 01.02.2018: bottling

## Record of proceedings for the treatment with Botector

(batch number V2018\_048)

- 17.09.2018:  
Harvest and delivery of grapes  
Mashing  
Division into two tanks  
Must analysis
- 18.09.2018:  
Addition of Trenolin Rot DF Addition of Botector (0,1%)  
Inoculation with the yeast Lalvin Rhône 2056

- 03.10.2018: Pressing of the mash
- 04.10.2018: Inoculation with LAB Oenococcus oeni Lalvin VP41
- 21.11.2018: Wine was removed from the lees, SO2 was added
- 01.02.2018: bottling

### Sensory evaluation April 2019

The first sensory evaluation was on April 30, 2019. 12-14 professional tasters took part on this evaluation.

The tasting took place according to the rules of a triangle test with a 20 point evaluation system. Wines with a scoring below 10 points are faulty. The tasting was repeated for a higher validity. Different bottles were used in the repetition to exclude any faulty bottles.

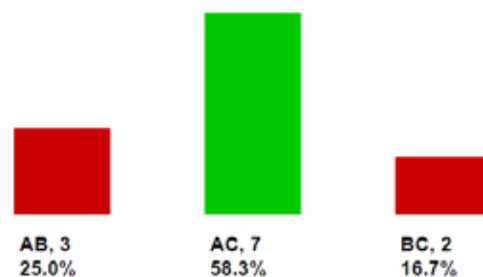
### First Tasting

**Auswertung: Versuchsweinkost WB Serie 26, 3eck-Test, BioFerm Botector vom 30.04.2019**

Bewertung der Versuchsweine Weinbau aus dem Jahrgang 2018

A: V2018\_047 Zweigelt 047, Kontrolle ZW - Kontrolle  
 B: V2018\_048 Zweigelt 048, Botector ZW - Botector  
 C: V2018\_047 Zweigelt 047, Kontrolle ZW - Kontrolle  
 Lösung: AC, Gesamt: 12

Schnitt A : 14.79  
 Schnitt B : 13.21  
 Schnitt C : 14.79



Result first tasting:

58% of the taster detected differences at the first tasting of the triangle test and differentiated between the control wine and the wine with the addition of Botector. The treatment with the addition of Botector received fewer points. However, due to the low rate of recognition this result is not significant.

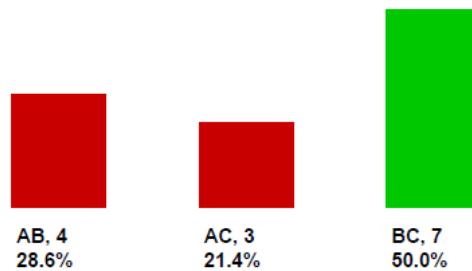
## Second Tasting

**Auswertung: Versuchsweinkost WB Serie 27, 3eck-Test, BioFerm Botector vom 30.04.2019**

Bewertung der Versuchsweine Weinbau aus dem Jahrgang 2018

A: V2018\_048 Zweigelt 048, Botector ZW - Botector  
 B: V2018\_047 Zweigelt 047, Kontrolle ZW - Kontrolle  
 C: V2018\_047 Zweigelt 047, Kontrolle ZW - Kontrolle  
 Lösung: BC, Gesamt: 14

Schnitt A : 14.00  
 Schnitt B : 14.07  
 Schnitt C : 14.07



Result second tasting:

At the second tasting only 50% of the taster detected a difference between the wines. Both wines scored the same points. No significant difference was detected between the treatments.

## Summary Tasting April 2019

At the first sensory evaluation in April, no differences were detected between the wines with and without the addition of Botector. There is no sensory effect from Botector which could lead to a recognizable effect in the final wine. The wine with the addition of Botector got fewer points in one tasting, however the rate of recognition is too low to draw any conclusions about sensory influences of Botector.

## Sensory evaluation August 2019

The second tasting took place on August 27, 2019 and 9-10 professional tasters took part.

The tasting took place according to the rules of a triangle test with a 20 point evaluation system. Wine with a scoring below 10 points are faulty. The tasting was repeated for a higher validity. Different bottles were used in the repetition to exclude any faulty bottles.

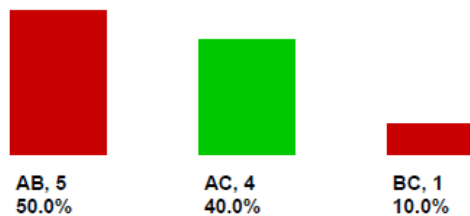
## First Tasting

### Auswertung: Versuchsweinkost WB Serie 18, 3eck-Test, BioFerm Botector vom 27.08.2019

Bewertung der Versuchsweine Weinbau aus dem Jahrgang 2018

A: V2018\_047 Zweigelt 047, Kontrolle ZW - Kontrolle  
 B: V2018\_048 Zweigelt 048, Botector ZW - Botector  
 C: V2018\_047 Zweigelt 047, Kontrolle ZW - Kontrolle  
 Lösung: AC, Gesamt: 10

Schnitt A : 14.25  
 Schnitt B : 12.00  
 Schnitt C : 14.25



Result first tasting:

Only 40% of the taster detected the right choice at the triangle test and detected a difference between the treatments. The wine with the addition of Botector received fewer points as the control wine. Nevertheless, this result is not significant due to this low rate of recognition.

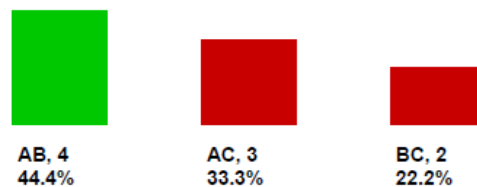
## Second Tasting

**Auswertung: Versuchsweinkost WB2 Serie (19), 3eck-Test, BioFerm Botector vom 27.08.2019**

Bewertung der Versuchsweine Weinbau aus dem Jahrgang 2018

A: V2018\_047 Zweigelt 047, Kontrolle ZW - Kontrolle  
 B: V2018\_047 Zweigelt 047, Kontrolle ZW - Kontrolle  
 C: V2018\_048 Zweigelt 048, Botector ZW - Botector  
 Lösung: AB, Gesamt: 9

Schnitt A : 15.50  
 Schnitt B : 15.50  
 Schnitt C : 13.12



Result second tasting:

At the second tasting, only 44% of the taster detected a difference between the wine with and without the addition of Botector. The wine with the addition of Botector again received fewer points as the control wine. There are no significant differences between the qualities of the wines, because no significant differentiation was possible in the triangle test.

## Summary April and August 2019

In all 4 tastings, no significant differences between the control wine and the wine with the addition of Botector was detected. In 3 tastings a trend could be observed that the wine with the addition of Botector received fewer scoring points. However, due to minor differences in the scoring and the high deviation of the individual scores no distinct conclusion can be drawn. Therefore, from the contradictory results of the four tastings no sensory influence of Botector was detected.