THE INFLUENCE IN THE UTILIZATION OF THE SYSTEM FOR CLEARING THE MUST BY FLOATATION ABOUT THE QUALITY OF WINE

INFLUENȚA UTILIZĂRII SISTEMULUI DE LIMPEZIRE A MUSTULUI PRIN FLOTAȚIE ASUPRA CALITĂȚII VINULUI

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Abstract. *Wine pressing of the must of impurity witch are trained gravitational to the bottom of recipient or erected to the his surface is a prerequisite in the elaboration of white wines of quality. Flotation represents quick method to clear the must before the fermentation.*

The word "flotation" come from the English language and it means : to swim, to float, to erect to the surface. The closer meaning is: the solid mini pieces that are came from grape float in must are raised to surface, thus we can obtain a clear separation of the lees of the clear liquid. The method of clearing is based on the introduction of little bubbles of gas in the liquid, those are attached by the solid parts in flotation from must and then raise them to the surface. The mini solid pieces stay there in top forming a solid layer. This layer can be remove continuously from the surface or the clear liquid can be pulled by the his absorbtion to the inferior part through pipeline of total depletion of recipient. The clearing through flotation were longtime an usually method for treatment of residual waters. In the last years were used more intense in preliminary wine pressing of the must. Today can be use that a confirmed process for improving the quality of wine

Rezumat. *Deburbarea mustului de impuritati fie antrenate gravitational la fundul vasului fie ridicate la suprafata lui este o conditie esentiala în elaborarea vinurilor albe de calitate. Flotatia reprezinta un procedeu rapid de limpezire mustului inainte de fermentatie. Cuvântul flotatie vine din limba englezã si înseamnã a inota, a pluti, a se ridica la suprafatã. Intelesul mai apropiat este: particolele solide provenite din strugure plutesc în must ridicându-se spre suprafatã, astfel se poate obtine o separare netã a sedimentului de lichidul limpede.*

Procedeul de limpezire este bazat pe introducerea unor bule mici de gaz în lichid, acestea se atasează de pãrtile solide în suspensie din must si le ridicã spre suprafatã. Particolele solide rãmân acolo sus, formând un strat solid. Acest strat poate fi înlãturat continuu de pe suprafatã sau lichidul limpede poate fi extras prin absorbirea lui la partea inferioarã prin conducta de golire totalã al recipientului.

Limpezirea prin flotatie a fost mult timp un procedeu uzual pentru tratarea apelor reziduale. In ultimii ani s-a utilizat mai intens în deburbarea preliminarã a mustului. Astãzi poate fi utilizat ca un proces confirmat pentru îmbunãtãtirea calitãtii vinului

MATERIAL AND METHOD

For being obtain of the must were used the grapes belonging the kind Aligote which they were enzymatic with Extrazym, and the must obtained hade three destinations:

- The must obtained by classic method.
- The must obtained of the blacher wine pressing through flotation.
- The must obtained by pneumatic press wine pressing through flotation.

To three musts it caused the contain in sugars, organic acids, polyphenols total and the absorbance. The must resulted was soured with selected yeasts (IOC) to see the fermentation through a periodic determination of the density of the must to see the dynamic of fermentation. At the wine obtained it was applied wine clarification and the necessary treatments, after that they were made the physics -chemical current analyzes.

RESULTS AND DISCUSSIONS

Table 1

The analyze physics -chemical of the obtained must

Nr. crt.	The specification concerning the elaboration of the must	Sugars g/l	Total acidity g/l H_2SO_4	SO_2 total mg/l	Absorbance D_0 =420nm	Total polyphenols g/l
1	Clasic not claring	183	4,0	7	0,152	0,59
2	Blacher -flotating	188	4,2	7	0,124	0,32
3	Pneumatic-flotating Press	196	3,9	10	0,387	0,40

From dates of table 1 results as the resulting must from those three processes have the physics -chemical relative similar parameters, significant differences are noticed to the contend in polyphenols total which are placed in reduced limits closer at floated musts and special 0.32g/l in the case of utilization of the must floated resulted from blacher-tank and 0.40 g/l at the must made from pneumatic press. This parameter higher is explained through a long time of stockage in press comparative with one from blacher-tank. The highest contain in polyphenols was realized at must not claring 0.59 g/l. Luminous absorbance at 420 nm indicate a process of oxidation at the must resulted through the pneumatic press as the result of longer stationary in the nipper of the press where is oxygenated stronger in the process of the press (0.387 nm).

The floated must a most luminous it is accomplished through the utilization of the blacher - tank being at 0.124 nm. Therefore is enforced a shorter regime of press to a smaller amount of grapes and isn't necessary to wait until the press is full and probably a bigger regime of sulphytation for give it the antioxidate safety.

Table 2

The dynamic of fermentation's must

Date	Classic not claring		Blacher -flotation		The press pneumatic - flotation	
	Sugars g/l	Temperature °C	Sugars g/l	Temperature °C	Sugars g/l	Temperature °C
30.09	183	20	188	20	196	20
01.10	183	20,5	188	20,5	196	20,5
02.10	164	23	180	21	194	21
03.10	140	26	168	23	170	23
04.10	110	28	145	25	135	25
05.10	88	30	110	28	105	28
06.10	55	31	78	29	75	29
07.10	20	31	45	29	43	29
08.10	5	30	22	28	20	28
09.10			11	27	10	27
10.10			6	26	5	26

In the table 2 is presented the dynamics of alcoholic fermentation at three musts and it is noticed a metabolic **of** sugars more quickly in the case of the in floated must than in the case of floated must. This fact is caused of the material support more abundant from the frame of the in floated must comparative with the clear must through flotation which was disembarrassed of most impurity. The temperature of fermentation was higher at wine clarification must comparative with the one who is wine pressing must by flotation. The fermentation has resulted more easily in case of floated must.

The physics - chemical of pointers of achieved wine are presented in table 3 and they are showing significantly differences regarding volatile acidity which is higher at resulting wine by not claring must being at 0.51 g/l acid acetic, comparative with the one achieved by floatation, which was situated at 0.21 respectively at 0.24g/l acid acetic at the wine pressing wines resultants by blancher- tank and air press. Appreciable differences were noticed regarding extractivity of wines, the in reduced extraction was placed at 18 g/l derived wine by not claring must and at 21 g respectively at 22 g/l at those two variants.

The best luminous intensity at 420 nm was realized at wine derived from blacher - tank 1.24 nm, because his processing by floatation was realized immediately comparative with the one of resulted wine by pneumatic press, where the flotation was realized after a long period of stagnation in press where were in progress an oxygenation enough stronger. By this method, the wine has registered a tint yellowish.

The luminous intensity of wine at 420 nm was highest at the wine resulting from air press and special 0.116 where were happened biggest oxygenations, but don't in according to damage quality of wine. The obtained wine from press is with tint the yellowish maul than one obtained from blacher but without he has bareback gustatory repercussions falled across the oxidation initially the must. In order to reduced the oxidation from the bunker of the press is essary a sulphitation an energetical maul musts from coupled press with decrease of the duration of stationary in bunker (fig. 2).

Table 3

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Nr. Crt.	The kind the way of elaboration	Alcohol % vol.	otal acid g/l H_2SO_4	Acidity vol. g/l CH_3 - COOH	SO_2 mg/l free	SO_2 mg/l total	Sugar Red. g/l	Extractnered. g/l	D.O. 420nm	Total polyphenols g/l	Organoleptic appreciation
1	Aligoté/must of Blacher nedeburbat by flotation	10,8	4,5	0,51	18	100	3	18	0,055	0,24	Mediocre hard without fineness
2	Aligoté/must de la Blacher deburbat by flotation	11,0	3,9	0,21	19	102	6	21	0,047	0,15	Very good with many kinds of aromas
3	Aligoté/must from air press deburbat by flotation	11,5	4,6	0,24	16	95	2	22	0,116	0,16	Very good with many kinds of aromas

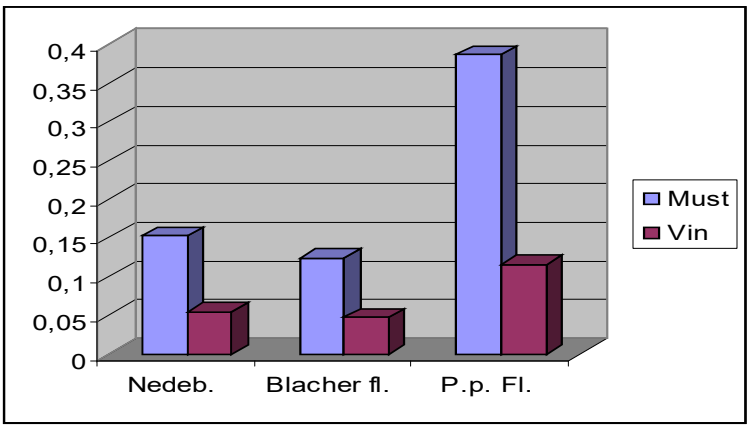

Fig. 1. Luminous intensity of must and wine

The amount of polyphenolics remanent in wine was of 0.24g/l in the case of wine resulting from nedeburbat must and smaller in the case of wine resulting from blancher –tank and air press and special 0.15 respectively 0.16 g/l total polyphenolics (fig.1)**.**

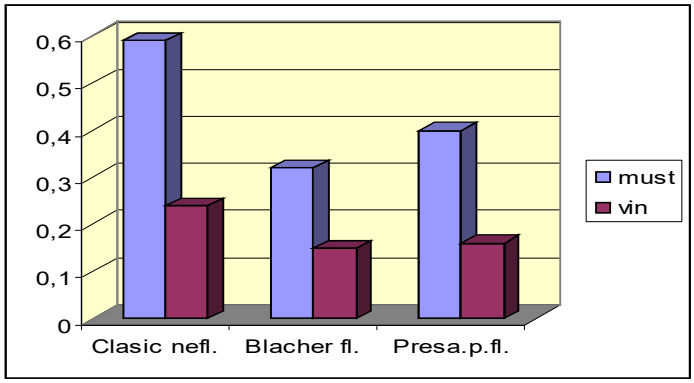

Fig.2. Polyphenolic compounds by must and wine

Below sensorial appearance the best gustatory and olfactory impressions gave the wines results by flotation, being expressive, harmonious with different kinds of aromas.

CONCLUSIONS

Significant differences consisted in what regarding the volatile acidity which is higher at the wine resulted from the not wine pressing being of 0.51 g/l acid acetic comparative with the one obtained by flotation witch was placed to 0.21, respectively 0.24 g/l acetic acid at wine pressing wines resulted from blancher - tank and air press.

Appreciable differences were seen regarding extra activity of wines, irreducible extract to the wine derived from the not wine press was smaller comparative with the one of wines derived by floated musts.

The luminous intensity of wine at 420 nm was highest at the wine resulted at the pneumatic press and special 0.116, where were produced the biggest oxygenations, but don't in according as endanger the quality of wine. The wine obtained from press is with tint the yellowish maul than one obtained from blacher but without having bareback gustatory repercussion falled across the initially oxidation of the must. In order to reduce the oxidation from the bunker of the press is necessary a sulphitation more energetically of the action of creation of the must from coupled press with the decrease of the duration of stationary in bunker.

The contain in total polyphenolic compounds highest was in the wine resulted from the not wine press must and the smallest in case of the wine result from blacher and air press.

Under sensorial appearance the best impression gustatory and olfactory are given by the wines realized by floatation, being expressive, harmonious with many kinds of aromas.

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