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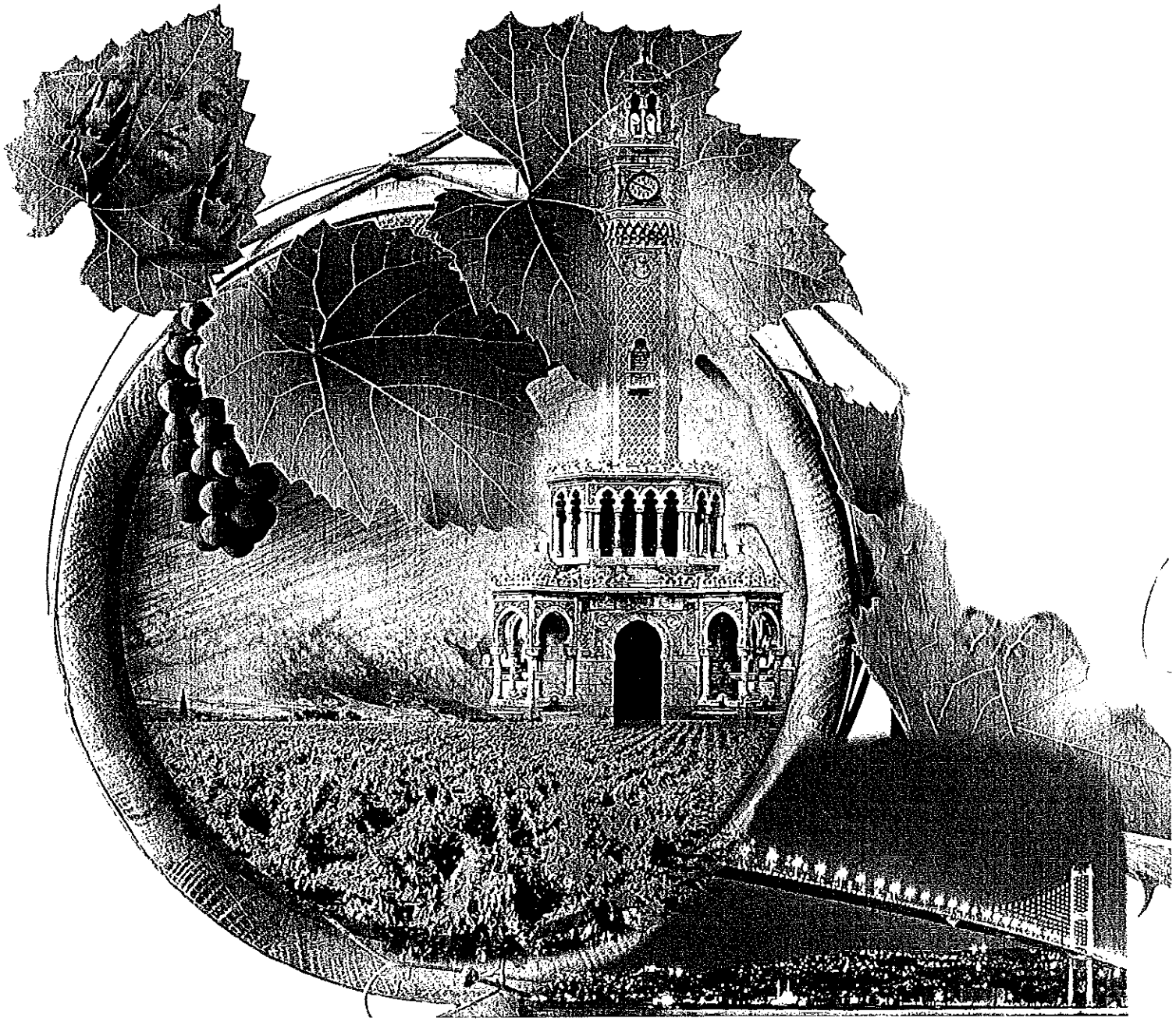

Congress Abstracts Book

EVALUATION OF PHYSICO - CHEMICAL AND MINERAL CHARACTERISTICS RED WINES PRODUCED BY DELESTAGE AND REASSEMBLY

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This study evaluated the physical and chemical characteristics of red wines prepared by two different methods of maceration, made with grapes from Serra Gaucha, cv. Cabernet Sauvignon. Microvinifications were performed simulating the process of reassembly and *délestage*, lasting 5, 10 and 15 days. After completion of winemaking, the wine was bottled. Passed a year of the bottling the wine samples were carried out with physicochemical analyzes, using rapid determination FOSS, minerals determination, through high-resolution continuum source fast-sequential flame atomic absorption spectrometry (HR-CS FS-FAAS) and antioxidant capacity determined by the method DDPH expressed as Trolox.

Keywords: wine, physico-chemical, mineral profile, maceration.

DIFFERENCE IN COLOR PARAMETERS OF RED WINE ELABORATED FROM 'CABERNET SAUVIGNON' GRAPES UNDER THERMAL PEST CONTROL TREATMENT

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This work evaluated the color parameters of wines elaborated from cabernet sauvignon grapes, treated in a conventional way and managed with TPC, from two nearby vineyards, isolated in landscape, set on Farroupilha, RS, Brazil. Six different raw material (T1, T2, T3, T4, T5, T6) were evaluated in four different Times of Vinification Process (TVP) and five different color spaces (X, Y, Z; Y, x, y; L, a, b, L*, a*, b*; L*, C*, h) were taken into consideration in order to evaluate the color in the fermented resulting wines. In relation of vine TPC or conventional treatment, only two parameters showed statiscally difference ($p<0.05$). Variations resulting from TPC treatment are higher in chemical pomace (T2) and fermented pomace (T4), giving the idea that the raw material accumulated different pigment compounds, and nor the vinification system nor the chemical step used were able of extracting all of them from the grapes. With the ageing, the samples tended to diminish its initial variations.

VOLATILE COMPOSITION STUDY OF NATURAL SPARKLING WINES ELABORATED FROM AUTOCHTHONOUS GRAPE VARIETIES OF CASTILLA Y LEON (SPAIN) OVER THE AGING ON LEES

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Natural sparkling wines elaborated following the "champenoise" method carry out a second fermentation in bottle and have been aged with lees for at least 9 months before the disgorging. Grape variety is one of the most important factors that can influence sparkling wine composition. Castilla y León is an Autonomous Community with a large vitiviniculture tradition, which has an important number of autochthonous grape varieties perfectly adapted to these zones, and some of them with good characteristics to obtain quality sparkling wines. Taking into account that aroma is one of the most important attributes in the final quality of sparkling wines, the aim of this work was to study the volatile composition of sparkling wines elaborated from different grape varieties over their ageing on lees in bottle. Different natural sparkling wines were elaborated following the traditional or "champenoise" method, 5 from white and 2 from red grape varieties. All the grapes came from "Castilla y León". After the tirage phase, the bottles were kept in a cellar at temperature and relative humidity controlled for 9 months. The volatile compounds were analyzed by gas chromatography coupled to a mass detector, after a previous liquid-liquid extraction. The analyses were carried out in duplicate. During the aging on lees in the bottle, an increase in the majority of ethyl esters, with the exception of ethyl octanoate and ethyl decanoate, and fusel alcohols was generally observed. By contrast, a strong decrease of fusel alcohol acetates, and hexanoic and decanoic acids was found. In general, the differences in volatile compounds observed among the different base wines were maintained after the 9 months of aging on lees in the bottle. Thus, the wines elaborated from white grape varieties Albarín,Godello and Verdejo and red grape variety Prieto Picudo showed higher concentrations of

most volatile compounds studied, highlighting for its higher content of fruity aromas.
Los vinos espumosos naturales elaborados siguiendo el método "champenoise" llevan a cabo una segunda fermentación en botella, transcurriendo un mínimo de 9 meses antes del degüello. La variedad de uva es uno de los factores más importantes que pueden influir en la composición de los vinos espumosos. La Comunidad Autónoma de Castilla y León tiene una gran tradición vitivinícola y cuenta con un gran número de variedades autóctonas perfectamente adaptadas a cada zona de cultivo, muchas de las cuales pueden tener buenas aptitudes para la elaboración de vinos espumosos naturales de calidad. Teniendo en cuenta que el aroma es uno de los atributos más importantes en la calidad de los vinos espumosos, el objetivo de este trabajo ha sido estudiar la composición volátil de vinos espumosos naturales elaborados con diferentes variedades de uva a lo largo de su crianza sobre lías en botella. Se han elaborado diferentes vinos espumosos naturales, siguiendo el método tradicional o "champenoise", a partir de 5 variedades de uva blancas y 2 tintas procedentes de Castilla y León. Tras el tiraje, las botellas se mantuvieron en una cava subterránea a temperatura y humedad relativa controlada durante 9 meses. Los compuestos volátiles se han analizado por cromatografía de gases-masas, previa extracción líquido-líquido. Los análisis se llevaron a cabo por duplicado. Durante la crianza sobre lías en la botella, se observó en general un aumento de la mayoría de los ésteres etílicos, a excepción del octanoato y decanoato de etilo y de los alcoholes de fusel. Por el contrario, se observó un fuerte descenso de los acetatos de alcoholes de fusel, y de los ácidos hexanoico y decanoico. En general, las diferencias de los compuestos volátiles observadas en los vinos base se mantuvieron tras los 9 meses de crianza sobre lías en botella. Así, los vinos elaborados con las variedades de uva blanca *Albarín*,*Godello* y *Verdejo* y de la variedad tinta *Prieto Picudo* presentaron mayores concentraciones de la mayoría de los compuestos volátiles estudiados, destacando por su mayor contenido en aromas afrutados.

CHARACTERIZATION OF PHENOLIC COMPOUNDS IN THERMOVINIFICATION DERIVED POMACE

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Flavonoids present in skin extracts of red seedless table grape varieties Summer Royal, Autumn Royal and Crimson, and white seedless varieties Carati and Thompson were analyzed by HPLCDAD- MS, in three years of study (2006-2008). The anthocyanins, delphinidin-3-O-glucoside, cyanidin-3-O-glucoside, petunidin-3-O-glucoside (with their corresponding *p*-coumaroyl derivatives), peonidin-3-O-glucoside and malvidin-3-O-glucoside (with their corresponding acetyl, caffeoyl and *p*-coumaroyl derivatives) were found. In addition the flavonols quercetin-3-Oglucuronide, quercetin-3-O-rutinoside, quercetin-3-O-glucoside, kaempferol-3-O-glucoside, kaempferol-3-O-galactoside and the flavan-3-ols procyanidin B1, procyanidin B2 and catechin were also detected. Anthocyanins were the main flavonoids in red grapes ranging from 24 (Crimson) to 500 (Summer Royal) mg/kg fresh weight of grapes; consistent levels of flavonols and flavan-3-ols were also quantified in all varieties. To determine the effective climatic influence on flavonoids content in field conditions, viticultural practices have been developed, that could exclude the effects of direct solar radiation from confounding the assessment of those related to thermal conditions alone. A strong positive correlation was determined between flavonoids and temperature data that seem to be responsible for the difference of these metabolites along the years, furthermore, it has been possible to define a linear relationship ($R2 = 0.6871$, $p = 0.0057$) between thermal amplitude and total flavonoids values in the red grapes. In questo lavoro sono stati caratterizzati, a mezzo analisi HPLC-DAD-MS, i flavonoidi presenti negli estratti di buccia di alcune varietà di uva da tavola apirena (Summer Royal, Autumn Royal, Crimson,Carati e Thompson).

Lo studio è stato condotto in tre anni consecutivi (2006-2008). Tra i composti identificati vi sono le antocianine, delfinidina-3-O-glucoside, cianidina-3-O-glucoside, petunidina-3-Oglucoside (con i corrispondenti derivati p-cumarilati), peonidina-3-O-glucoside e malvidina-3-Oglucoside (con i corrispondenti acetil, caffeoil and *p*-cumaril derivati); i flavonoli, quercetina-3-Oglucuronide, quercetina-3-O-rutinoside, quercetina-3-O-glucoside, kaempferolo-3-O-glucoside, kaempferolo-3-O-galactoside e i flavan-3-oli, procianidine B1 e B2 e catechina.Le antocianine risultavano i flavonoidi presenti in maggiore quantità nelle uve a bacca colorata con valori compresi tra 24 (Crimson) e 500 (Summer Royal) mg/kg di peso fresco; livelli elevati di flavo noli e flavan-3-oli sono stati ritrovati, peraltro, in tutte le varietà. Per determinare l'effettiva influenza climatica sul contenuto di flavonoidi in condizioni di campo, sono state applicate tecniche viticole che permettessero di escludere gli effetti della radiazione solare diretta permettendo di valutare quasi esclusivamente le condizioni termiche. Una correlazione fortemente positiva è stata determinata tra flavonoidi e temperatura la quale sembra la principale responsabile del diverso contenuto di questi metaboliti nelle 2 uve durante i tre anni perlustrati; è stato possibile peraltro definire una relazione lineare ($R2 = 0.6871$, $p = 0.0057$) tra ampiezza termica e contenuto di flavonoidi totali nelle uve rosse.