$1 29(59,(: 21 %275<7,=(' :,1(6

5(9,6-2 9,1+26 %275,7,=$'26

*HRUJLRV .DOOL6WRVLRDX&DWLDVULQR

/($) /LQNLQJ /DQGVFDSH (QYLURQPHQWFH$J&ULEXOWXUHDVWXUL9DVDQGV;RVRG6XSHUDRUEHU $JURQRP
7DSDGD GD $MXGD /LVERD 3RUWXJDO

&H)(0$ &HQWUH RI 3K\VLFV DQG (QJLQHHULQJ RI 1DQRVWUXFWXUHG0DWHULDOV6HUYLFH8QLYHUVLGDGH$EHUWD7pFQ
5RYLVFR 3DLV /LVERD 3RUWXJDO

&RUUHVSRQGLQJ DXWKRU 7HO LQR#LVD XOLVERD SW ILDFDWDU

(Received 08.06.2020. Accepted 29.08.2020)

6800$5<

1REOH URW ZLQH LV D VSHFLILF PWWSXHH RQIHZHWHWRQZRQJHUDWSKHGWKHGHHVWHVDUZLQHV FDU DUH SURGXFHG LQ VSHFLILF ZLQH UWHLRQHV DUHFXRQ WKH RQHV 7KH SXUSRVH RI WKH FXUUHQWLFHZLVR QWRWSKRYGLGHHDUHRQ RI +RQHV 7KH SXUSRVH RI WKH FXUUHQWLFHZLVR QWRWSKRYGLGHHDUHRQ RI WKH SURFHVV DEDQGRQHG GHWDLOHG DQDOVLVXSHFWKH LWRKOYLHWG6HSHFLILFLIHDWWKH SURFHVV DEDQGRQHG VSHFLDO HPSKDVLV LV JLYHQ WR ZLQHFHPDNLQJWEHRKQWRGGWKDSERLQDLWRQWRIDFRPSORHIRR QXPEHU RI SDUDPHWHUV H J YHEQVSHIFLILFLQYWLKRQUPDUQWDORFRQWHQWEMGKWLQRQWTXHFXHUVHQ ERWU\WL]HG ZLQHV

5(6802

2V YLQKRV ERWULWL]DGRV UHSUHVHQWDPRV XGRDFHVDWHHQGHRDHEWSLHGRLFDSBRUWXQGHR EDJR Botrytis cinerea, DWUDYpV GH XP SURFHVVR GHVLJQDGR SRUSUSRGXL]LGGmRV QHRUHJLVWHHVWHVVSLHQtIL 6DXWHUQHV H 7RND\ RULJLQiULRV QGWHH)URQQHD[HPSOXRQVURLDL VHFRSQHKFHWFLLYGRRMEDOQKtRYHVOmRRXQQ UHYLVWRV RV SULQFLSDLV DVSHFWVLQYKROMVOEDFWLGRFRVRP eDGSHUFGXLQQRRRGFRGRmRFGRVERDHRG SRBUcinerea H GLVFXWLGDV DV SULQFLSDLV FHRQDSHDVDHoRRHHQWRHHYKGRMFDREPQQLQDDmRRFRPSOH[D GH PXLWRV IDFWRUHV GHVGH ORJRDLV HP[XLWQRFLHDVSHFtRFQGVL}H[SODIFDLLBGQWRUGHDGH HGD GHVWDFD D VLQJXODULGDGH GHVWH WLSR GH YLQKRV

.H\ ZRUGV%RWU\WLVcinerea QREUH VZHHW ZLQHV
3DODYUDV%RWU\WLVcinerea SRGULGmR QREUH YLQKRV GRFHV

7KH VXEFDWHJRU\ RI ³6ZHHW ZLQHV ZLWK GHULYHG IURP JUDSHV´ ZKHUH QRE
,1752'8&7,21
$FFRUGLQJ WR WKH ,QWHUQDWLRQDO 2UJDQL]DWLRQ RI 9LQH DQG :LQH 2,9 QREOH URW ZLQHV UHSUHVHQW DSSUR[LPDWHO\ VXJDUV JHQHUDO FDWHJRU\ RI ³6SHFLDO DLEQRHVH RU 6SHFLDO ZLQHV´J / 7KHVH DUH ZLQHV FRPLQJ IURP IUHVK JUDSHV DQG RWKHU SURGXFWV RI WKH DOFRKRO ZLQHV WKDW KDYH XQGHUJRQH FRPSOHWH RU SDUWLDO IHUPHQWDWLRQ ZKLFK RU DIWHU WKHLU SURGXFWLRQ FRPH QRW RQO\ IURP WKH JUDSHV RULJLQDOO\ SUHVHQW LQ WKH JUDSH PXVW EXW DOVR IURP VXJDUV DGGHG IRU WKLV SXUSRVH 7KH SRWHQWLDO DOFRKROLF VWUHQ

7KLV LV DQ 2SHQ $FFHVV DUWLFOH &LUHDWLYH &RPPRQV $WWULEXWLRQ /LFHQVH
KWWSV FUHDWLYHFRPPRQVRUJOLFHQVHV\SHUPLWV XQUHVWULFWHG XVHDQG GLVWULEXWLRQ
ZRUN LV SURSHUO\ FLWHG

Estádios do processo de botritização na variedade 'Semillon'. Sem infecção aparente (A), infecção ligeira (B), pourri plein (C)), e pourri rôti (D) (Blanco-Ulate et al., 2015) (Foto cedida por Château la Varière, Brissac-Quincé, França).

B. cinerea

Vitis vinifera

et al.

et al.

et al.

et al.

Características analíticas de vinhos botritizados de diferentes regiões Francesas

BOTRYTIS CINEREA

B. cinerea

B. cinerea *Botryotinia fuckeliana*

Ascomycota *Pezizomycotina* *Leotiomycetes* *Helotiales* *Sclerotiniaceae* *Botryotinia*

et al.

et al.

B. cinerea

z

B. cinerea

z

B. cinerea

B. cinerea

B. cinerea

Botrytis

B. cinerea

et al.

B. cinerea

B. pseudocinerea

et al

et al

et al.

B. cinerea

B. cinerea's

et al.

B. cinerea

et al.

et al.

et al.

et al.

et al.

et al.

Vitis vinifera L. ***B. cinerea***

B. cinerea

et al.

Vitis vinifera

et al.

et al.

B. cinerea

et al.

µ

o

et al.

B. cinerea

µ

µ *et al.*

µ *o*

o *µ*

o

o

et al.

et al.

et al.

B. cinerea

pourri plein

et al.

et al.

B. cinerea

β

o

pourri plein

B. cinerea

pourri rôti

o

o

o

o

B. cinerea

et al.

et al.

et al.

B. cinerea

et al.

et al.

et al.

al. *KDYH GHPRQVWUDWHG WKDW S R KDUYHVW*

B. cinerea

et

al.

et al.

et al.

et al.

B.
cinerea

B.

B.
cinerea

B.
cinerea

B.
cinerea

B.
cinerea

pourri rôti

BOTRYTIS CINEREA

B. cinerea

et al.

et al.

et al.

et al.

et al.

pourri plein

et al.

β

o β o

β o

o et al. o

B. cinerea

et al.

et al. β

et al. o o

et al.

et al.

o

o o o o

o

o et al.

p

o o

o o

o o o

et alD o

et

al

et

al

o o o

et al.

o

o o o o

o o o o

o o o o

oo o o

o o o o

o

o o et al.

et al.

B. cinerea

et al.

et al.

o

o et al.

pourri

plein pourri rôti

B. cinerea

μ o

o o

o o

o o

o o o o o

o

o

o o

o o

o o o o o

o

o o o o o o o

o

o

o o o

o et al.

B. cinerea

et al.

Actividade lacase em diferentes estádios da infecção do bago por Botrytis cinerea

B. cinerea

B. cinerea

et al

et al.

et al.

et al.

B. cinerea

B. cinerea

et al.

et al.

et al.

et al.

Composição química do bago, por volume de mosto (L) e por número de bagos (1000) (Ribéreau-Gayon et al., 2006a)

et al.

pourri plein

B. cinerea

et al. et al. et al.

Terpenes

et al.

et al.

et al.

B. cinerea

et al

et al.

Thiol precursors

et al.

et al.

et al. $

et al.

β

et al.

et al.

et al.

pourri rôti

pourri plein

et al.

B. cinerea

et al.

[illegible] *B. cinerea* [illegible] *et al.* [illegible] *et al.* [illegible]

[illegible] *et al* [illegible] *B. cinerea* [illegible] *et al* [illegible] *B. cinerea* [illegible] *et al* [illegible] *et al.* [illegible] *et al.* [illegible] *et al.*

[illegible]

[illegible] *et al.* [illegible] *et al.* [illegible] *et al.* [illegible] *B. cinerea* [illegible] *et al.* [illegible] *et al.*

Phenolic acids and hydroxycinnamic esters

[illegible] *et al* [illegible] *et al* [illegible] *et al*

Stilbenes

[illegible] *et al.* [illegible] *trans-* [illegible] *et al.* [illegible] *et al.* [illegible] *et al.*

B. cinerea [illegible] *et al.* [illegible] *et al.* [illegible] *trans-* [illegible] *trans-* [illegible] *trans-* [illegible] ε [illegible] *pourri plein* [illegible] *et al.*

Other phenolic compounds

[illegible] *B. cinerea* [illegible] *et al.* [illegible] *pourri rôti* [illegible] *et al* [illegible] *et al.* [illegible]

[illegible]

et al.

B. cinerea

et al.

et al.

et al.

et al.

Composição fenólica de um vinho branco seco e de um vinho botritizado

et al.

B. cinerea

B. cinerea

B. cinerea

et al.

B. cinerea

et al.

et al.

B. cinerea

B. cinerea

Penicillium expansum Penicillium crustosum Aspergillus niger Alternaria alternata

et al.

B. cinerea

et al. *B. cinerea*

Penicillium *Aspergillus*

et al.

B. cinerea

et al.

Gluconobacter *Gluconobacter oxydans*

et al.,

et al.,

et al. *Gluconobacter oxydans*

Acetobacter aceti *Acetobacter pasteurianus*

Acetobacter aceti

et al.

et al

Presença de bactérias acéticas em mostos de uvas botritizadas em três vindimas consecutivas (Barbe et al., 2001)

pourri rôti

et al *et al* *et al* *et al* *et al*

et al

B. cinerea

et al.

et al.

pourri rôti

et al.

B. cinerea

et al.

et al.

B. cinerea pourri rôti

et al

et al

et al

et alD

et al.

et al

et al

et alD

et al

et al D 7KH RSWLPXP

et al

et alD

et al.

et al.

et al.

Saccharomyces cerevisiae

et al.

et al.

et al.

Candida spp.

et al. *Candida* *Klyveromyces* *Saccharomyces* *et al.*

Candida

Candida

et al.

Candida stellata

Candida stellata *Saccharomyces cerevisiae*

et al.

Candida *et al.*

Candida stellata *Candida zemplinina* *Candida zemplinina* *Starmerella bacillaris* *Saccharomyces cerevisiae*

et al.

et al. *Candida stellata* *Saccharomyces cerevisiae* *Candida stellata* *Candida zemplinina*

Torulaspora delbrueckii

Torulaspora delbrueckii

et al.

Saccharomyces cerevisiae

et al. *Torulaspora delbrueckii* *Saccharomyces cerevisiae*

et al.

et al.

Saccharomyces cerevisiae

et al.

et al. D

et

al.

et al. D

et al.

B.

cinerea

et al.

et al.

γ δ o o o o

o

o o o o

o o

o

o o

o

o o

o o o

o

o o

o o

et

al.

E\ S URGXFWV LGHQWLILHG LQ GLIIHUHQW Z

Saccharomyces cerevisiae

[illegible] *et al.* [illegible]

[illegible] *et al.* [illegible] *et al.* [illegible]

[illegible] *et al.* [illegible]

[illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *et al.* [illegible] *o*

[illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *et al.* [illegible] *o*

[illegible] *et al.* [illegible]

[illegible] γ [illegible] δ [illegible] *o* [illegible] *o*

[illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] γ [illegible] *o* [illegible] γ [illegible] *o* [illegible] δ [illegible] *o*

[illegible] *et al* [illegible] γ [illegible] *o* [illegible] γ *o o* [illegible] *o* [illegible] *o* [illegible] *o*

[illegible] μ [illegible] *o* [illegible] *et al.* [illegible] *o o*

[illegible] μ [illegible] *et al.* [illegible] *o* [illegible] γ [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o o* [illegible] *o* [illegible] *o* [illegible] *o*

[illegible] *et al* [illegible]

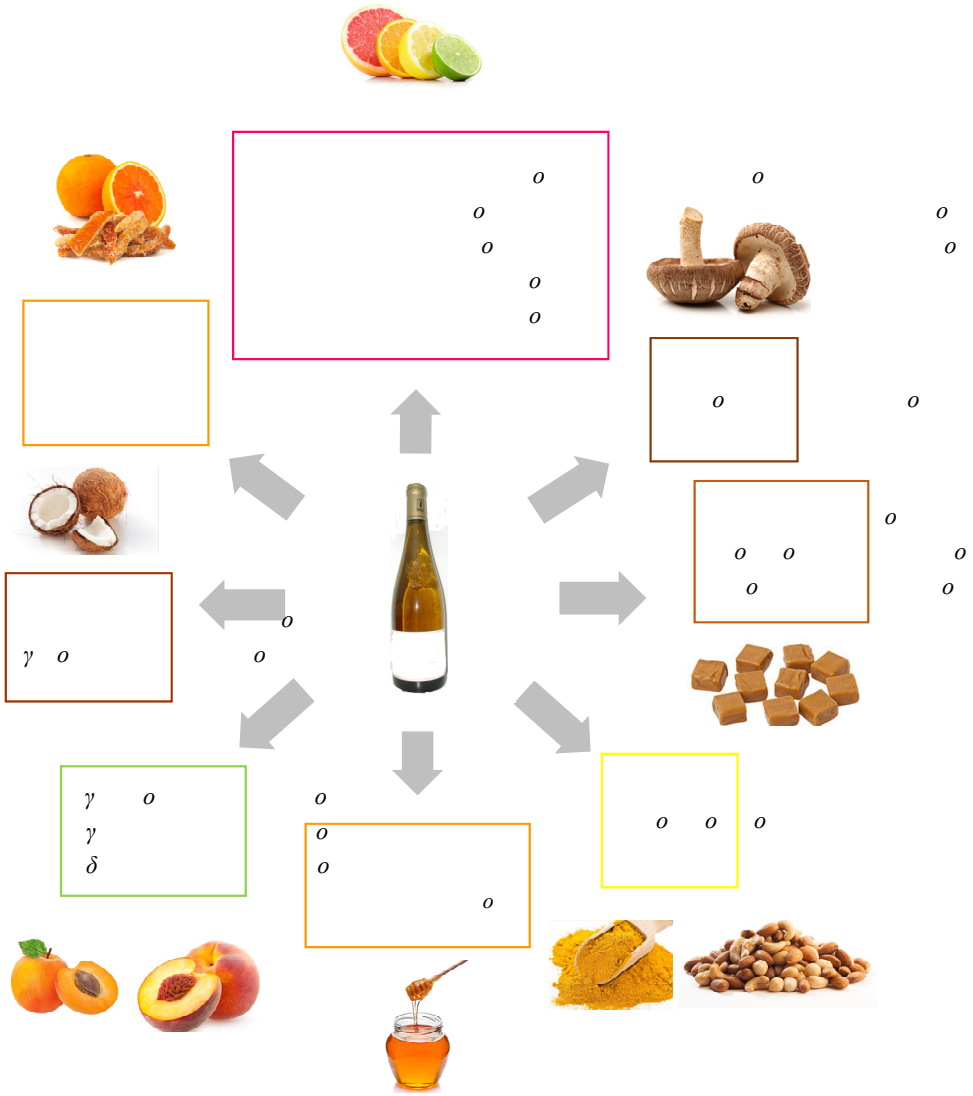
[illegible] *et al* [illegible] γ [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o o* [illegible] *et al.* [illegible] *o* [illegible] *et al.* [illegible]

[illegible] *o* [illegible] *o* [illegible] *o* [illegible] *et al.* [illegible] μ [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] γ [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *o* [illegible] *et al.* [illegible] *o* [illegible] *o* [illegible] *o*

[illegible]

[illegible]

[illegible] *o* [illegible] μ [illegible] *et al.* [illegible] *o*



Compostos odorantes dos principais grupos de compostos do aroma encontrados nos vinhos botritizados.

et al.

et al.

et al.

et al

et al. [illegible] *et al.* [illegible] *et al.*

[illegible] *et al.* [illegible] *et al.*

[illegible] *et al.* [illegible] *et al.*, [illegible]

[illegible] *et al.* [illegible] *et al.* [illegible]

Concentração de 3MH em vinhos obtidos a partir de uvas em diferentes estádios de infecção (Sarrazin et al., 2007b)

[illegible]	[illegible]	[illegible]	[illegible]	MH [illegible]
	[illegible]			
	Pourri plein			
[illegible]	Pourri rôti			
	[illegible] pourri rôti			
	[illegible]			
	Pourri plein			
[illegible]	Pourri rôti			
	[illegible] pourri rôti			

[illegible] *et al.*, [illegible] S-S [illegible] *et al.*

[illegible] *et al.* [illegible] *et al.* [illegible] *et al.*, [illegible] *et al.*

et al.

B. cinerea

et al.

et al.

et al.

et al.

et al.

et al.

et al.

B. cinerea

et al.

et al. et al.

et al. et al.

et al. et al. et al.

et al.

et al.

et al.

et al. et al.

et al.

et al.

Refermentation problems

Zygosaccharomyces bailii *Sacharomycodes ludwigii* *Saccharomyces cerevisiae*

et al.

et al.

et al.

Diagrama de vinificação e envelhecimento de vinhos botritizados em barrica e em cuba.

Pasteurization

et al. D

et al.

et al.D

Sorbic acid

et al. D ,

et al. D

et al.

Dimethyl dicarbonate

et al. ,

et al.

et al.

Oenological tannins

et al., D

et al.

Bentonite

et al.

et al.

et al.D

Stabilization with silica

β

Filtration

et al.

et al.

et al.

Addition of beta-glucanases (β1-3, β1-6)

et al.

et al.

et al.

et al.

Inoculation of lactic acid bacteria

Oenococcus oeni

Carboxymethylcellulose

et al.

Ascorbic acid

et al.

μ

et al.

Barrel aging

et al.

et al.

et al.

et al.

et al.

Bottling aging

et al.

et al.

Aspergillus

Penicillium

μ

o *o*

o *o* *o*

o *o* *o*

B. cinerea *o* *o*

et al.

B. cinerea

et al., *et al.*

et al.

B. cinerea,

et al.

et al.

B. cinerea

et al.

et al.

et al.

J. Agric. Food Chem.

J. Agric. Food Chem.

Saccharomyces cerevisiae *European J. Appl. Microbiol. Biotechnol.*

J. Agric. Food Chem.

J. Appl. Microbiol.

J. Chromatogr. A

Saccharomyces cerevisiae *J. Biosci. Bioeng.*

Torulaspora delbrueckii – *Saccharomyces cerevisiae* *Int. J. Food Microbiol.*

Am. J. Enol. Vitic.

Botrytis cinerea *J. Plant Physiol.*

Botrytis cinerea *Appl. Microbiol. Biotechnol.*

In: VIII International Terroir Congress

Chaetomium globosum . *Botrytis cinerea* 3 *Phormidium tenue* *Chem. Pharm. Bull.*

J. Agric. Food Chem.

Connaiss. Vigne Vin

J. Agric. Food Chem.

Botrytis cinerea *J. Appl. Microbiol.*

Food Chem

Vitis Vinifera *Botrytis cinerea* *Postharvest Biol. Tec*

In: Advances in Food and Nutrition Research, Volume 63

Candida stellata Candida zemplinina Saccharomyces uvarum *Saccharomyces cerevisiae Food Microbiol*

Botrytis cinerea *J. Agr. Food Chem.*

J. Int. Sci. Vigne Vin

Agric. Biol. Chem

Int. J. Food. Microbiol., □ □

Acta Aliment.

Anal. Chim. Acta

Botrytis *Appl. Environ. Microbiol.*

Candida zemplinina *Saccharomyces cerevisiae* *Appl. Environ. Microbiol.*

Am. J. Enol. Vitic.

Bull. OEPP

Food Chem. Toxicol.

J. Org. Chem.

Candida zemplinina *Saccharomyces cerevisiae*

Botrytis cinerea *Can. J. Bot.*

Vitis Vinifera *Botrytis cinerea* *Front. Plant Sci.*

Botrytis cinerea *Vitis Vinifera* *Ciência Téc. Vitiv.*,

Connaiss. Vigne Vin

Connaiss. Vigne Vin

Botrytis cinerea *Can. J. Bot.*

Food Chem. Toxicol.

J. Org. Chem.

Candida zemplinina *Saccharomyces cerevisiae* *Appl. Environ. Microbiol.*

Am. J. Enol. Vitic.

Bull. OEPP

Anal. Chim. Acta

Vitis

I

Botrytis cinerea

J. Food Sci.

RI

Food Chem.

J. Agric. Food Chem.

In: Grand Prix de L'Académie Amorim

J. Agric. Food Chem.

Chromatographia

Candida zemplinina

Candida stellata J. Basic. Microbiol.

RI

Candida stellata

Saccharomyces cerevisiae

Aust. J. Grape Wine R.

Rev. Œnologues

H

Connaiss. Vigne Vin

Aust. J. Grape Wine R.,

Intl. J. Food Ferment. Technol.

WLQ

Vitis Vinifera

Food Chem

Vitis Vinifera

J. Agr. Food Chem.

Food Chem.

Botrytis pseudocinerea

Botrytis cinerea. Phytopathology,

Food Chem.

Science

Botrytis cinerea

Mol. Plant Pathol.