



## Filter Practices that Protect Aroma Profile

Increasing Colour and Stability of Pinot Noir

Aspects of Grape and Oenology Technology on Aromatic Whites

Sparkling Blanc de Noir Production

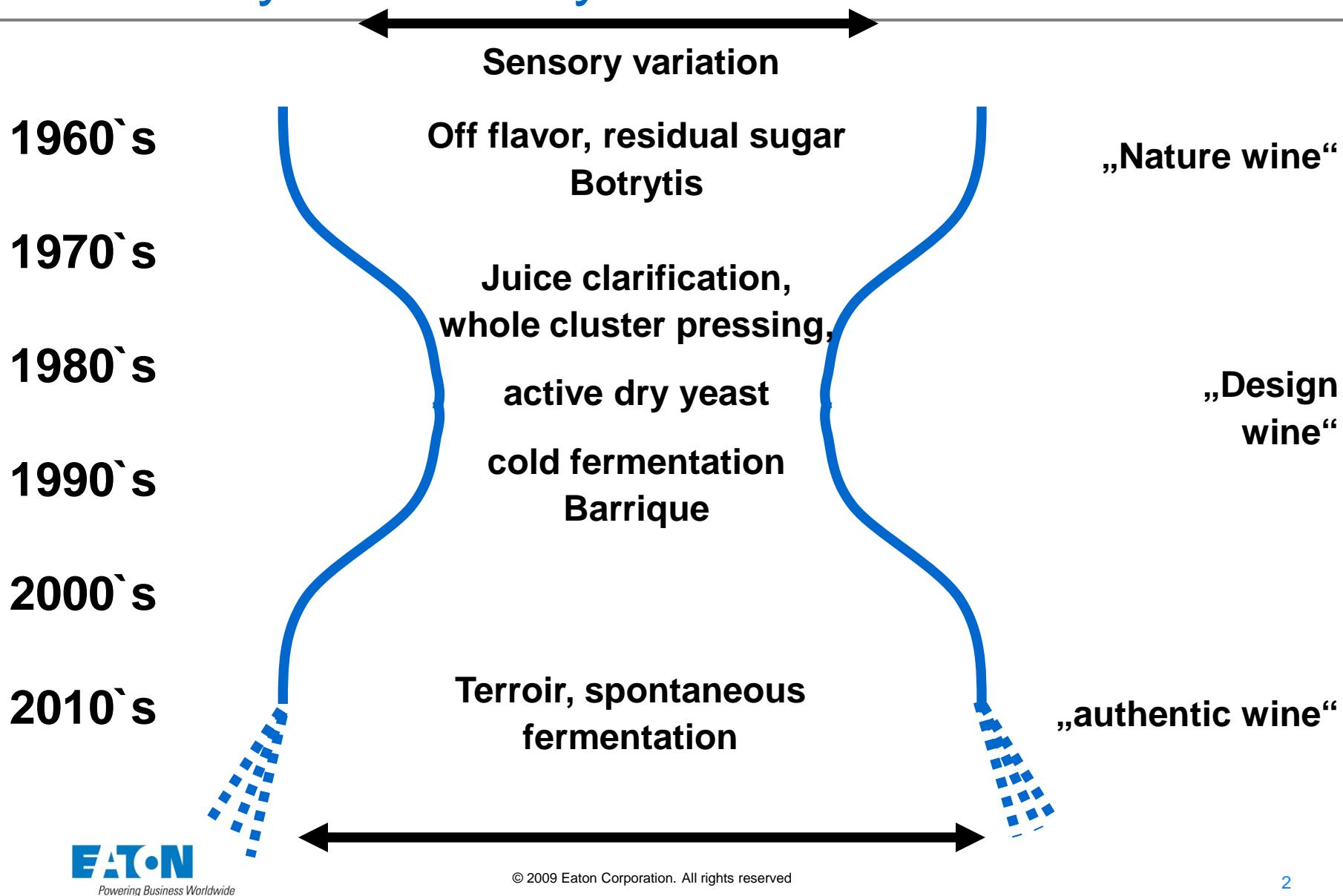
Dr. Ilona Schneider



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# History of wine style



# Enology trends – view from europe

- Spontaneous alcoholic fermentation
- Favorite exotic aroma – „Thiole-Aficionados“
- Moderate alcohol
- Long yeast contact time
- Biotechnology (microorganisms, enzymes) instead of mechanical processing
- Lower oak influence in red - and white wine
- High volume barriques for white wines
- Wines from Amphore
- Production of individual signature wines

# Trend: Wine style

- Easy-drinking: cold fermentation aroma – fresh- fruity
- Expression of green – exotic Sauvignon blanc
- Mineral driven, structured Terroir wine
- Complex, creamy Sponti Type
- Intensive Bouquet Wine (Aromatic wine)
- Rosé – easy to drink Lifestyle
- Premium red wines without an overloading of tannins

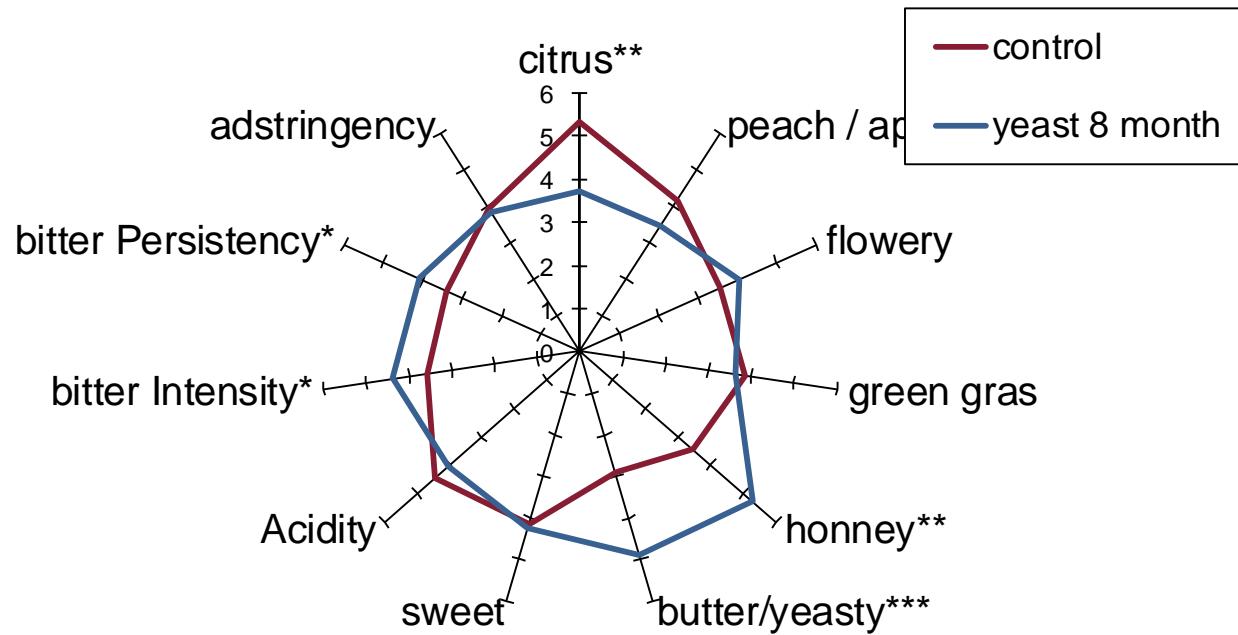
# Easy-drinking cold fermentation – fresh - fruity



- Sugar concentration juice 70 – 80°Oe
- 7 – 9 g/L juice acidity
- Max. 10% Botrytis
- 30-50 mg/L SO<sub>2</sub>, depending on pH
- Enzymation of juice, Bentonite finning
- Intensive juice clarification 10 – 30 NTU
- Yeast with high ester production (SIHA Cryarome, SIHA WhiteArome, SIHAFERM Element)
- Fermentation at beginning 15°C, stop cooling process depending on the fermentation speed of the yeast
- High demand of yeast nutrient (DAP, SIHA SpeedFerm)
- SO<sub>2</sub>-Addition 14 days after fermentation, no MLF, early racking.
- If residual sugar: stop fermentation of by cuve
- Early bottling: from nov. until spring

Ronald Searle Winespeak, 1983  
[ronaldsearle.blogspot.com](http://ronaldsearle.blogspot.com)

# Sensorical profile of long yeast sediment storage in 2009 Pinot Blanc (N = 16 person x 3 reputation)



significance:

p <0,05; \*\*p<0,01; \*\*\*p<0,001

M. Sokolowsky, U. Fischer

AiF FV 16006

# International style of Sauvignon blanc (Fischer, Weinwelt 2011)



*Green note*



South  
Africa

New Zealand



France



Chile, US, Austr.

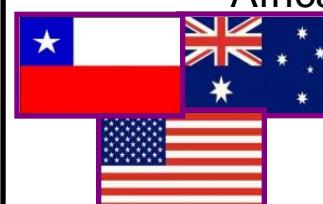


*Raspberry*



South  
Africa

New Zealand

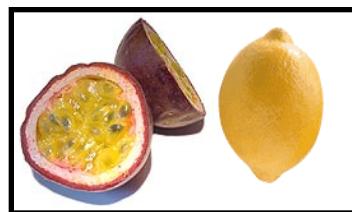


Chile, USA, Austr.



France

*Fruit (passionfruit, citrus)*



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*Minerale*



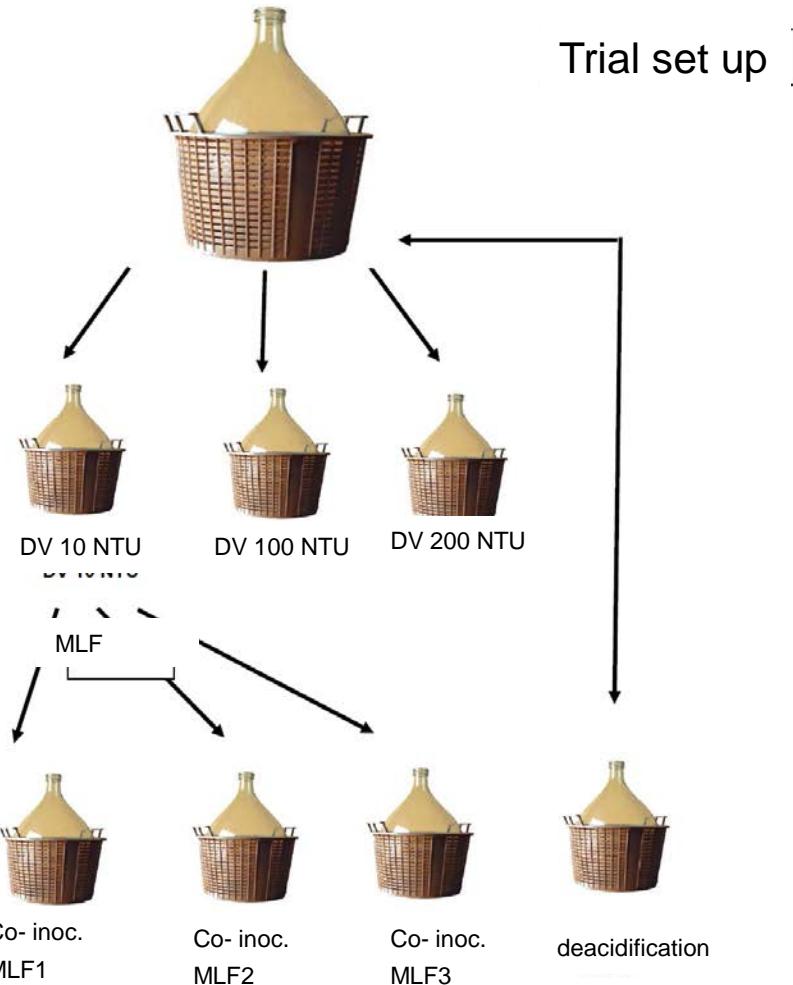
# Expression of green – exotic Sauvignon blanc

- Juice sugar concentration 80 – 90°Oe
- 7 – 10 g/L juice acidity
- No botrytis
- 1/3 early harvest (Pyrazine) 2/3 late harvest (Exotic)
- 50 mg/L SO<sub>2</sub> + 100 mg/L ascorbic acid
- Enzymation of juice, bentonite finning
- Intensive juice clarification 10 – 30 NTU
- Sauvignon Blanc yeast (SIHA Cryarome)
- Fermentation at beginning 16-18°C, stop cooling process depending on the fermentation speed of the yeast
- SO<sub>2</sub> Addition 14 days after fermentation, no MLF, racking 14 days before bottling, DE-Filtration
- No or low residual sugar
- O<sub>2</sub>-reduction bottling from feb., screw caps



# Trial 2010 Sauvignon Blanc

## Direct processing (DV)

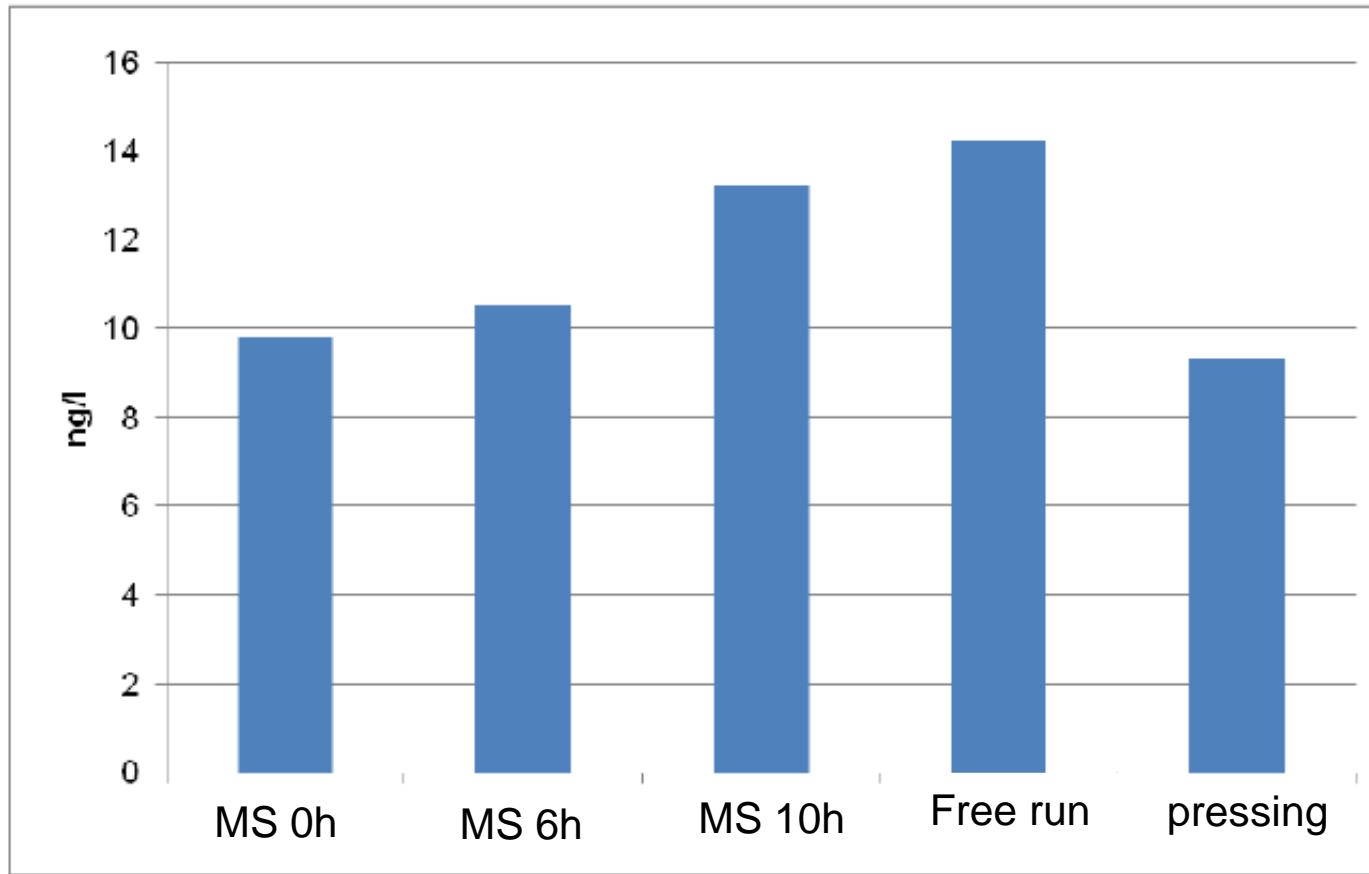


## Mash treatment (MS)



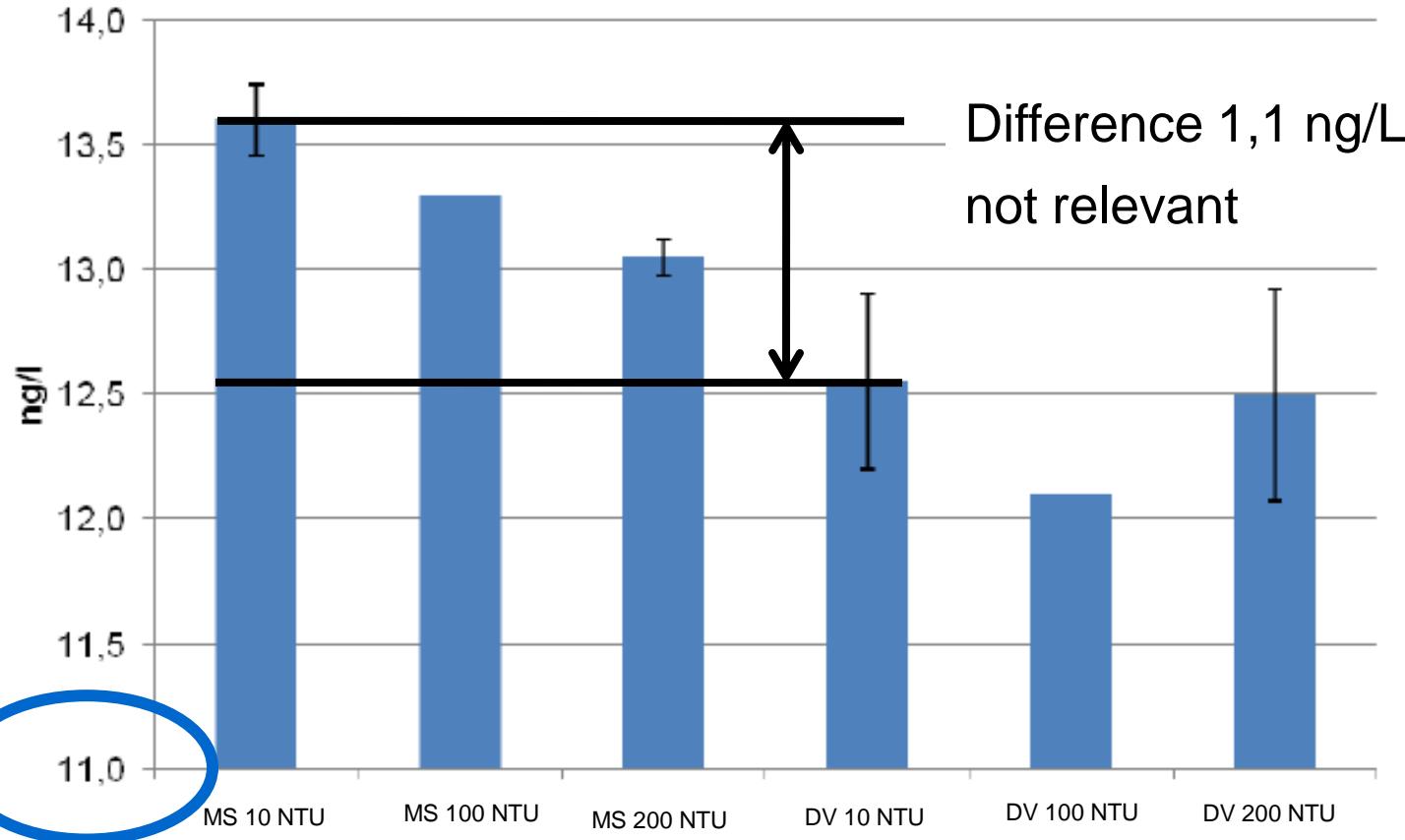
Bachelor M. Schneider  
FH Rhein-Main, FB Geisenheim,  
A Rosenberger, H.-G. Schmarr,  
DLR Rheinpfalz

# Extraction of Isobutyl-Methoxypyrazine during mash treatment and press fraction



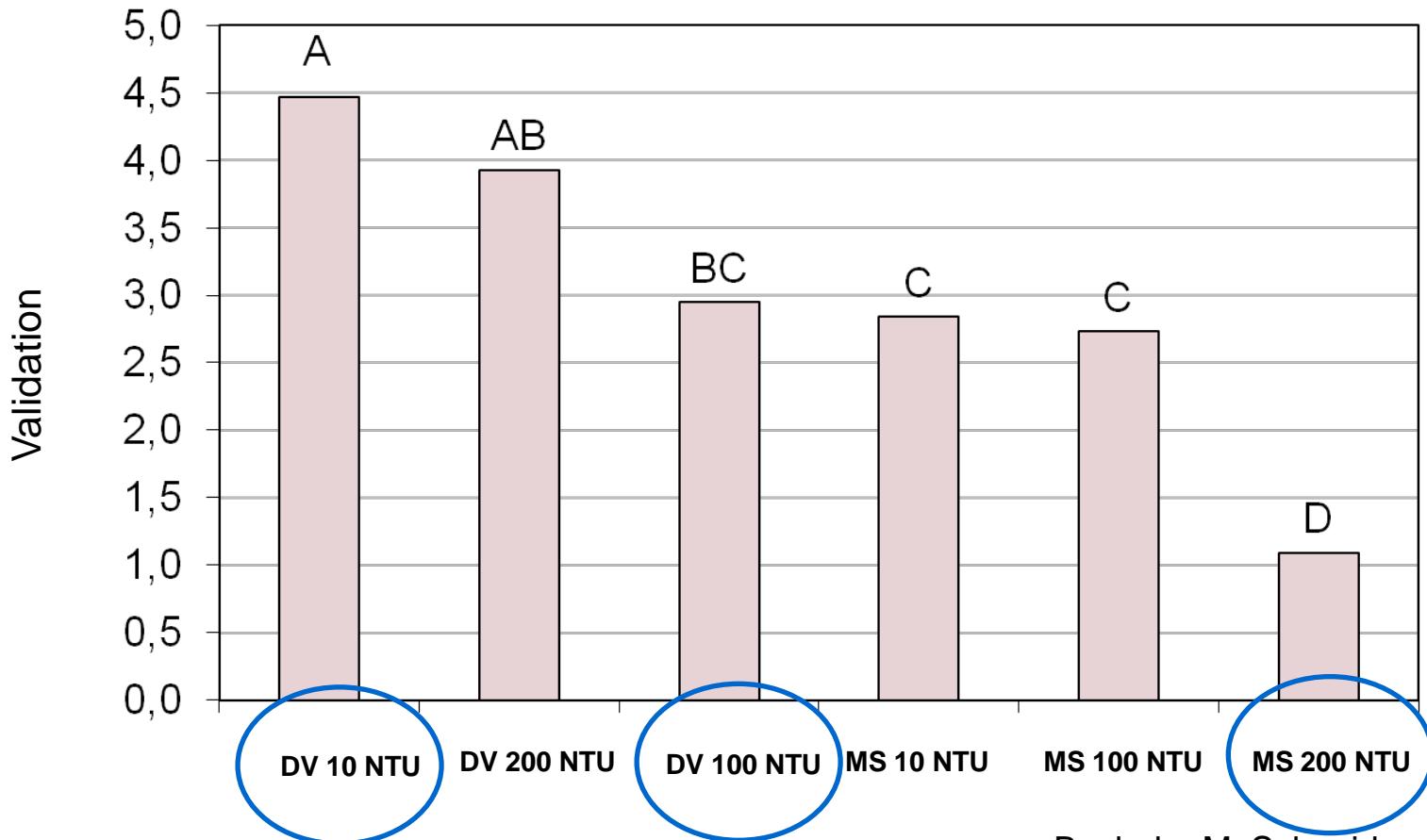
Bachelor M. Schneider  
FH Rhein-Main, FB Geisenheim,  
A Rosenberger, H.-G. Schmarr,  
DLR Rheinpfalz

# Isobutyl-Methoxypyrazine after bottling



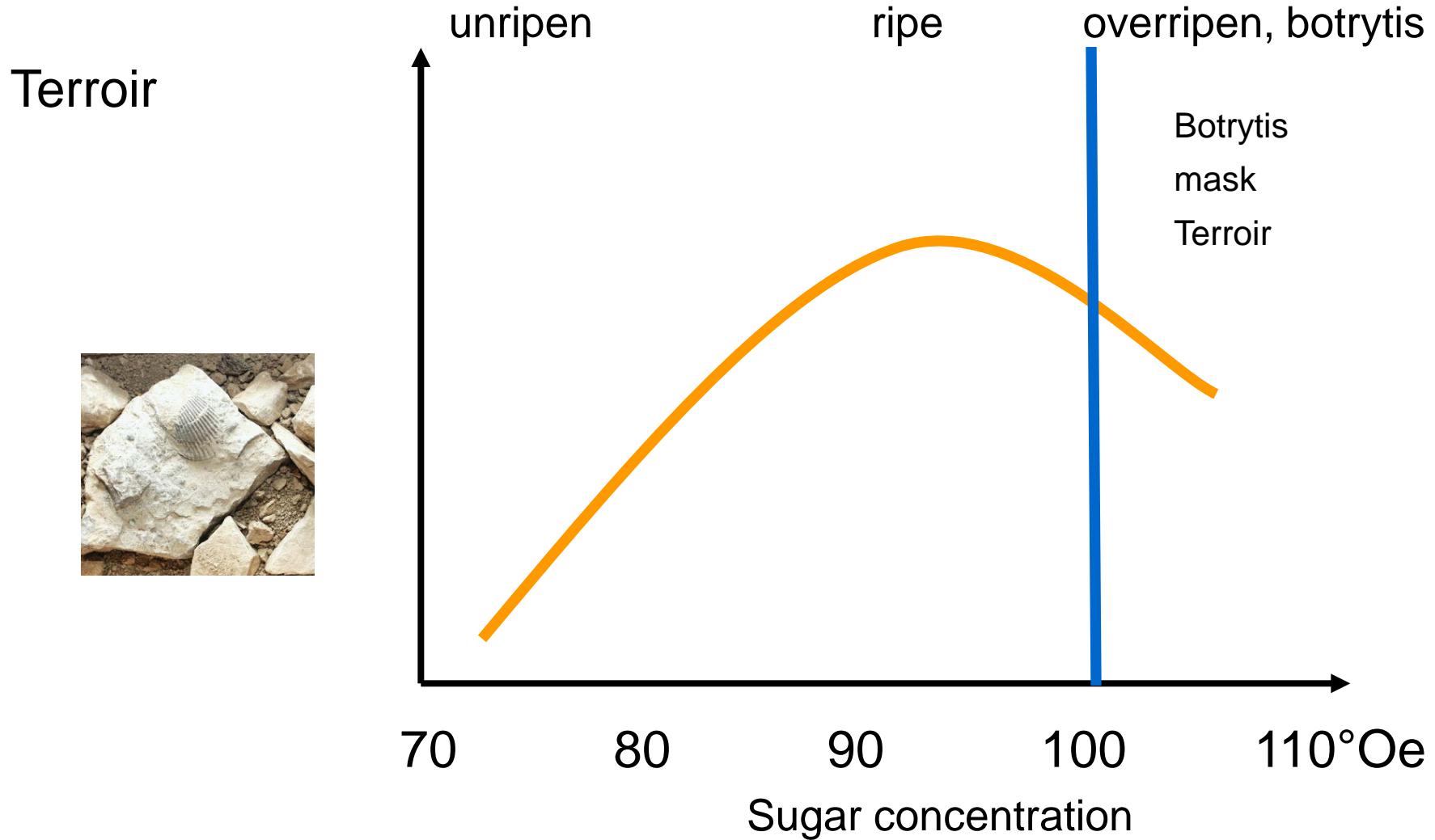
Bachelor M. Schneider  
FH Rhein-Main, FB Geisenheim,  
A Rosenberger, H.-G. Schmarr,  
DLR Rheinpfalz

# 5-point-scheme (n= 16)



Bachelor M. Schneider  
FH Rhein-Main, FB Geisenheim,  
A Rosenberger, H.-G. Schmarr,  
DLR Rheinpfalz

# Optimale ripening of grapes

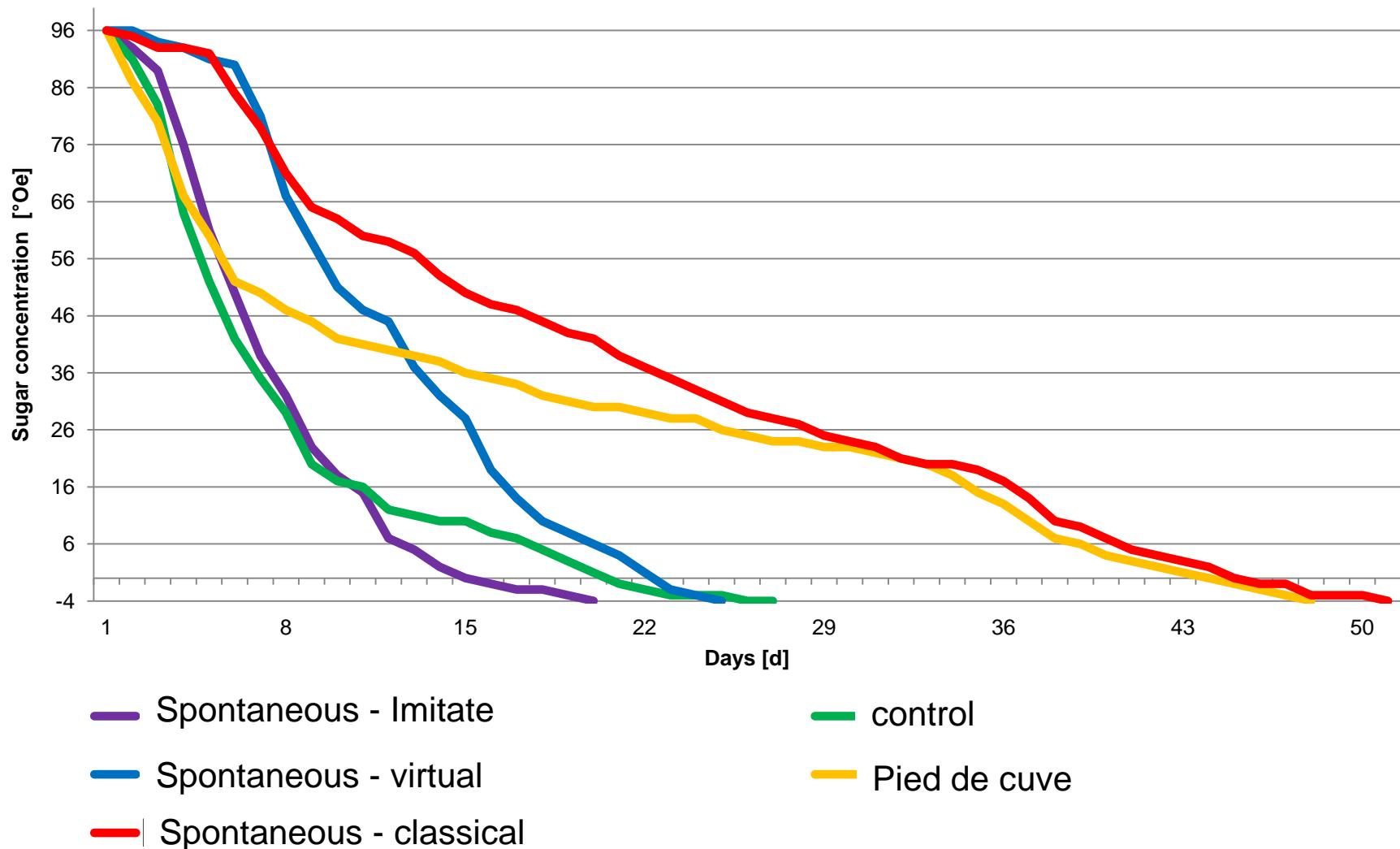


# Complex, creamy Sponti Type

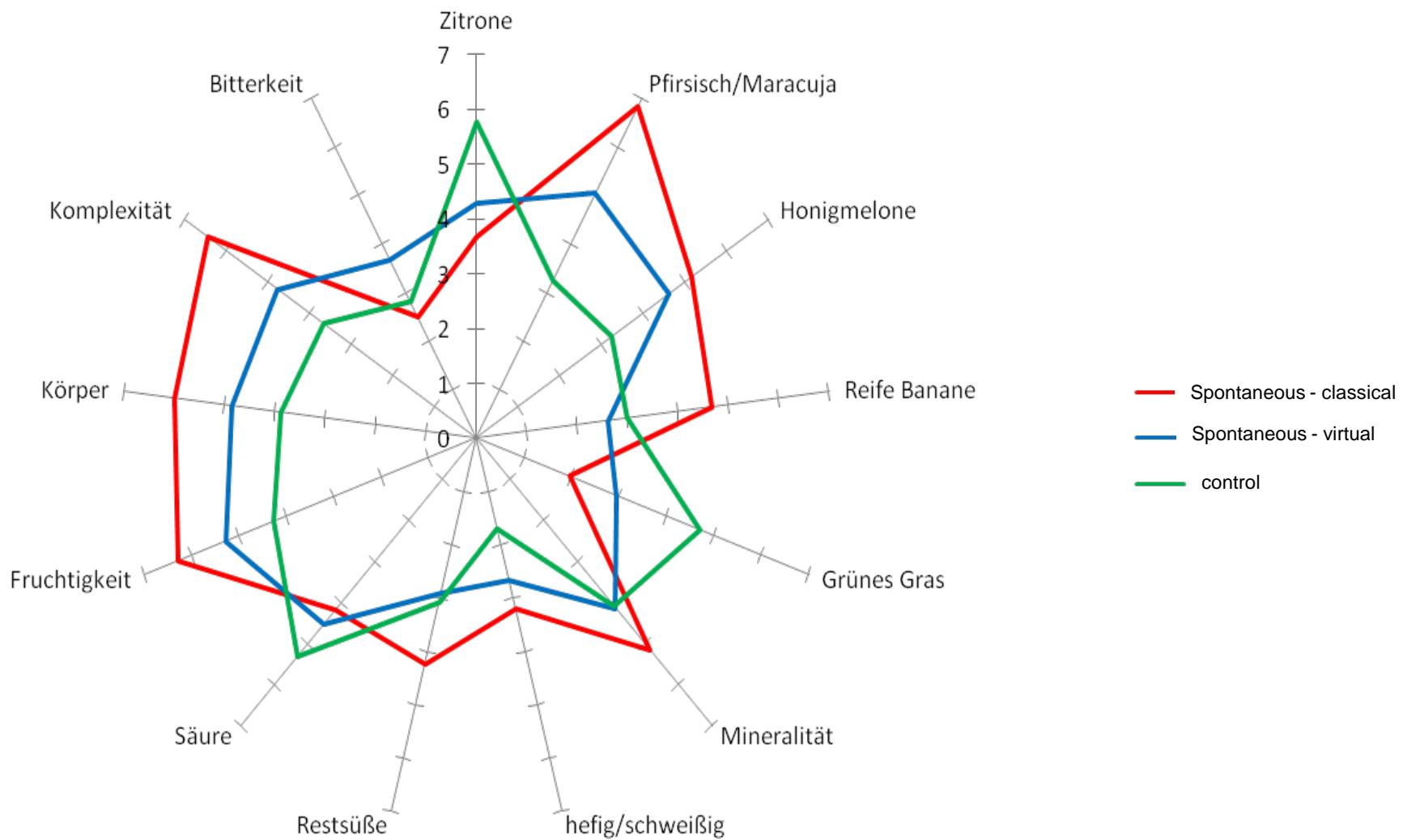


- Sugar concentration 85 – 105°Oe, 6 – 10 g/L juice acidity
- Max. fresh 10% botrytis
- mashing (4 – 12h) with enzyme
- Moderate juice clairification 40 - 100 NTU
- no SO<sub>2</sub> – spontaneous – fill up the tank
- Fermentation and storage in big wood barrels
- Wait until fermentation starts– Addition of nutrients like SIHA SpeedFerm, later SIHA Proferm Plus
- Fermentation temperature 20°C
- after ½ of fermentation addition of SIHAFERM Element
- SO<sub>2</sub>-Addition 14 days after fermentation, no MLF, racking 14 days before bottling with DE-Filtration
- Natural residual sugar
- Sufficient SO<sub>2</sub> for a long bottle storage

# Fermentation rate



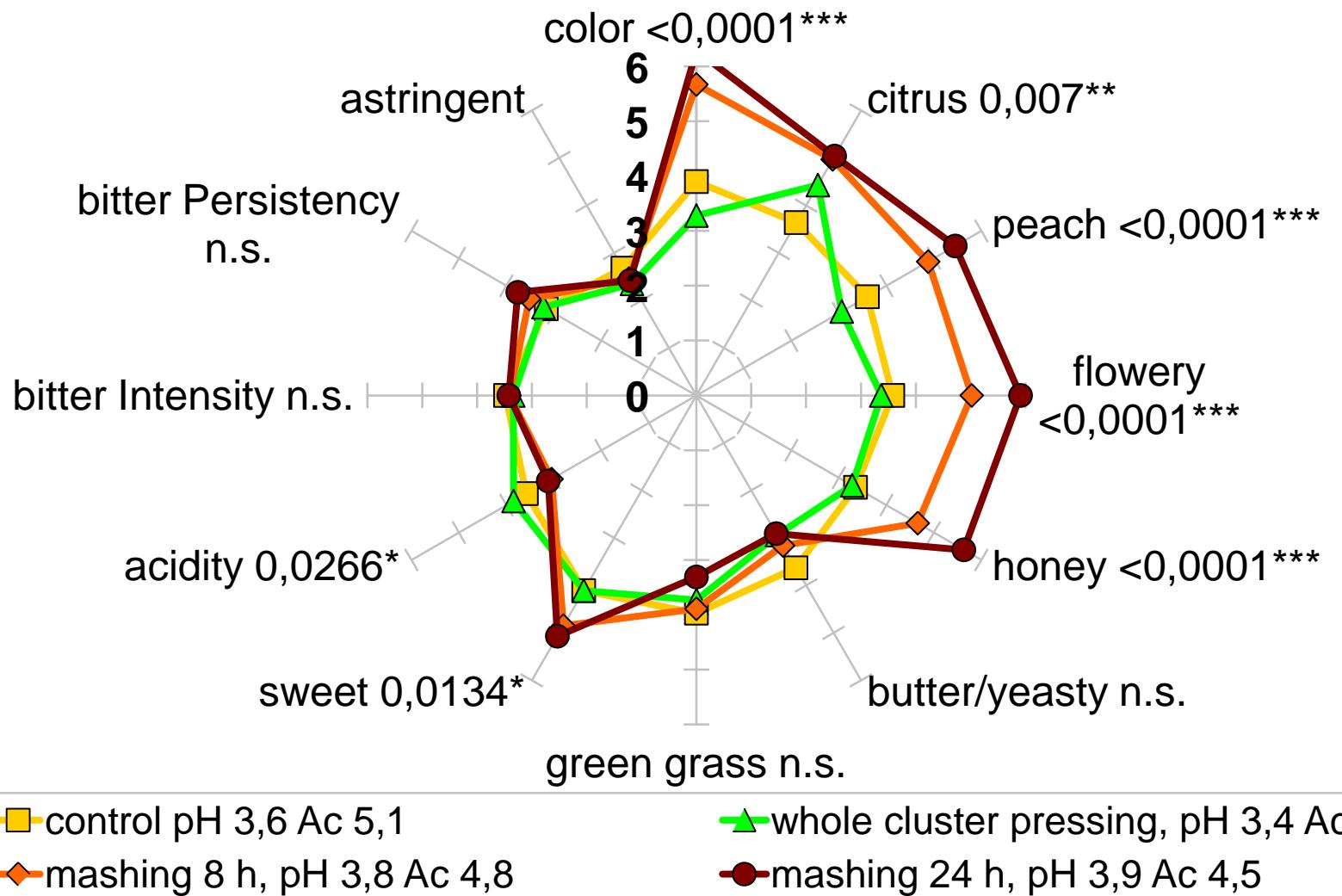
# Descriptive analysis (N = 21 persons)



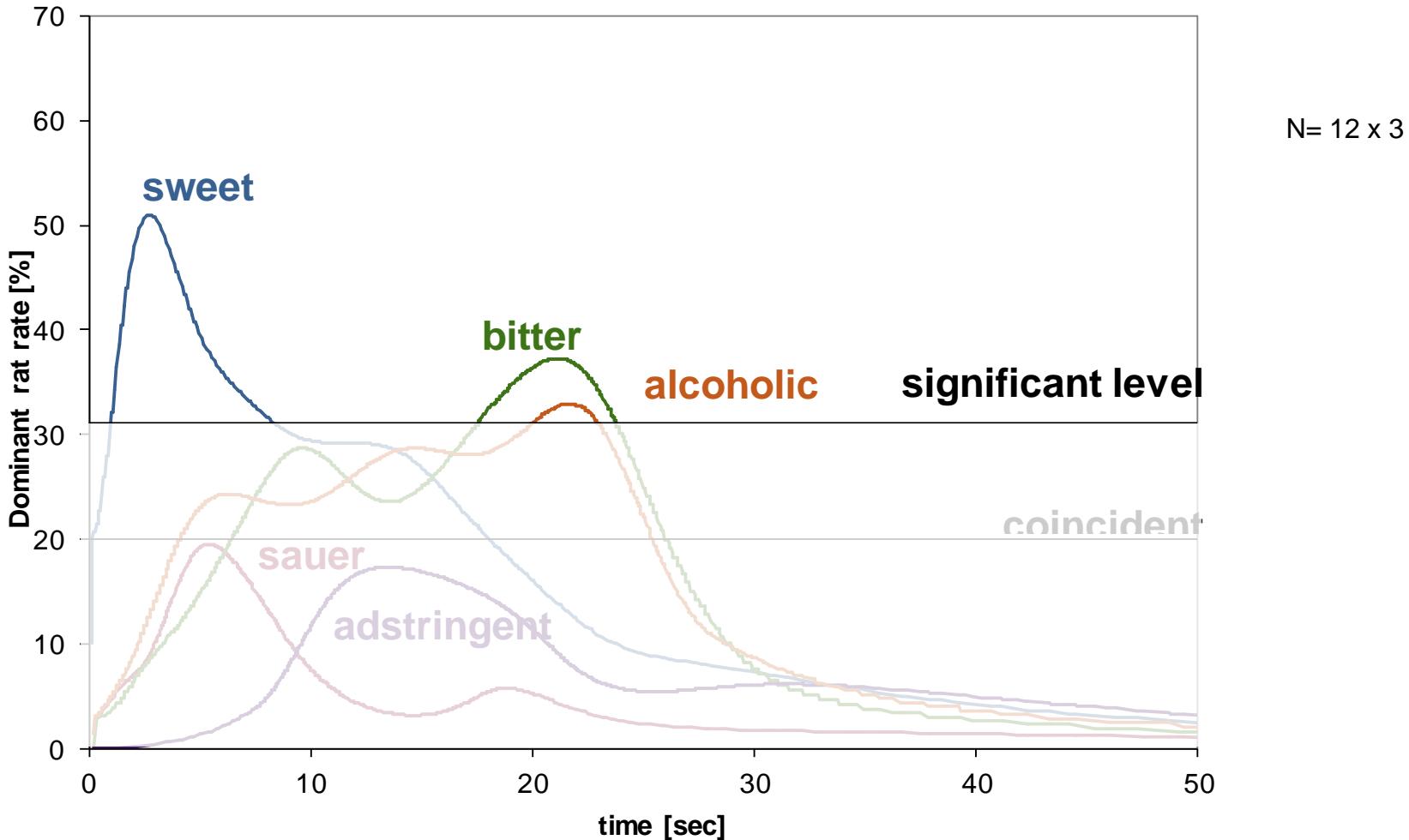
# Intensive Bouquet Wine

- 
- Sugar concentration 90 – 115°Oe
  - 6 – 9 g/L juice acidity
  - only ripe, dried botrytis – up to 30%
  - 50 mg/L SO<sub>2</sub>, alternative 100 mg/L Lysozyme
  - Mash treatment with enzyme; active carbon in juice
  - Filtration up to 10 – 50 NTU
  - Yeast with high aroma precursor (SIHA 7)
  - Fermentation to begin 18°C, fermentation cooling depending on fermentation rate
  - SO<sub>2</sub>-Addition after fermentation, no MLF , early racking
  - Favorable Residual sugar
  - Sufficient free SO<sub>2</sub> for long storage

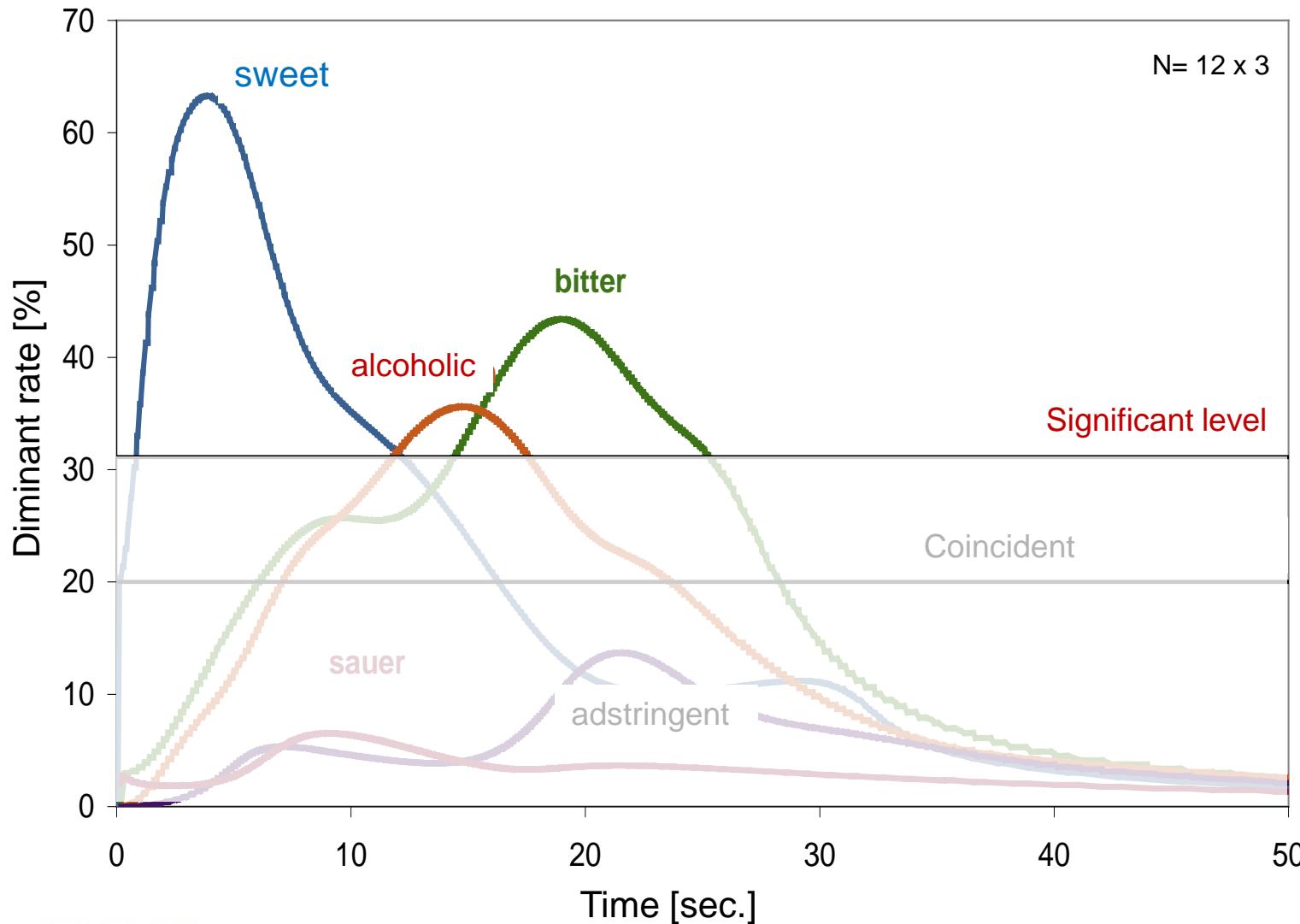
# Sensory profile grape processing 2009 Gewürztraminer (n = 18 P. x 3 R)



# Mashing Gewürztraminer – 8 h holding time



# Mashing Gewürztraminer – 24 h holding time



# Rosé – easy to drink Lifestyle

- Sugar concentration 65 – 85°Oe, 6 – 7 g/L juice acidity
- Destemming without crushing or whole cluster pressing
- Reduction of juice / Saignée process for red wines
- Juice enzymation, bentonite fining, as far there is botrytis grapes active carbon fining
- Clarification 10 – 30 NTU (Flotation N<sub>2</sub>)
- Cold fermentation yeast (SIHA Cryarome, SIHA WhiteArome)
- Fermentation at the beginning 16°C, cooling down depending on fermentation rate
- High demand on yeast nutrient (Fermentation salt, SIHA SpeedFerm, SIHA Proferm H+2)
- SO<sub>2</sub>- Addition 14 days after fermentation, no MLF, fast racking.
- Colour adjustment by red wine



# Premium red wines without an overloading of tannins



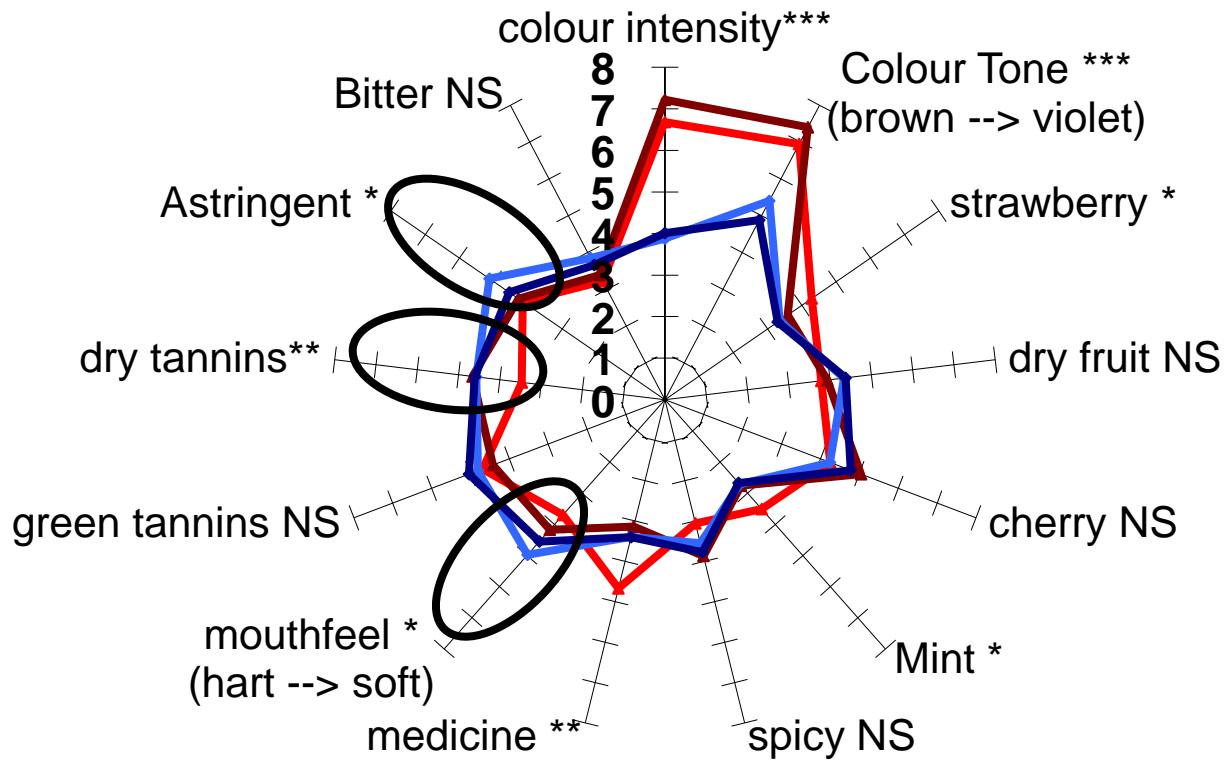
- Sugar concentration 90 – 105°Oe
- 6 – 8 g/L juice acidity
- Destemming with crushing of 50% of berries
- 50 mg/L SO<sub>2</sub>
- Cold maceration 5 days at < 10°C
- Inoculation with yeast with positive Effect on polymerisation (Siha 10 – Red Roman, SIHA Rubino Cru)
- 5 – 8 days fermentation at 30°C
- MLF, also co-inccoluation with high cell count
- 30 mg/L SO<sub>2</sub> before storage in barrique
- Bottling before harvest of the following year

Cold maceration of 2011, Pinot Noir  
 (B.Sc. Arbeit David Golitko, WeinCampus Neustadt)

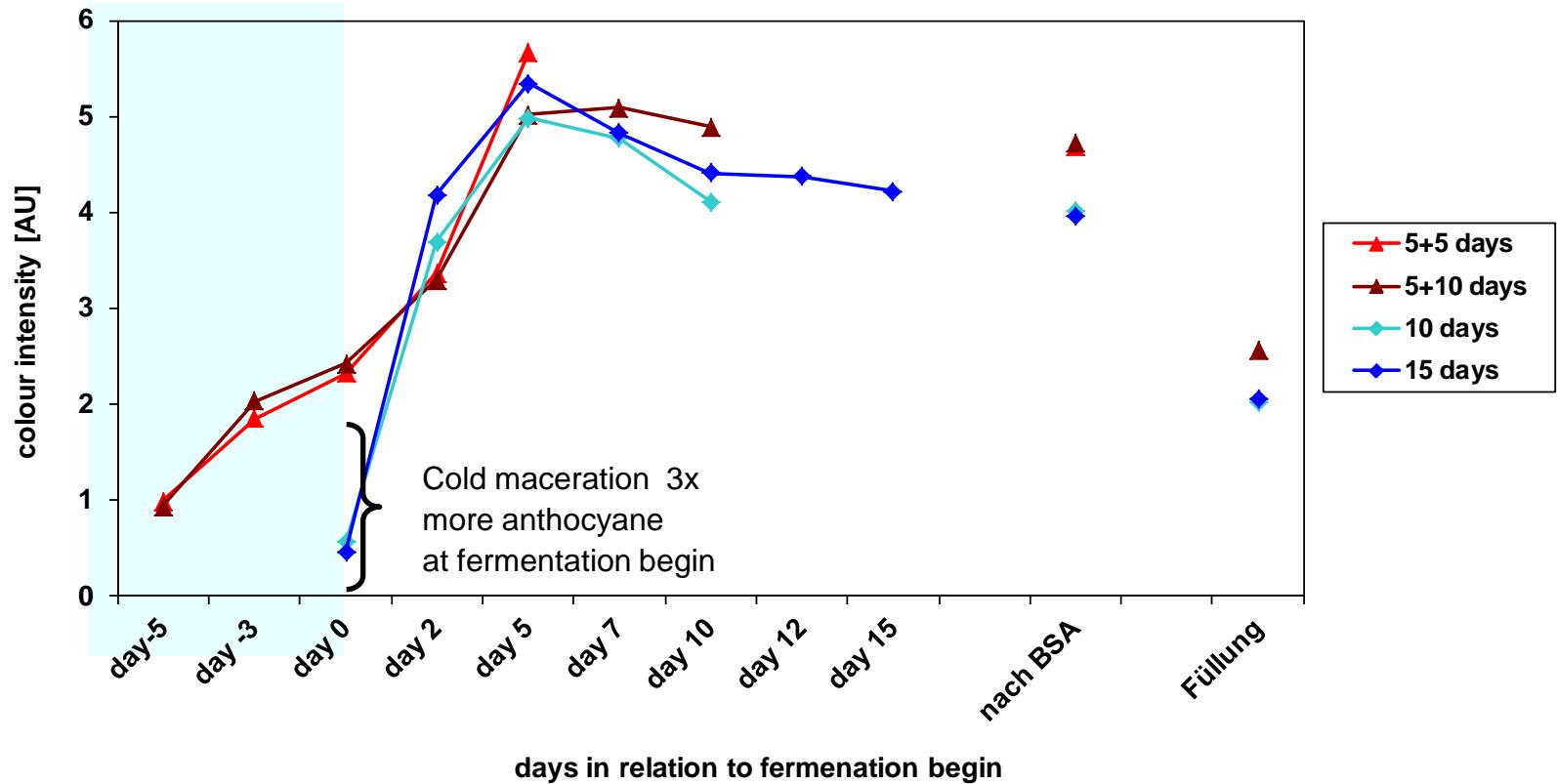
Sample	Description
5+5 days	5 days cold maceration 5 days fermentation/maceration
5+10 days	5 days cold maceration 10 days fermentation/maceration
10 days	10 days fermentation/maceration
15 days	15 days fermentation/maceration

vintage 2011	Maceration and fermentation	Yeast:
Auer 2107t	50 L tanks (15 L juice/ 35 kg grapes) n = 2	SIHA 10
Harvest: 15. Sept	Cold maceration: 5 °C	
	50 mg/L SO <sub>2</sub>	

# Influence of cold maceration on the sensory profile of pinot noir 2011 (B.Sc. Arbeit David Golitko)



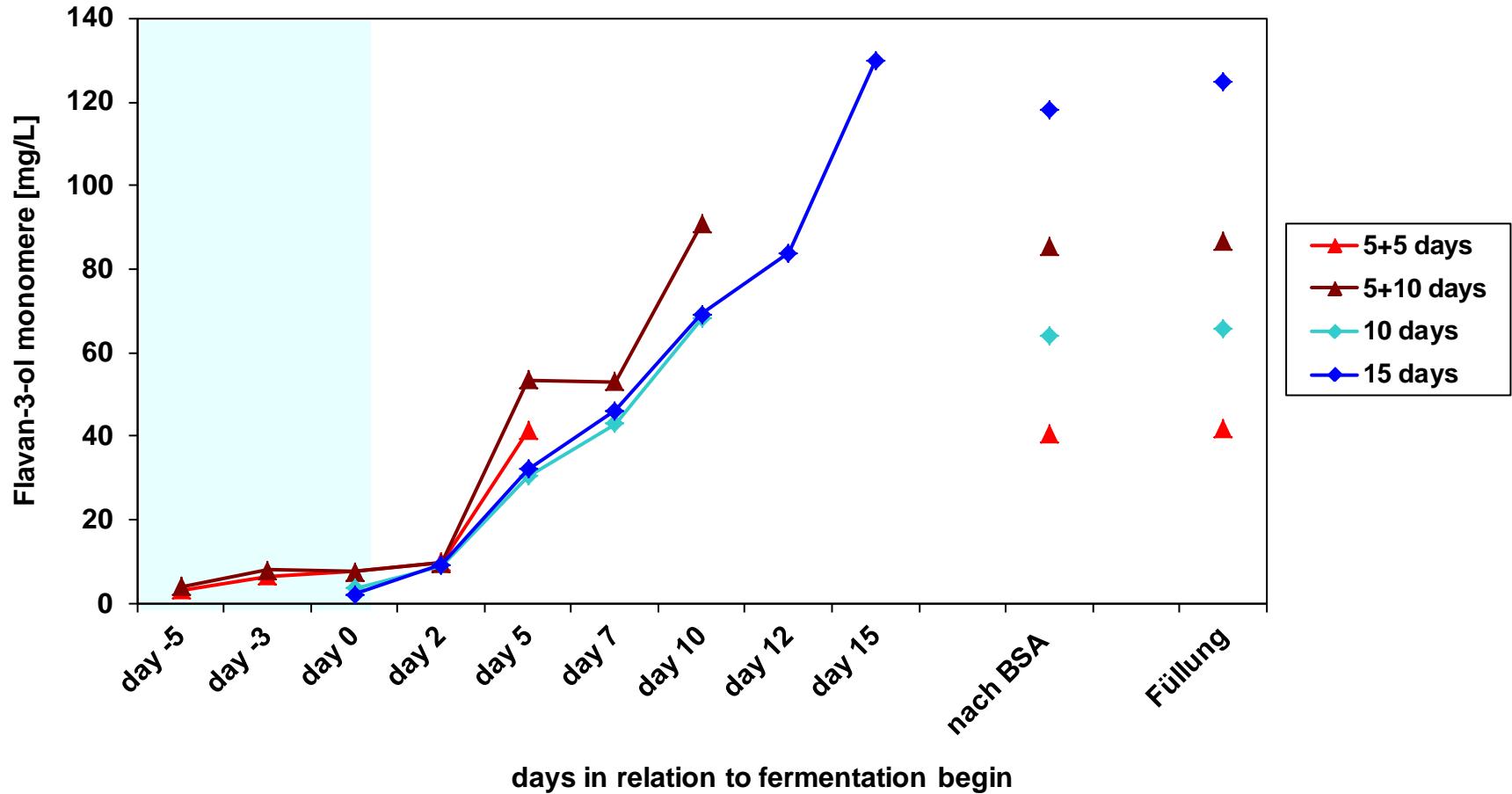
# Influence of colour intensity on pinot noir 2011 (B.Sc. Arbeit David Golitko)



## Cold maceration

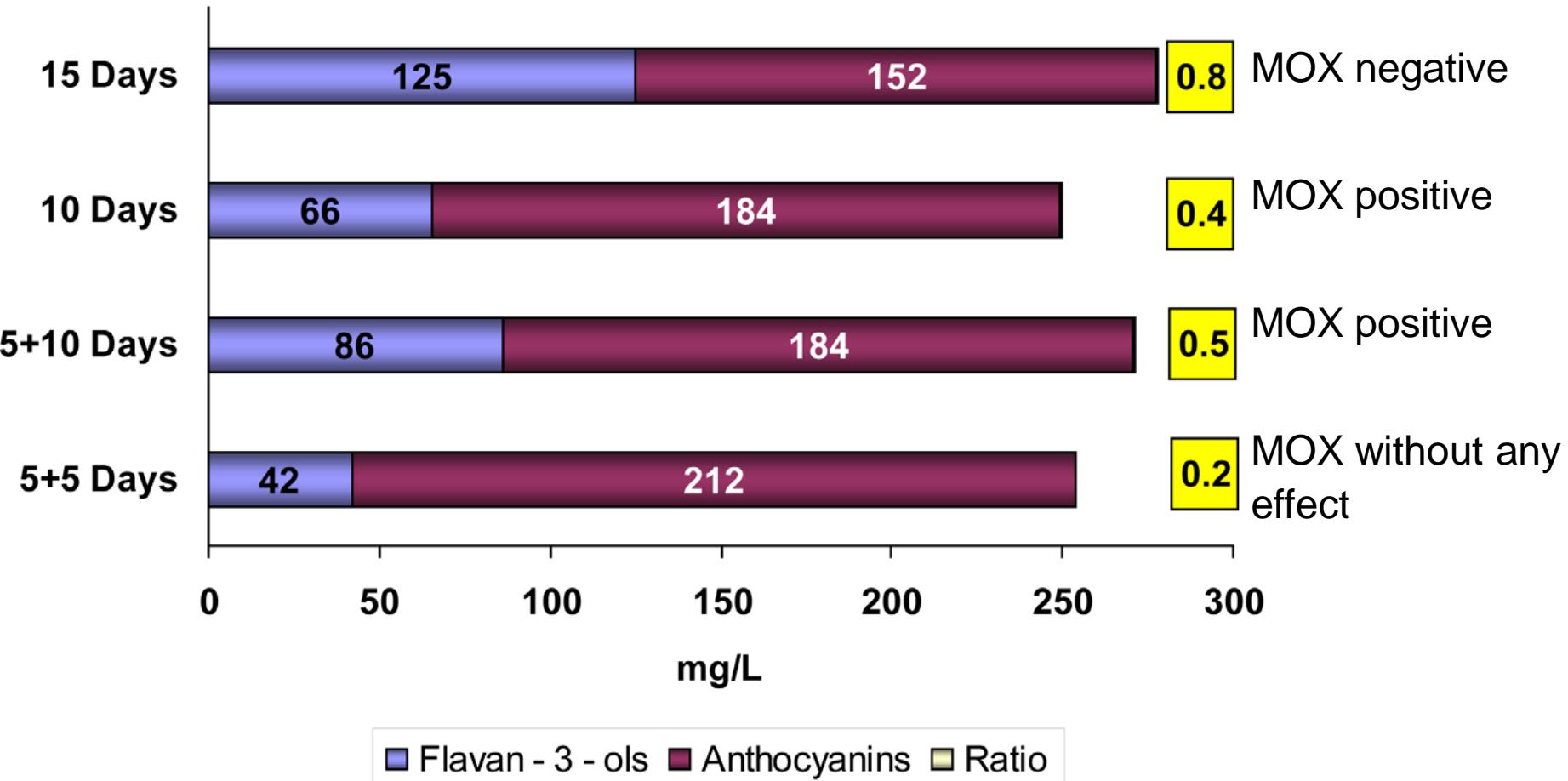
# Extraction of phenol on pinot noir 2011

## (B.Sc. Arbeit David Golitko, WeinCampus Neustadt)

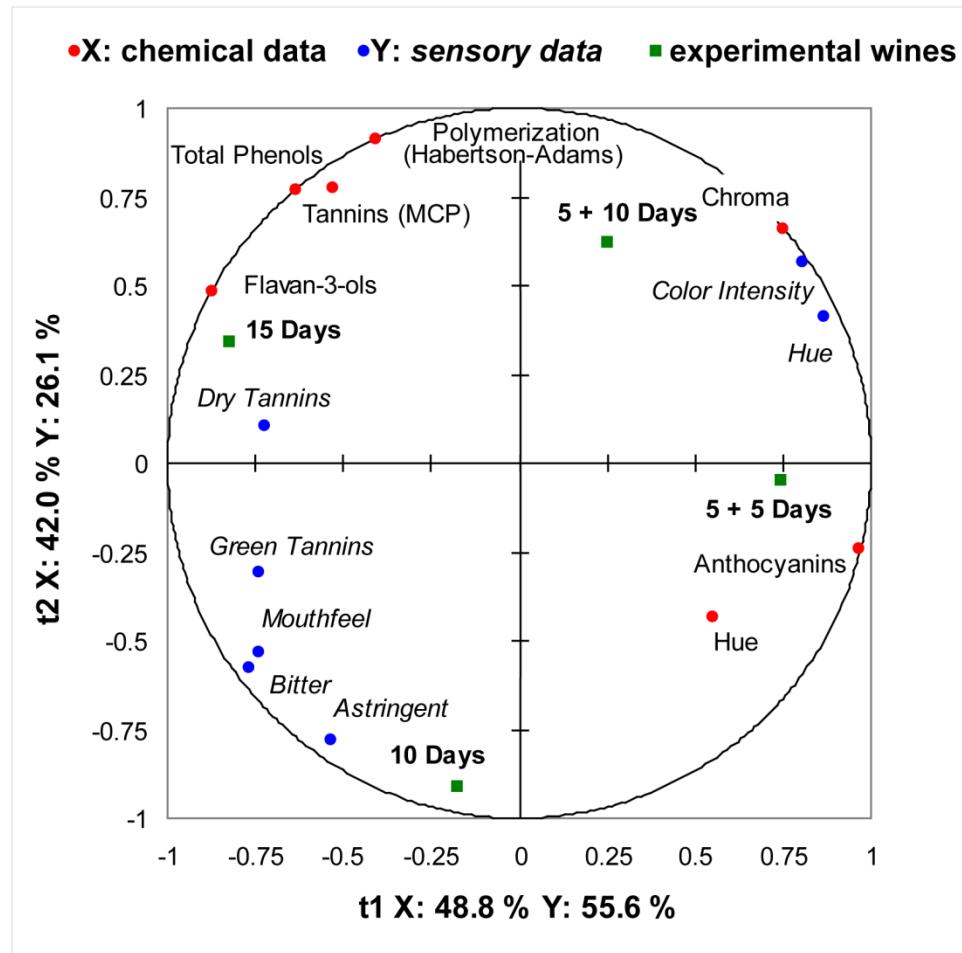


## Cold maceration

# Influence of maceration on ratio Flavanol – Anthocyane



# Model of Sensory data (B.Sc. Arbeit David Golitko, WeinCampus Neustadt)





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