Utilizing Phenolic Assays to Improve Winemaking

Pellegini Vineyards
North Fork of Long Island
New York

Control versus Leaf Removal

- catechin (mg/g): 15
- epicatechin (mg/g): 15
- quercetin (mg/g): 25
- caffeic acid (mg/g): 5

- total anthocyanins (mg/g): 0.64
- malvidin 3-glucoside (mg/g): 183
- malvidin 3,5-glucoside (mg/g): 187
- quercetin 3-glucoside (mg/g): 16
- quercetin 3,5-glucoside (mg/g): 0.55

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Pump-over Vinification

- gallic acid (mg/g): 15
- catechin (mg/g): 15
- quercetin (mg/g): 25
- caffeic acid (mg/g): 5

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Rotary Fermenter Vinification

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- catechin (mg/g): 15
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Rotary Fermenter vs Pump-over

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- catechin (mg/g): 15
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Punch-down versus Rotary Ferment

- 2004 Cabernet Franc
  - pH: 3.6
  - Alcohol: 15.8 g/L
  - Total acidity: 5.2 g/L
  - Malic acid: 2.2 g/L
  - Sugar: 1.8 g/L
  - Alcohol by Volume: 14.8%
  - Total acidity: 5.9 g/L
  - Malic acid: 2.6 g/L
  - Sugar: 3.1 g/L
  - Alcohol by Volume: 13.7%

- 2004 Cabernet Franc (Rotary)
  - pH: 3.5
  - Alcohol: 15.5 g/L
  - Total acidity: 5.1 g/L
  - Malic acid: 2.1 g/L
  - Sugar: 2.1 g/L
  - Alcohol by Volume: 14.7%
  - Total acidity: 5.8 g/L
  - Malic acid: 2.4 g/L
  - Sugar: 3.0 g/L
  - Alcohol by Volume: 13.5%

Yeast Comparison

- 2004 Cabernet Franc
  - pH: 3.6
  - Alcohol: 15.8 g/L
  - Total acidity: 5.2 g/L
  - Malic acid: 2.2 g/L
  - Sugar: 1.8 g/L
  - Alcohol by Volume: 14.8%
  - Total acidity: 5.9 g/L
  - Malic acid: 2.6 g/L
  - Sugar: 3.1 g/L
  - Alcohol by Volume: 13.7%

- 2004 Cabernet Franc (Rotary)
  - pH: 3.5
  - Alcohol: 15.5 g/L
  - Total acidity: 5.1 g/L
  - Malic acid: 2.1 g/L
  - Sugar: 2.1 g/L
  - Alcohol by Volume: 14.7%
  - Total acidity: 5.8 g/L
  - Malic acid: 2.4 g/L
  - Sugar: 3.0 g/L
  - Alcohol by Volume: 13.5%