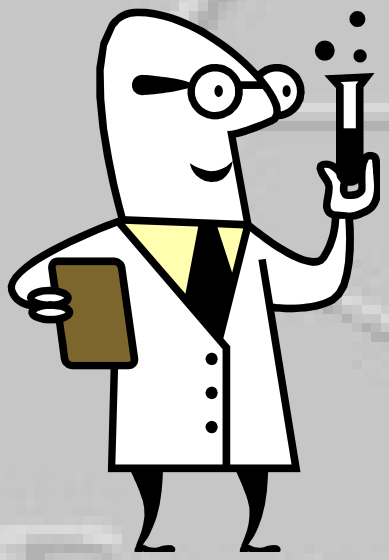

PRESQUE ISLE WINE CELLARS WINE SCHOOL

Presents

Winemaking 101 - Basics

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Wine School Class Offerings

- ***Winemaking 101- Basics – Theory, Lecture, Demonstration (2-3 hours)***
  - Designed for beginning winemakers or those wondering about starting to make wine. We will cover the winemaking process, equipment, sanitation, basic chemicals, critical tests and terminology.
- ***Winemaking 201 – Intermediate – Theory, Lecture, Demonstration, Lab (2-3 hours)***
  - Designed to follow Winemaking 101 – Basics Class. We will cover acid testing, sugar testing, pH testing, sulfite administration and testing and stabilizing. We will demonstrate pH testing, sulfite testing and Accuvin Quick tests. Labs will be hands on acid testing and sugar testing for primary fermentation and residual sugar before bottling using a Syringe type acid testing kit (yours to keep), hydrometer and sugar testing tablets. We will also cover sugar and acid adjustments and highlight sulfur addition
- ***Winemaking 301 – Advanced – Theory, Lecture, Demonstration, Lab (2-3 hours)***
  - Designed to follow Winemaking 201 – Intermediate Class. We will expand on the pH testing vs. acid testing relationship and the effect on sulfite additions to protect your wine. We will also discuss 'Why choose the right yeast', 'The Time and Place for Malo-Lactic fermentation' (Second fermentation), 'What are Tannins' and 'Fining and Filtering Your Wines'. We will demonstrate the effect of acid levels, sugar addition, sulfite levels, and tannins for balance of your wine. The Lab will be hands on testing for free sulfites using Titrets.

Amateur Winemaking

- Simple Art
- Despite Folklore Secrets
- Principles are Simple and Open to Everyone
- Can Become an Obsession
- Allied Fields
  - Grape Growing
  - Tasting and Evaluation
  - Gourmet Cooking
  - Exotic Winemaking

Process

- Wine can be made with very little intervention. Usually any fruit whose skin has been ruptured will start to ferment on its own. Yeast cells produce enzymes which convert sugar to ethanol (ethyl alcohol) and carbon dioxide gas plus very small fractions of many other organic compounds. It is as simple as that.

Base Materials

- Materials capable of being turned into alcoholic beverages have to contain sugar or starch (converted into sugar by enzymes) and ideally somewhat acidic
  - Practically any fruit
  - Many vegetables
  - Even exotic materials
    - Mushrooms
    - Tea
    - Dandelion

Reasons To Make Wine

- Satisfy Artistic Needs
- Satisfy Competitive Urges
- Relaxation – Therapy (Hobby)
- Economic Reasons
- Preparation for commercial production
- Satisfaction

Attributes Needed

- Patience
- Observation
- Good Judgment
- Concentration

Items Needed

- Primary Fermenter
- Stir Stick
- Secondary Carboy w/airlock*
- Tube for Racking*
- Wine Compatible Cleaner
- Wine Compatible Sterilizer*
- Hydrometer*
- Juice
- Yeast*

* - Included in PIWC Winemaking Starter Kit

Alcoholic Fermentation

- Yeast + Sugars = Alcohol + Carbon Dioxide
- Continues until all sugar is converted or until the combination of alcohol, sugar and yeast waste create an environment difficult for yeast to survive
- Typical biological Bell Curve – Slow, Crescendo, Tailing Off
- Will Last 2-6 Weeks - Temperature

Measurements

- Brix, Balling, SPG–Hydrometer-Sugar
- Acid – Test Kit
- pH – pH Meter
- Sulfur Dioxide – Test Kit

Brix, Balling, Spec. Grav.

- 1.090 SG or 22 Brix before fermentation will achieve 11 to 12% Alcohol
- 1/10 lb of sugar will raise 1 gallon of must 1 Brix (or %)
- Most wine yeasts do not ferment beyond 14% Alcohol
- Some fruits other than grapes are better if fermented to 8 – 10% Alcohol

Acids and pH

- Critical to make good wines .6% to .9% starting TA before fermentation
- Grapes contain Tartaric & Malic Acid as dominant acids
- Most all non-grape fruit contain Malic or Citric acid or a mix of the two as dominant acids and generally are at high levels requiring amelioration
- Amelioration - 1 gal. 20 Brix water to 5 gal. of must reduces acidity by about 10%

Acids and pH

- Other Methods of Lowering Acids
  - Blending
  - Calcium Carbonate
  - Potassium Carbonate
  - ML
  - Cold Stabilization
  - Cold Ferment
  - Carbonic Maceration

Acids and pH

- pH Meter is an item to measure the health of your wine and monitor the effects through the process.

Sulfur Dioxide

- Testing Free Sulfur Dioxide is for the curious or serious winemaker.
- Correct use of Campden Tablets or Pot. Meta will keep your SO2 levels within an acceptable range that most are not allergic.
- Titrets are an easy way to measure – sealed glass ampules

Most Important Factors

- Basic Information – Books or Classes
- Start with the right raw materials
- Equipment for Separating Juice
- Containers – Glass Jugs, Barrels, Tanks, Beer Kegs
- Air Locks or Fermentation Traps
- Chemicals – SO2 Source, Acidulants, Acid Reducers, Fining Agents, Pectic Enzymes, Yeast Nutrients, Fermentation Inhibitors

Important Factors Cont'd

- Yeast
- Cleaning and Sterilizing Equipment – Washing Soda, or Other Alkaline Cleaners, Brushers, Sterilizers
- Instruments-Hydrometer or Refractometer, Acid Tester, SO2 Tester, pH Meter
- Transfer Equipment – Hoses, Pumps
- Bottling and Storage