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### **SPARKLING WINE INSTRUCTIONS**

**Preliminary** Any still wine which is capable of further fermentation can be champagned. Alcohol content must be limited to levels which allow further fermentation after bottling. This is easily accomplished by using starting S.G.'s not higher than 1.085 (1.080 warm) for winegrape musts or 1.080 (1.075 warm) for fruit wine musts.

After fermentation is complete, bulk age the wine in normal fashion for four to eight months, and if necessary, use a fining agent to clear a hazy wine. The final S.G. should not be higher than those indicating complete fermentation (see *Making Wine At Home*).

#### **Bottle Fermentation**

1. Rack the clear wine carefully to a sulfite-wet primary fermenter. Remove about 2 cups of wine and warm gently in a small enamel or stainless steel sauce pan. Turn off the heat and dissolve cane sugar according to the below guide. Be sure to proportion the sugar carefully for volumes other than 5 gal.

For each 5 gal. wine, add:

Full Champagne	- 1-1/2	Level Measuring	Cups	Cane	Sugar	
Sparkling Wine	- 3/4	“	”	“	”	“
Mild Sparkle	- 1/4	“	”	“	”	“

2. Add the sugar solution prepared in step 1. and 1 level teaspoon of yeast energizer (for 5 gal.) to the wine and stir gently until well mixed.

3. Hydrate 1 package of champagne yeast in a little gently warm water (about 100 °F). Let the yeast soak into the water on its own for about 15 minutes. Then stir until smooth and lump free.

4. Remove about 2 cups of the sweetened wine to a clean mixing bowl. Cover the primary fermenter.

Aerate the 2 cups of wine by stirring vigorously and then add the yeast “solution” from step 3. Stir vigorously and pour into the wine in the primary fermenter.

**Important Warning** Considerable pressure from CO<sub>2</sub> gas builds during bottle fermentation and is dangerous in improper bottles. We recommend only sound champagne bottle be used. Please follow all instructions carefully.

5. Sterilize and rinse the champagne bottles and place upside down on paper toweling until each is ready to fill.

6. Siphon the wine gently to the bottles, leaving about 2 inches of headspace, and apply the closures immediately. During bottle filling, stir the wine in the primary fermenter every few bottles to prevent the yeast from settling out during bottle filling.

At this point it will be necessary to decide whether you later plan to remove the yeast sediments from the bottles and sweeten the wine to taste, or to leave the wine dry and decant from the sediments as you serve it.

**A. Leave dry and decant** Use metal crown caps or champagne stoppers and wire hoods for closures. Place the bottles upright at 70 to 75 °F for three or four weeks to complete bottle fermentation. Then move to a cool location for bottle aging (bottles upright). Remember the bottles are now fully pressurized and should be handled carefully. Most wines will improve dramatically with 6 months to a year of bottle aging.

**B. Remove sediments and sweeten** Place bottles neck down at about a 45 degree angle. Wine bottle cases may be propped up under one side to accomplish this angle. Leave at about 70 to 75 °F for three or four weeks to complete bottle fermentation. Then move to a cool location, maintaining the neck down position.

7. Wearing gloves and plastic lens glasses, give each bottle a sharp rap and quick quarter turn twist to dislodge and induce the yeast sediments toward the bottle neck. After several complete revolutions, increase the bottle angle about half way to vertical and continue the rap and rotate procedure for another several rotations. Finally, arrange the bottles completely upside down and

continue the rap and rotate routine. The goal is to get all the yeast into the neck of the bottle. If the wine is handled every day the whole procedure will take a number of weeks.

8. A day before disgorging the yeast sediment and sweetening, refrigerate the wine (still neck down) so that it will be thoroughly chilled. Prepare a brandy syrup for sweetening from a good quality brandy and cane sugar. We will need about one fl. oz. of the syrup for each bottle to be sweetened. Use about 16 oz. of brandy for 5 gal. The sugar will dissolve more easily if the brandy is first gently warmed over low heat in a covered sauce pan. With the flame off, add dry cane sugar in the approximate amounts given below and stir until dissolved. Then add additional brandy to reach a total volume of 25 oz. (for 25 bottles). Refrigerate the syrup well to get it ready for use.

- A. Dry            \_ to 1 cup
- B. Semi-dry    1-1/2 to 2 cups
- C. Sweet        2-1/2 or more cups

9. To disgorge the sediments, the neck of the bottle will be frozen to encase the yeast in an ice plug. Prepare a freezing bath (in an insulated container if possible) from about 2 lbs. dry ice and a few quarts of denatured alcohol. Wearing gloves, break up the dry ice into fist size chunks and place in the container. Then, pour in denatured alcohol a little at a time, allowing the bubbling to quiet down after each addition. Continue until the liquid depth is at least four inches.

10. Have the mushroom stoppers, wire hoods, chilled brandy syrup and some means to measure the syrup ready for use. Working with one bottle at a time, immerse the neck end an inch or so in the freezing bath for about 15 to 30 seconds to freeze solid the wine in the neck of the bottle. Aim the bottle (now upright) into an empty bucket on its side and remove the bottle closure. The ice plug and yeast should expel into the bucket or may come out inside the hollow of the mushroom stopper. A dry cotton swab can be used to remove any remaining yeast from inside the bottle neck. Immediately add one oz. of the chilled brandy syrup and install a fresh mushroom stopper and wire hood. Swirl the bottle to mix the syrup into the wine. Age the wine in cool place for six months or more of bottle aging. Cheers!