THE SORTING TABLE
WINEMAKER'S FINING TECHNIQUES

January 2018

INTRODUCTION

The process of fining wines is centuries old. Egg whites, forms of clay, and other products have been used. As more of us look to understand how the wines we drink are made, we asked our winemakers to tell us what fining techniques they use.

Many of us have an interest in fining because we want to know if there are any traces of the fining agents in the wine we drink. One of our winemaker's addressed this question.

" This is an interesting question to me because fining agents do not stay in solution. Their job is particle or tannin removal along with themselves falling out of the wine. You add egg white, it binds with anthocyanin (tannin) and falls to the floor of the barrel and you rack off. Bentonite clay is added to whites and pulls out instable proteins as it falls to the tank floor. None of these products leave a trace behind. (Otherwise the wines would be awfully cloudy)."

To help us understand the subject, below you will find the introduction paragraph and a table of fining agents used from **A Guide to Fining Wine** *by James F. Harbertson, Washington State University, Prosser IAREC*

Wine is a product of both the vineyard and the techniques the winemaker uses. Occasionally, aspects of the wine need to be refined more dramatically than can be dealt with by field adjustments or simple blending because not every growing season or fermentation goes the way the winemaker wants. Fining is a technique that is used to remove unwanted juice/wine components that affect clarification, astringency, color, bitterness, and aroma; the technique works for both red and white winemaking. Although fining is a useful technique to master, it is an indicator that there may be a problem in your vineyard or winemaking. However, in some cases the only solution available is fining. This guide will help you analyze the various problems that occur during the winemaking process and determine what fining agents are available to solve them (Table 1).

Problem	Description	Fining Agent
H2S, thiols	Stinky (rotten eggs, stagnant water, onions)	Copper sulfate
Polysaccharides	Haze (gelatinous masses)	Enzymatic treatment
Proteins	Haze (off-white flakes)	Bentonite
Tannins (excess)	Astringent	Protein
Catechins	Bitter	PVPP
Browning, stink	Off-color and aroma	Carbon

THE SORTING TABLE
WINEMAKER'S FINING TECHNIQUES

Producer	Whites	Reds
Bernard Moreau	Casein/Bentonite	None
Borgoluce	Bentonite	N/A
Castello di Ama	None - Wt/Rosé	2008 Chianti Classico Riserva, Il Chiuso = none; 2007 Chianti Classico, L'Apparita, Bellavista, La Casucia= 2 egg whites per barrel
Collazzi	None	None
Dauvergne Ranvier	Bentonite	None
Domaine du Pré Semelé	Bentonite/Isinglass	None
Domaine de la Guilloterie	None	None
Dugat-Py	Casein/Bentonite	None
Dujac	Casein/Bentonite	None
Jean-Baptiste Adam	None - For Filtration: Réserve, les Natures and Crémant - Tangential filtration. “Grands Vins” cellulose filtration.	None - For Filtration: Réserve, les Natures and Crémant - Tangential filtration. “Grands Vins” cellulose filtration.
Le Monde	Bentonite	None
La Varenne	None	None
Marina Coppi	Bentonite	None
Michel Mailliard	Sparkolloid	Sparkolloid
Neil Ellis	Isinglass, Lysozyme	Albumen
Rizzi	Bentonite	Gelatin
Roblet-Monnot	Bentonite	None
Seresin	Bentonite	None
Sincerely by Neil Ellis	Isinglass for Sauvignon Blanc; Lysozyme for Chardonnay	Gelatin
Snowden	Bentonite	None
St. Michael-Eppan	Bentonite	Bentonite
Domaine de Montcy - Terra Laura	Bentonite	None
The Left Bank by Neil Ellis	Gelatin	Gelatin
Tiberio	Bentonite for Trebbiano & Pecorino; Fonte Canale is unfined	Gelatin
Triennes	Isinglass	Gelatin
Trig Point		None on cork finished wines; CU2+ (copper) on screwcaps
Valenti	Bentonite	None
Vino Lauria	None	None
Waris-Hubert	None	Isinglass

Fining Agents	Definition
Albumen	Egg whites. Used as a fining agent to clarify red wines.
Bentonite	A clay made of soft phyllosilicate mineral, formed through the weathering of volcanic ash.
Casein	The name for a family of related phosphoproteins. These proteins are commonly found in mammalian milk, making up 80% of the proteins in cow milk and between 20% and 45% of the proteins in human milk.
Copper Sulfate	A copper salt that is used to remove sulfur aromas.
Gelatin	A translucent, colorless, brittle (when dry), flavorless solid substance, derived from collagen obtained from various animal by-products.
Isinglass	A substance obtained from the dried swim bladders of fish. It is a form of collagen.
Kieselsol	Used for fining. Aqueous solution of negatively charged, food grade colloidal silicic acid.
Kisselgur/Diatomaceous Earth	Used for filtering. Made from silcelous sedimentary rock it is a form of clay.
Lysozyme	Used in fermentation. A muramidase enzyme from egg whites used in soluble form to control lactic acid bacteria.
Sparkolloid	Used for fining. Derived from alginic acid salt found in brown algae.