FLASH DÉTENTE
WHY IT IS A USEFUL RED WINEMAKING TOOL
Notes from Winemakers Barry Gnekow and Tom Peterson

“I’ve never seen anything as transformative as this technology.” Winemaking Consultant, Barry Gnekow

IMPROVES COLOR EXTRACTION
- A portion, typically less than 25%, of the crushed and de-stemmed grapes are diverted to the Flash Détente process where skins and juice are briefly heated to 180 F, (one minute or less). During this minute, the skins enter a vacuum chamber where skin cells are ruptured by the rapid pressure change, releasing color constituents. This process is more efficient in extracting color than traditional methods (like pump-overs/extended macerations, and cold soaking) and has additional benefits.

REDUCES EXTRACTION OF HARSH TANNINS
- Traditional methods of extraction often pull harsh tannins from skins and seeds. Flash Détente extracts desirable color components from the skins without ‘over-extracting’ harsh seed tannins.

REDUCES ‘GREEN’ AND ‘VEGETAL’ FLAVORS AND AROMAS
- The vacuum portion of the process removes highly volatile aroma constituents which strongly contribute to ‘veggie’ smells and flavors (called Pyrazines compounds).

MODEST CONCENTRATION
- The vacuum process also removes a small portion of the water in the grape juice, resulting in a modest concentration of the processed juice, about 2 to 3%.

PROMOTES CLEAN, HEALTHY NATURAL FERMENTATION
- The highly colored juice that comes off the Flash Détente process is rapidly cooled and separated from the skins. It is free of destructive enzymes and microbes. Once inoculated with wine yeast, a healthy and vigorous fermentation ensues.

HYPOTHESIS CABERNET SAUVIGNON is uniquely 100% Flash Détente. As a result, the wine is placed into barrels after the Flash process for fermentation. The barrel fermentation better integrates the oak flavor components in the wine and allow the wine to be consumed at an early age.

“…it’s not a panacea. Flash extraction won’t produce stellar wines from bad grapes…It’s not loaves and fishes. You can’t create something that isn’t there…Instead, like other winemaking technologies, it’s a useful tool for specific vintages, specific vineyards and even specific wine programs.”  
Winemaker Barry Gnekow

Hypothesis Cabernet Sauvignon by Roots Run Deep Winery, 100% Flash Détente

Renowned Lodi winemaker/consultant Barry Gnekow monitors Cabernet Sauvignon undergoing "Flash Detente" extraction

Flash Détente Condenser
Flash extraction has been around for more than 10 years and used in Europe, South America, Australia and elsewhere. But the first commercial unit in the United States wasn’t installed until just before the 2009 harvest, at Monterey Wine Co. That first year, Flash Détente was used on about 500 tons of grapes, MWC winemaker and general manager Eric Laumann says. He estimates that this year, 2011, 3,000 tons of grapes from all over California would undergo Flash Détente—roughly a third of the winery’s production.

“I’ve never seen anything as transformative as this technology,” says winemaking consultant Barry Gnekow.

Because vapor has been removed, the sugar level is increased in the remaining must by about 6%. The winemaker can work with the higher Brix level, add back the condensate, discard the condensate and add water or a combination. Most discard the “flash water.” Smell the condensate and you can see why: Flash water from a load of Cabernet Sauvignon at MWC had a very light pink color and a greenish, acetone aroma.

**Exhaust, biscotti and Black Angus**

In his work with flash extraction during the 2010 vintage, winemaking consultant Barry Gnekow also discovered something unexpected: The characteristics of the flash water can tell winemakers a lot about the area surrounding a vineyard.

A load of Pinot Noir from Carneros produced flash water that smelled like car exhaust; the vineyard is next to a highway. Malbec from Ripon generated flash water with aromas of almond biscotti; there’s a flood-irrigated almond orchard next door. These are components in the grapes, Gnekow says, “that we didn’t know were there.”

Then there was the load of Amador County Zinfandel that produced particularly nasty flash water. “We voted it as the worst flash water of the vintage so far,” Gnekow says. He subsequently found out that the vineyard is surrounded by grazing Black Angus cattle.

Gnekow has been saving flash water and plans to visit the vineyards to check out their surroundings. “You know that what’s in the air gets in the grapes,” he says.

When the flash process concludes, the must has been cooled to 82º. Then the winemaker has two choices for fermentation. The grapes can be pressed and the juice (after clarification through filtration or a centrifuge) fermented, similar to a white wine. Or, the must can be sent to a tank for a more traditional fermentation with the pulpy skins, usually for five to six days.

...Flash technology differs from traditional thermovinification, because the traditional method doesn’t involve a vacuum, and there is no flash water produced as a byproduct. Winemakers familiar with both say the tannin extraction with thermovinification is also less. Laumann says that flash does everything thermovinification does, and does it better, in addition to removing pyrazines. “I’m not using (other thermovinification) very much anymore now that I have flash,” he says.

**Winemakers still learning**

...Pyrazine reduction is an obvious use, as is intensifying color in certain reds. It could perhaps be used to create fruitier styles of wine. At this point, winemakers are still learning which grapes will benefit from the treatment and tweaking of fermentation techniques to get the desired results.

Gnekow says he's used the process on overripe grapes to remove a raisined character. He didn’t think initially that flash technology would remove those flavors. He says, however, “I have the flash water to prove it.” ... But it’s not a panacea. Flash extraction won’t produce stellar wines from bad grapes. “It’s not loaves and fishes. You can’t create something that isn’t there,” Gnekow says.

Instead, like other winemaking technologies, it’s a useful tool for specific vintages, specific vineyards and even specific wine programs.

“It’s an adjunct to traditional winemaking,” says Rick Jones, winemaking consultant with Della Toffola [thermoflash unit producer.] “It’s not a replacement for traditional winemaking.”

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A resident of the Santa Cruz Mountains, Laurie Daniel has been a journalist for more than 25 years. She has been writing about wine for publications for nearly 15 years and has been a Wines & Vines contributor since 2006. Read more at: http://www.winesandvines.com/template.cfm?section=features&content=82256

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