

**VineWS**  
**Viticulture Information News, Week of 18 July 2016**  
**Columbia, MO**



### Petiole Sampling Reminders

A few reminders of what to sample and when to sample for petiole analysis.

**When to sample for tissue analysis.** There is differing opinions on this topic. If you have been sampling consistently over time at a specific phenological stage such as full bloom or veraison then I would suggest that you continue this trend. This will allow you to chart the nutrients over time.

The trend in the industry is to sample at full bloom. Full bloom is when 50% of the inflorescences have shed at least 50% of their caps.

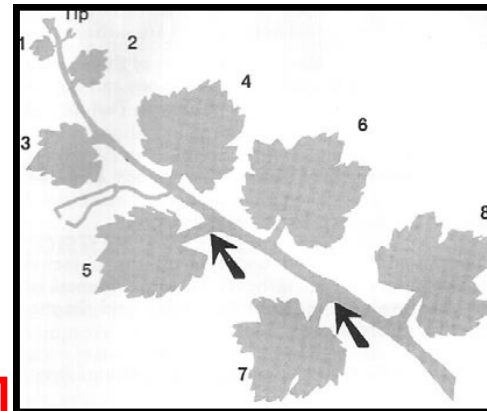
**What to sample.** Sample 50 to 100 petioles. Petioles are the structure that connects the leaf blade to the shoot. Place the petioles in a paper bag. Varieties should be sampled separately. Do not mix petioles from one grape variety with another. Grape vines selected for sampling should be representative of the vineyard block. Take one leaf per shoot and no more than 2 per vine. The leaves should be free of pest damage.

At full bloom petioles should be collected from leaves that are directly opposite the first or second basal flower clusters (See Figure 1)

At veraison petioles should be collected from the youngest fully mature leaf which typically is the 5th to 7th leaf from the shoot tip (See Figure 2). If grape vines have been hedged or skirted collect petioles from primary leaves near the skirting or hedging. Avoid collecting petioles from leaves that are from lateral shoots.



**Figure 1. At full bloom collect petioles from leaves directly across from basal flower clusters.** Photo credit: University of Minnesota.



**Figure 2. At veraison collect petioles from the youngest mature leaves, leaves 5 to 7 from the shoot tip.** Photo credit: University of Minnesota.

## Troubleshooting suspected nutrient deficiencies

Collect 50 to 100 petioles from leaves displaying nutrient deficiency symptoms regardless of leaf location on the vines. Also collect 50 to 100 petioles from leaves of healthy vines. Try to collect leaves from healthy vines from a similar location as the leaves collected displaying nutrient deficiency symptoms. Petiole sampling to diagnose suspected nutrient deficiencies can be done anytime during the growing season.

## Where to submit plant samples

Plant samples may be submitted to

[County extension centers](#) (recommended method)

**Soil and Plant Testing Laboratory** 23 Mumford Hall Columbia, MO 65211 Phone: 573-882-0623  
Fax: 573-884-4288 [Email: soiltestingservices@missouri.edu](mailto:soiltestingservices@missouri.edu)

[MU Soil Testing and Plant Diagnostic Services](#)

## Rupestris Speckle

This week I had the opportunity to observe some Valvin Muscat that was showing the disorder called Rupestris speckle. This is a physiological disorder and not a disease. The symptomology of Rupestris speckle varies on grape cultivars. All grape cultivars that display Rupestris speckle symptomology have *Vitis rupestris* in their genetic background. The symptoms of Rupestris speckle are believed to be the result of some type of stress. The disorder is often most apparent on mature leaves. Since the disorder is physiological there are no management recommendations.



Often times the symptoms of Rupestris speckle are confused with Black rot. Valvin muscat is moderately susceptible to Black rot. To differentiate Rupestris speckle from Black rot observe the symptoms with a 10X hand-lens.

Black rot lesions will have small black fruiting bodies (pycnidia) within the lesion whereas these fruiting bodies will be completely absent for Rupestris speckle.

## Cumulative Growing Degree Days for the Seven Grape Growing Regions of Missouri from April 1 to July 18, 2016.

Region	Location by County	Growing Degree Days <sup>1</sup>		
		2016	2015	30 Year Average
Augusta	St. Charles	1930	1942	1856
Hermann	Gasconade	1813	1849	1778
Ozark Highland	Phelps	2015	2027	1915
Ozark Mountain	Lawrence	1961	1971	1903
Southeast	Ste. Genevieve	1971	2054	1905
Central	Boone	1899	1836	1821
Western	Ray	1793	1783	1761

<sup>1</sup>Growing degree days at base 50 from April 1 to July 18, 2016. Data compiled from Useful and Useable at <https://mygeohub.org/groups/u2u/tools>. Click on link below to determine growing degree days in your area.

**To determine the number of growing degree days accumulated in your area since April 1, click this link [Search for GDD at your location using this tool](#).**

Please scout your vineyards on a regularly scheduled basis in an effort to manage problem pests. This report contains information on scouting reports from specific locations and may not reflect pest problems in your vineyard. If you would like more information on IPM in grapes, please contact Dean Volenberg at 573-882-0476 or volenbergd@missouri.edu