



Target Values - Petioles

Nutrient	Soil (ppm)	Petiole	
		Bloom (%)	Late summer (%)
Nitrogen	--	1.2-2.2	0.8-1.2
Phosphorus	20-50	0.17-0.3	0.14-0.30
Potassium	75-100	1.5-2.5	1.2-2.0
Calcium*	500-2000	1.0-3.0	1.0-2.0
Magnesium	100-250	0.3-0.5	0.35-0.75
Boron	0.3-2.0	25-50	25-50
Iron	20	30-100	30-100
Manganese	20	25-1000	100-1500
Copper	0.5	5-15	5-15
Zinc	2	30-60	30-60
Aluminum**			
pH			
V. labrusca	5.5		
Hybrids	6.0		
V. vinifera	6.5		
Organic matter	3-5%		

Source: Wolf, T.K. (Ed.). 2008. Wine Grape Production Guide for Eastern North America. Natural Resource, Agriculture, and Engineering Service (NRAES), Ithaca, NY.