

MOLECULAR SO₂ and pH

Free SO₂ exists in a pH-dependent equilibrium in wine as follows: Molecular SO₂ ↔ HSO₃⁻ ↔ SO₃²⁻

Lower pH levels shift the equilibrium to the left resulting in a higher proportion of molecular SO₂.

pH	% molecular SO ₂	Free SO ₂ (mg/L) required for 0.6mg/L molecular SO ₂	Free SO ₂ (mg/L) required for 0.8mg/L molecular SO ₂
2.90	7.5	8	11
2.95	6.6	9	12
3.00	6.1	10	13
3.05	5.3	11	15
3.10	4.9	12	16
3.15	4.3	14	19
3.20	3.9	15	21
3.25	3.4	18	23
3.30	3.1	19	26
3.35	2.7	22	29
3.40	2.5	24	32
3.45	2.2	27	37
3.50	2.0	30	40
3.55	1.8	33	46
3.60	1.6	38	50
3.65	1.4	43	57
3.70	1.3	46	63
3.75	1.1	55	72
3.80	1.0	60	79
3.85	0.9	67	91
3.90	0.8	75	99
3.95	0.7	86	114
4.00	0.6	100	125

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