

Converting between Wet %O₂, Dry %O₂, and % Excess Air; and multipliers* for correcting flue gas analysis readings to a base of 3% oxygen ... for a typical (1000 Btu/cf) natural gas.

% Oxygen dry	% Oxygen wet	% Excess air	Multiplier
0	0	0	0.86
1	0.82	4.53	0.90
1.10	0.90	5	0.90
1.22	1	5.57	0.91
2	1.66	9.54	0.95
2.09	1.73	10	0.95
2.41	2	11.7	0.97
2.98	2.49	15	1.00
3	2.51	15.1	1.00
3.57	3	18.6	1.03
3.80	3.20	20	1.05
4	3.38	21.4	1.06
4.54	3.85	25	1.09
4.71	4	26.2	1.10
5	4.26	28.4	1.13
5.22	5.02	30	1.14
5.83	5	34.8	1.19
5.85	5.02	35	1.19
6	5.16	36.3	1.20
6.43	5.55	40	1.24
6.92	6	44.6	1.28
7.46	6.50	50	1.33
8	7.01	55.9	1.38
8.38	7.35	60	1.43
9.04	8	68.7	1.51
9.83	8.77	80	1.61
10	8.93	82.6	1.64
11	9.92	100	1.80
11.1	10	102	1.82
12	10.9	121.7	2.00
13	12.0	148.2	2.25
14	13.0	183.0	2.57
15	14.1	230.4	3.0

*These multipliers may be used to correct any volumetric gas concentration reading to a 3% oxygen base. They correct for dilution only – not for the effects of excess air on the NO_x, CO, SO₂ or combustible generating mechanism.

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