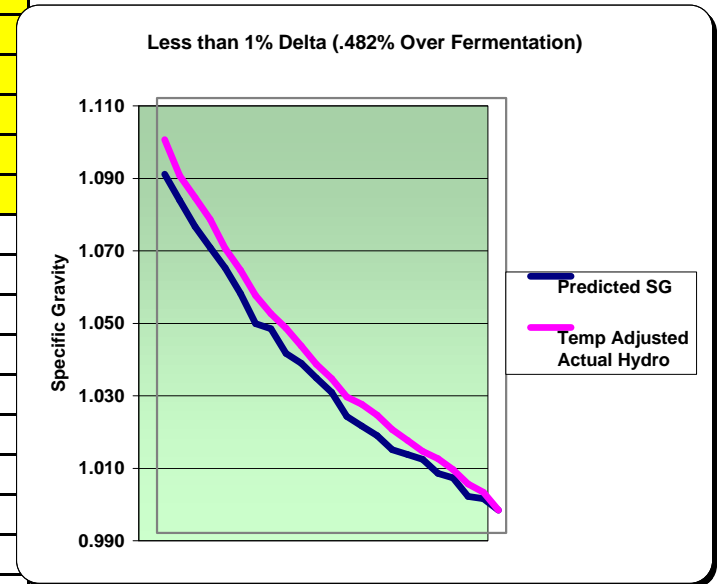


Brix to SG Conversion Utilizing Refractometer

Yeast pitched @ Enter Starting Brix (OB)
 8:32AM 7/19 @ 22.4% Brix 22.400

| Date Time | Refractometer Readings (AB) | Predicted SG | Predicted Brix (Plato) | Actual Hydro | Enter Temp. in °F | Temp Adjusted Actual Hydro | Temp Adj. Actual Brix (Plato) | Delta "Predicted From Adjusted SG" | Percent Error from Prediction SG |
|-----------------|-----------------------------|--------------|------------------------|--------------|-------------------|----------------------------|-------------------------------|------------------------------------|----------------------------------|
| 20-Jul 8:20 AM | 22 | 1.089 | 21.3 | 1.096 | 80.0 | 1.0985 | 23.4 | 0.0095 | 0.87% |
| 21-Jul 7:15 AM | 21 | 1.082 | 19.6 | 1.086 | 80.0 | 1.0885 | 21.2 | 0.0068 | 0.63% |
| 21-Jul 7:10 PM | 20 | 1.074 | 18.0 | 1.080 | 80.0 | 1.0825 | 19.8 | 0.0080 | 0.75% |
| 22-Jul 6:20 AM | 19.2 | 1.069 | 16.7 | 1.074 | 80.0 | 1.0765 | 18.5 | 0.0078 | 0.73% |
| 22-Jul 7:10 PM | 18.4 | 1.063 | 15.4 | 1.066 | 80.0 | 1.0685 | 16.6 | 0.0054 | 0.51% |
| 23-Jul 7:16 AM | 17.4 | 1.056 | 13.8 | 1.060 | 80.0 | 1.0625 | 15.3 | 0.0064 | 0.61% |
| 23-Jul 9:07 PM | 16.2 | 1.048 | 11.8 | 1.053 | 80.0 | 1.0555 | 13.6 | 0.0078 | 0.74% |
| 24-Jul 8:45 AM | 16 | 1.046 | 11.5 | 1.048 | 80.0 | 1.0505 | 12.5 | 0.0041 | 0.40% |
| 24-Jul 9:07 PM | 15 | 1.040 | 9.8 | 1.044 | 80.0 | 1.0465 | 11.5 | 0.0070 | 0.67% |
| 25-Jul 6:40 AM | 14.6 | 1.037 | 9.2 | 1.039 | 80.0 | 1.0415 | 10.3 | 0.0047 | 0.45% |
| 25-Jul 8:05 PM | 14 | 1.033 | 8.2 | 1.034 | 80.0 | 1.0365 | 9.1 | 0.0037 | 0.36% |
| 26-Jul 8:20 AM | 13.4 | 1.029 | 7.2 | 1.030 | 80.0 | 1.0325 | 8.1 | 0.0038 | 0.37% |
| 26-Jul 10:55 PM | 12.4 | 1.022 | 5.6 | 1.025 | 80.0 | 1.0275 | 6.9 | 0.0054 | 0.53% |
| 27-Jul 8:40 AM | 12 | 1.019 | 4.9 | 1.023 | 80.0 | 1.0255 | 6.4 | 0.0061 | 0.59% |
| 27-Jul 6:15 PM | 11.6 | 1.017 | 4.3 | 1.020 | 80.0 | 1.0225 | 5.7 | 0.0057 | 0.56% |
| 28-Jul 7:20 AM | 11 | 1.013 | 3.3 | 1.016 | 80.0 | 1.0185 | 4.7 | 0.0056 | 0.55% |
| 28-Jul 9:38 PM | 10.8 | 1.012 | 3.0 | 1.013 | 80.0 | 1.0155 | 3.9 | 0.0039 | 0.39% |
| 29-Jul 6:55 AM | 10.6 | 1.010 | 2.6 | 1.010 | 80.0 | 1.0125 | 3.2 | 0.0022 | 0.22% |
| 29-Jul 7:30 PM | 10 | 1.006 | 1.7 | 1.008 | 80.0 | 1.0105 | 2.7 | 0.0041 | 0.40% |
| 30-Jul 6:35 AM | 9.8 | 1.005 | 1.3 | 1.005 | 80.0 | 1.0075 | 1.9 | 0.0024 | 0.23% |
| 31-Jul 6:30 AM | 9 | 1.000 | 0.0 | 1.001 | 80.0 | 1.0035 | 0.9 | 0.0035 | 0.35% |
| 31-Jul 10:04 PM | 8.9 | 0.999 | -0.1 | 0.999 | 78.0 | 1.0012 | 0.3 | 0.0018 | 0.18% |
| 1-Aug 6:51 PM | 8.4 | 0.996 | -1.0 | 0.994 | 78.0 | 0.9962 | -1.0 | 0.0000 | 0.00% |

Period of heavy bubbles effecting Hydro
 Period of heavy bubbles effecting Hydro, spinning doesn't help
 Heavy bubbles, spin helps but raises quickly to 1.085



0.482% Average Delta Over Fermentation.

$$*SG = 1.001843 - 0.002318474(OB) - 0.000007775(OB^2) - 0.000000034(OB^3) + 0.00574(AB) + 0.00003344(AB^2) + 0.000000086(AB^3)$$

*SG = Specific Gravity, OB = Original Brix, AB = Actual Brix (Brix Readings During Fermentation)

$$\text{Brix (Plato)} = -676.67 + 1286.4*SG - 800.47*(SG^2) + 190.74*(SG^3)$$

*Formula was derived from the 69th edition (1988-1989) of the CRC Handbook of Chemistry and Physics, "Concentrative Properties of Aqueous Solutions: Conversion Tables", Table 88 Sucrose