Note: This is a reference cited in *AP 42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources.* AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

The file name refers to the reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

# Background Report Reference

**AP-42 Section Number:** 9.12.1

**Background Chapter:** 4

**Reference Number:** 14

**Title:** Report on Diagnostic Testing Performed for Coors Brewing COmpany

Clean Air Engineering

Clean Air Engineering

November 1992

87 pp.

Stack Test Report # 4

Clean Air Engineering

| | |
|---|---|
| AP-42 Section | 9.12.1 |
| Reference | |
| Report Sect. | 4 |
| Reference | 14 |

# REPORT ON DIAGNOSTIC TESTING

Performed for:
COORS BREWING COMPANY
GOLDEN, COLORADO

CAE Project No: 6265-2
November 25, 1992

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## SUMMARY

### INTRODUCTION

Clean Air Engineering was contracted by Coors Brewing Company to determine the levels of total hydrocarbons emissions at their facility located in Golden, Colorado for diagnostic purposes.

The testing took place at the Cellar 9 B Floor and the Cellar 9 C Floor, tanks C9-2, C9-4, C9-6, C9-8, C9-9, C9-10 and C9-12 on June 16 through 19, and 21, 1992. Coordinating the field testing were:

F. Varani - Coors Brewing Company
M. Hynes - Clean Air Engineering

### SUMMARY OF TEST RESULTS

The test conditions and results of analysis are presented in Table 1 on page 1-2.

To the best of our knowledge, the data presented in this report are accurate and complete.

Respectfully submitted,

CLEAN AIR ENGINEERING

Michael Pierce
Manager, Denver Region

David Perkins
Manager, Technical Communications

## TABLE 1 - Summary of Test Results

### EPA Method 25A
### Cellar 9 B and C Floor

| | Live yeast | Aging yeast (dead) | Aging yeast | Waste Beer | | waste Beer | HPF (lysed) yeast | Ethanol condensate |
|---|---|---|---|---|---|---|---|---|
| **Location** | C9-2 | C9-4 | C9-6 | C9-8 | C9-9 | C9-10 | C9-12 | C9-B |
| Run No. | 5 | 3 | 3 | 3 | 3 | 2 | 1 | 5 |
| Date (1992) | June 21 | June 18 | June 18 | June 18 | June 18 | June 17 | June 16 | June 21 |
| Start Time (approx.) | 5:26 PM | 9:41 AM | 10:37 AM | 9:41 AM | 10:37 AM | 12:11 PM | 3:29 PM | 5:26 PM |
| Stop Time (approx.) | 8:55 PM | 10:36 AM | 2:17 PM | 10:36 AM | 2:17 PM | 4:15 PM | 6:54 PM | 8:55 PM |
| Gas Conditions[1] | | | | | | | | |
| Moisture (volume %) | 5.4 | 4.0 | 4.0 | 4.1 | 5.6 | 2.6 | 13.7 | 4.8 |
| $O_2$ (dry volume %) | 19.9 | 19.9 | 19.9 | 20.4 | 20.0 | 20.7 | 20.1 | N/A |
| $CO_2$ (dry volume %) | 2.8 | 2.8 | 1.3 | 0.2 | 0.2 | 0.2 | 0.3 | N/A |
| Volumetric Flow Rate[1] | | | | | | | | |
| acfm | 42 | 42 | 42 | 9.4 | 9.4 | 9.4 | 42 | 7.2 |
| dscfm | 33 | 33 | 33 | 7.4 | 7.5 | 7.3 | 33 | 5.6 |
| **For Solvent Corrected:** | | | | | | | | |
| Total Hydrocarbons | | | | | | | | |
| lb/hr (as ethanol) | 1.552 | 0.0 | 0.628 | 0.125 | 0.102 | 0.019 | 6.35 | 1.60 |
| ton/yr (as ethanol) | 6.80 | 0.0 | 2.75 | 0.549 | 0.445 | 0.083 | 27.8 | 7.01 |
| **For Non-Solvent Corrected:** | | | | | | | | |
| Total Hydrocarbons | | | | | | | | |
| ppm, dry (as propane) | 2,909 | 0 | 1,176 | 1,048 | 838 | 160 | 11,898 | 17,674 |
| lb/hr (as propane) | 0.66 | 0.0 | 0.27 | 0.05 | 0.04 | 0.01 | 2.69 | 0.68 |
| ton/yr (as propane) | 2.88 | 0.0 | 1.17 | 0.23 | 0.19 | 0.04 | 11.78 | 2.97 |

1 Gas Conditions for Location C9-4 was taken from data obtained at location C9-2.

1 Gas Conditions and Volumetric Flow Rates for Location C9-8 was taken from the average of data obtained at locations C9-9 and C9-10.

1 Volumetric Flow Rates for Locations C9-2, C9-4 and C9-12 were taken from data obtained at location C9-2.

## DESCRIPTION OF INSTALLATION

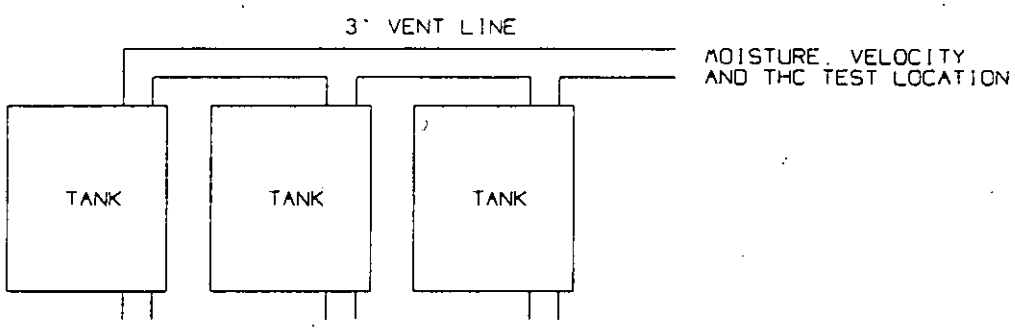
At the Coors Brewing Company facility, located in Golden, colorado, there are eight tanks on the Cellar 9 B Floor. These tanks receive ethanol condensate from the Waste Beer Condensor (WBC) or the Yeast Drying Press (YDP). All eight tanks are vented to a single three inch pipe. To keep particulate matter from settling, air is injected into the bottom of each tank, and the air flow is controlled with a rotometer.

There are a number of tanks on the Cellar 9 C Floor. These tanks receive waste beer products from the live yeast, aging yeast, HPF yeast and waste beer produced during the brewing process. To keep particulate matter from settling, air is injected into the bottom of each tank, and each tank has its own vent. The air flow to each tank is controlled with a rotometer.

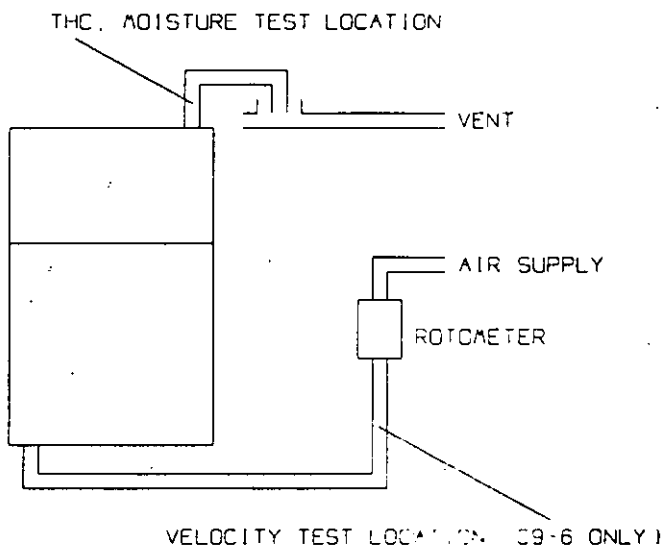
The testing reported in this document was performed at the Cellar 9 B Floor and the Cellar C Floor, tanks C9-2, C9-4, C9-6, C9-8, C9-9, C9-10 and C9-12.

## DESCRIPTION OF INSTALLATION ( Continued)

A schematic of the Cellar 9 B Floor is shown below.




A schematic of the Cellar 9 C Floor is shown below.



## SUMMARY OF PROCEDURES

### SAMPLING PROCEDURES

The sampling followed procedures as detailed in U.S. Environmental Protection Agency (EPA) Methods 1, 2, 3, 4 and 25A. These methods are titled:

- Method 1 — "Sample and Velocity Traverses for Stationary Sources;"
- Method 2 — "Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube);"
- Method 3 — "Gas Analysis for the Determination of Dry Molecular Weight;"
- Method 4 — "Determination of Moisture Content in Stack Gases;"
- Method 25A - "Determination of Total Gaseous Organic Concentrations using a Flame Ionization Analyzer (FIA)."

These methods appear in detail in Title 40 of the Code of Federal Regulations (CFR), Part 60, Appendix A.

The sampling apparatus is shown in Figure 1 on page 3-2. All equipment was calibrated at the Clean Air Engineering laboratory prior to shipment to the job site.

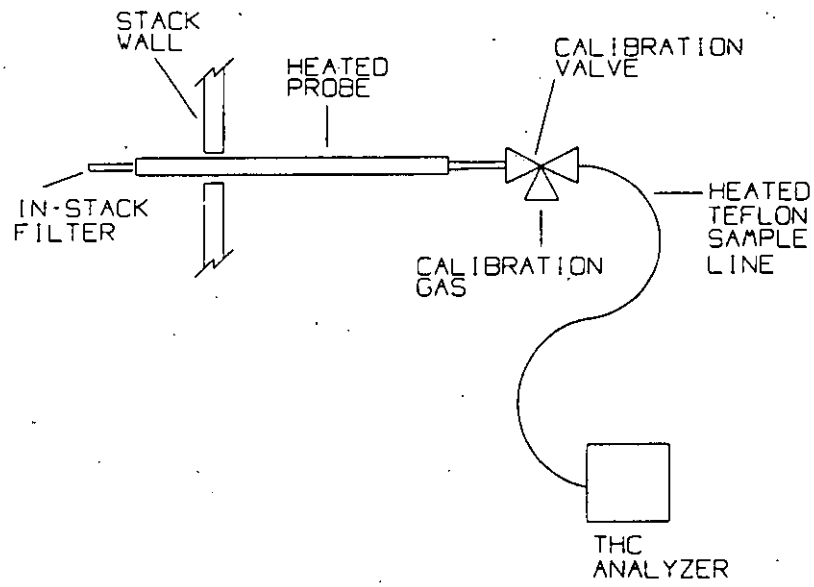
Sampling Locations

The C9-6 test location has two ports. For velocity testing, two points were sampled per port. The traverse locations are shown in Figure 2 on page 3-3. For moisture determination and total hydrocarbons testing, a single point was sampled from the center of the duct for various time intervals.

For the C9-2, C9-4, C9-8, C9-9, C9-10, C9-12 and C9B test locations, velocity testing was not done. For moisture determination and total hydrocarbons testing, a single point was sampled from the center of the ducts for various time intervals.

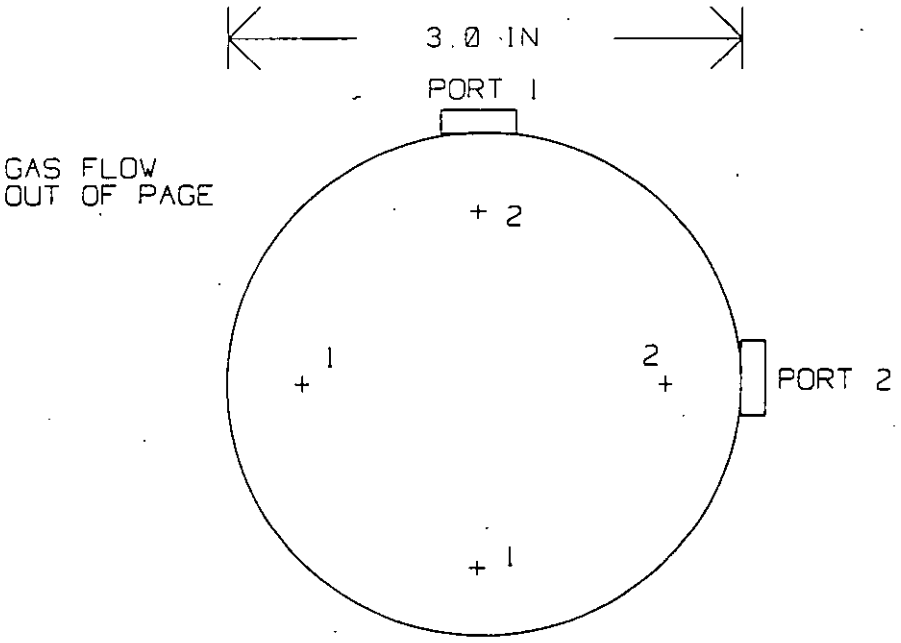
## FIGURE 1

The EPA Method 25A sampling apparatus is shown.



## FIGURE 2

The cross section of the C9-6 test location shows traverse point locations.




| TRAVERSE POINT | PORT TO POINT DISTANCE (IN) |
|---|---|
| 1 | 2.5 |
| 2 | 0.5 |

## SUMMARY OF PROCEDURES (Continued)

### ANALYTICAL PROCEDURES

#### Continuous Emissions Monitoring

Total Hydrocarbons

The total hydrocarbons emission rate was determined using procedures detailed in EPA Method 25A. A sample was extracted continuously from the flue gas stream, and a portion was conveyed to a flame ionization analyzer.

Before and after each run, the monitor was zeroed and calibrated with a certified calibration gas. These calibrations were used to correct the raw data for zero and calibration drift occurring during the test runs.

#### Solvent Calibration

Referenced were EPA Method 18 "Measurement of Gaseous Organic Compound Emissions by Gas Chromatography"; Section 6.2, "Calibration Standards"; Subsection 6.2.2, "Preparation of Standards from Volatile Materials"; Subsection 6.2.2.2, "Liquid Injection Technique."

Apparatus

The apparatus consisted of a 50 liter Tedlar bag connected to the outlet of a midget impinger where the solvent was volatilized. The inlet of the impinger was connected to the outlet of a dry gas meter which received nitrogen gas from a gas cylinder. On the top of the midget impinger was a septum for introducing the solvent with the use of a syringe.

System Preparation

Before each solvent run, the Tedlar bag was evacuated and purged with zero air to remove any contaminates. This was repeated until no VOC's were detected. The Tedlar bag was then evacuated and attached to the outlet of the midget impinger.

## SUMMARY OF PROCEDURES (Continued)

Sampling

The hot bath was brought to a boil and the initial dry gas meter reading was taken. The flow rate from the nitrogen take was adjusted to completely fill the Tedlar bag in approximately 15 minutes. The meter pressure and temperature was recorded along with the barometric pressure.

A 10, 100 and 1,000 microliter syringe was used to inject the solvent sample into the midget impinger. The solvent will be injected into the impinger below the inlet air stream.

When the bag was completely filled the pump was stopped, the bag removed and the final volume recorded. The bag was set aside for one hour or massaged to insure adequate mixing of the gas.

The solvent density was found by accurately measuring a known volume on an analytical balance to the nearest 1.0 milligram. The results were calculated in terms of g/ml.

Analysis

The Tedlar bag was analyzed using the same hydrocarbon analyzer as was used in the field. The response of the analyzer was read as ppm propane.

## QUALITY CONTROL PROCEDURES

Quality control procedures for all aspects of field sampling; sample preservation and holding time; reagent quality; analytical method; analyst training and safety; and instrument cleaning, calibration and safety were followed. These procedures are generally consistent with EPA guidelines documented in "Quality Assurance Manuals for Air Pollution Measurement Systems," Vol 3, "Stationary Source Specific Methods" (EPA-600/4-77-027b).

## COMMENTS

The volumetric flow rate of location C9-6 was measured using a hot wire anomometer. This value was then used at the identical locations C9-2, C9-4 and C9-12. The volumetric flow rates for the other test locations, C9-8, C9-9 and C9-10, were obtained by pre-set rotometers operated by plant personnel. These values can be found in the Parameter Section of the Appendix.

Temperature values measured at the Cellar 9 B Floor and Cellar 9 C Floor were of ambient conditions. The values can be found in the Parameter Section of the Appendix.

No other deviations from standard U.S. EPA testing procedures were noted.

COORS BREWING COMPANY
CAE Project No: 6265-2

## APPENDIX

NOMENCLATURE ..... 5-1
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# NOMENCLATURE

# Nomenclature

| | | |
|---|---|---|
| $A$ | - | absorbance |
| $A_n$ | - | cross sectional area of nozzle ($ft^2$) |
| $A_s$ | - | cross sectional area of stack ($ft^2$) |
| $B_{wo}$ | - | proportion of water vapor in the gas stream by volume |
| $B_{ws}$ | - | proportion of water vapor in the gas stream by volume at saturated conditions |
| $C_p$ | - | pitot tube coefficient (dimensionless) |
| $D_f$ | - | dilution factor |
| $F_d$ | - | ratio of dry gas generated to gross calories (dscf/MBtu) |
| $F_c$ | - | ratio of gas generated |
| GCV | - | gross calorific value of fuel (Btu/lb) |
| $\overline{DH}$ | - | average pressure drop across meter box orifice (in. $H_2O$) |
| $\overline{\sqrt{DP}}$ | - | average square roots of velocity heads of stack gas ($\sqrt{\text{in. } H_2O}$) |
| DH@ | - | meter orifice calibration coefficient (in. $H_2O$) |
| %I | - | percent of isokinetic sampling (acceptable: $90 \leq \%I \leq 110\%$) |
| $K_p$ | - | pitot tube constant: 85.49 (ft/sec) $\frac{\sqrt{(\text{lb/lb-mole})(\text{in. Hg})}}{\sqrt{(^\circ R)(\text{in. } H_2O)}}$ |
| $K_c$ | - | spectrophotometer calibration factor |
| $M_d$ | - | dry molecular weight of stack gas (lb/lb-mole) |
| $M_s$ | - | molecular weight of stack gas, wet basis (lb/lb-mole) |
| $M_n$ | - | total amount of particulate matter collected (gm) |
| $N$ | - | normality of titrant (meq/ml) |
| $P_b$ | - | barometric pressure (in. Hg) |
| $P_f$ | - | final absolute pressure of flask (in. Hg) |
| $P_i$ | - | initial absolute pressure of flask (in. Hg) |
| $P_s$ | - | absolute stack gas pressure (in. Hg) |
| $Q_a$ | - | volumetric flow rate, actual conditions |
| $Q_{std}$ | - | volumetric flow rate, standard conditions, dry basis |
| std | - | standard conditions, 29.92 in. Hg, 68 ° F |
| $T_f$ | - | final absolute temperature of flask ( ° R) |
| $T_i$ | - | initial temperature of flask ( ° R) |
| $T_m$ | - | average dry gas meter temperature ( ° F) |

| | | |
|---|---|---|
| $T_s$ | - | average stack temperature ( ° F) |
| $T_{std}$ | - | absolute temperature, standard conditions (528 ° R) |
| $\Theta$ | - | total sampling time (min) |
| $V_a$ | - | volume of aliquot (ml) |
| $V_f$ | - | volume of flask (ml) |
| $V_{lc}$ | - | total volume of liquid collected in impingers and silica gel (ml) |
| $V_m$ | - | volume of gas sample through the dry gas meter at meter conditions ($ft^3$) |
| $V_{mstd}$ | - | volume of gas sample through the dry gas meter, standard conditions ($ft^3$) |
| $V_{sc}$ | - | volume of flask sample, standard conditions (ml) |
| $V_{soln}$ | - | total volume of solution (ml) |
| $V_t$ | - | volume of titrant used to titrate aliquot (ml) |
| $V_{tb}$ | - | volume of titrant used to titrate blank (ml) |
| $V_{wstd}$ | - | volume of water collected, standard conditions ($ft^3$) |
| $V_s$ | - | stack gas velocity (ft/sec) |
| $Y_d$ | - | gas meter correction factor (dimensionless) |

# Nomenclature

| | |
|---|---|
| CAL GAS | actual concentration of the upscale calibration gas |
| CAL I | initial system calibration bias check response for the upscale calibration gas, ppm |
| CAL F | final system calibration bias check response for the upscale calibration gas, ppm |
| ZERO I | initial system calibration bias check response for the zero gas, ppm |
| ZERO F | final system calibration bias check response for the zero gas, ppm |
| ppm | measured concentration as parts per million in the gas stream |
| ppm (drift calibrated) | concentration calibrated for drift as per Eq. 6C-1 of EPA Method 6C |

## SAMPLE CALCULATIONS

COORS BREWING COMPANY
CAE Project No : 6265 - 2

## SAMPLE CALCULATIONS - LOCATION C9 - 6

(Note : results are taken from computer analysis)

1. Volume of water collected

$$V_{wstd} = (0.04707\ ft^3/ml)\ (V_{lc})$$
$$= (0.04707)\ (19.0)$$
$$= 0.89\ wscf$$

2. Volume of gas metered, standard conditions

$$V_{mstd} = \frac{(17.64\ ^\circ R/in.\ Hg)\ (V_m)\left[P_b + \frac{DH}{13.6}\right]}{(460 + T_m)}(Y_d)$$
$$= \frac{(17.64)\ (26.98)\left[24.42 + \frac{2.0}{13.6}\right]}{(460 + 85)}(1.0078)$$
$$= 21.62\ dscf$$

3. Moisture content (actual)

$$B_{wo} = \frac{V_{wstd}}{V_{mstd} + V_{wstd}}$$
$$= \frac{0.89}{21.62 + 0.89}$$
$$= 0.0397$$
$$= 4.0\ \%$$

4. Molecular weight of dry gas stream

$$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%CO + \%N_2)$$
$$= 0.44(1.3) + 0.32(19.9) + 0.28(78.8)$$
$$= 29.00$$

5. Molecular weight of stack gas

$$M_s = M_d\ (1 - B_{wo}) + 18(B_{wo})$$
$$= 29.00\ (1 - 0.0397) + 18(0.0397)$$
$$= 28.78$$

6. Stack pressure (in. Hg)

$$P_s = P_b + \left(\frac{STATIC\ P}{13.6}\right)$$
$$= 24.42 + \left(\frac{0.0}{13.6}\right)$$
$$= 24.42$$

## SAMPLE CALCULATIONS (Continued)

9. Total Hydrocarbons (as propane)

$$ppm_{wet,\ drift\ calibrated} = \left(C_{avg} - C_o\right)\frac{C_{ma}}{(C_m - C_o)}$$
$$= (1,155 - 1)\frac{851.3}{(871 - 1)}$$
$$= 1,130$$

$C_{avg}$ = Average gas concentration indicated by gas analyzer, wet basis, ppm.
$C_o$ = Average of initial and final system calibration bias check responses for the zero gas, ppm.
$C_m$ = Average of initial and final system calibration bias check responses for the upscale calibration gas, ppm.
$C_{ma}$ = Actual concentration of the upscale calibration gas, ppm.

$$ppm_{dry} = \frac{ppm_{wet,\ drift\ calibrated}}{1 - B_{wo}}$$
$$= \frac{1,130}{1 - 0.0397}$$
$$= 1,176$$

$$lb/dscf = \frac{(ppm_{dry})(MW)}{385.3 \times 10^{-6}}$$
$$= \frac{(1,176)(44)}{385.3 \times 10^{-6}}$$
$$= 1.34 \times 10^{-4}$$

$$lb/hr = (lb/dscf)(dscfm)(60)$$
$$= (1.34 \times 10^{-4})(33)(60)$$
$$= 0.27$$

$$lb/hr,\ ethanol = (lb/hr)(Ethanol\ Correction\ Factor)$$
$$= (0.27)(2.36)$$
$$= 0.628$$

$$ton/yr,\ ethanol = \frac{(lb/hr,\ Ethanol)(24\frac{hr}{day})(365\frac{days}{yr})}{2,000\frac{lb}{ton}}$$

$$= \frac{(0.628)(24)(365)}{2,000}$$
$$= 2.75$$

## SAMPLE CALCULATIONS (Continued)

10. Solvent Calibration (trial 1)

$$lb/dscf_{Ethanol} = \frac{(grams_{Ethanol})(28.31 \frac{liters}{ft^3})}{(liters)(453.59 \frac{g}{lb})}$$

$$= \frac{(0.0013)(28.31)}{(15)(453.59)}$$

$$= 5.41 \times 10^{-6}$$

$$RF(1) = \frac{(lb/dscf_{Ethanol})(385.3 \times 10^6)}{(ppm_{FID})(MW)}$$

$$= \frac{(5.41 \times 10^{-6})(385.3 \times 10^6)}{(20.5)(44)}$$

$$= 2.31$$

## PARAMETERS

COORS BREWING COMPANY
Project No. 6265-2
Cellar 9 Vents

## Moisture and Velocity Parameters

| Location | C9-2 | C9-6 | C9-9 | C9-10 | C9-12 | C9-B |
|---|---|---|---|---|---|---|
| Date (1992) | June 19 | June 18 | June 19 | June 18 | June 17 | |
| Start Time (approx.) | 12:13 PM | 11:21 AM | 8:42 AM | 12:18 PM | 12:53 PM | |
| Stop Time (approx.) | 12:43 PM | 11:51 AM | 9:12 AM | 12:48 PM | 1:23 PM | |
| %CO2 | 2.8 | 1.3 | 0.2 | 0.2 | 0.3 | N/A |
| %O2 | 19.9 | 19.9 | 20.0 | 20.7 | 20.1 | N/A |
| Pb | 24.42 | 24.42 | 24.42 | 24.42 | 24.42 | 24.42 |
| Cp | N/A | N/A | N/A | N/A | N/A | N/A |
| As | 0.087 | 0.049 | 0.087 | 0.087 | 0.087 | N/A |
| Vlc | 24.5 | 19.0 | 26.5 | 12.0 | 71.0 | N/A |
| Vm | 25.45 | 26.98 | 25.87 | 26.89 | 25.90 | N/A |
| DH | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | N/A |
| Yd | 1.0078 | 1.0078 | 1.0078 | 1.0078 | 1.0078 | N/A |
| Tm | 85 | 85 | 75 | 86 | 78 | N/A |
| CALCULATED RESULTS | | | | | | |
| Vwstd | 1.15 | 0.89 | 1.25 | 0.56 | 3.34 | N/A |
| Vmstd | 20.39 | 21.62 | 21.12 | 21.51 | 21.03 | N/A |
| Bwo (actual) | 0.0535 | 0.0397 | 0.0558 | 0.0256 | 0.1371 | N/A |
| Bwo* | 0.0200 | 0.0200 | 0.0200 | 0.0200 | 0.0200 | 0.0200 |
| AVG TEMP** | 80 | 80 | 68 | 82 | 76 | 84 |
| Md | 29.24 | 29.00 | 28.83 | 28.86 | 28.85 | N/A |
| Ms | 29.02 | 28.78 | 28.62 | 28.64 | 28.63 | N/A |
| Ps | 24.42 | 24.42 | 24.42 | 24.42 | 24.42 | 24.42 |
| Vs | N/A | 14.33 | N/A | N/A | N/A | N/A |
| Qa (acfm)*** | 42 | 42 | 9.4 | 9.4 | 42 | 7.2 |
| Qstd (dscfm) | 33 | 33 | 7.5 | 7.3 | 33 | 5.6 |

* Moisture content was assumed to be ambient.
** AVG TEMP was considered to be ambient air conditions.
*** For location C9-6, acfm was obtained using a hot wire anomometer. This value was also used for locations C9-2 and C9-12. For locations C9-9, C9-10 and C9-B, acfm was obtained from client operating data.

COORS BREWING COMPANY
CAE Project No: 6265-2
Cellar 9 Vents

**Total Hydrocarbons Concentration**
**(ppm as propane)**

| Location* | C9-2 | C9-4 | C9-6 | C9-8 | C9-9 | C9-10 | C9-12 | C9-B |
|---|---|---|---|---|---|---|---|---|
| Run No. | 5 | 3 | 3 | 3 | 3 | 2 | 1 | 5 |
| Date (1992) | June 21 | June 18 | June 18 | June 18 | June 18 | June 17 | June 16 | June 21 |
| Start Time (approx) | 5:26 PM | 9:41 AM | 10:37 AM | 9:41 AM | 10:37 AM | 12:11 PM | 3:29 PM | 5:26 PM |
| Stop Time (approx) | 8:55 PM | 10:36 AM | 2:17 PM | 10:36 AM | 2:17 PM | 4:15 PM | 6:54 PM | 8:55 PM |
| | | | | | | | | |
| dscfm** | 33 | 33 | 33 | 7.4 | 7.5 | 7.3 | 33 | 5.6 |
| Bwo*** | 0.0535 | 0.0397 | 0.0397 | 0.0407 | 0.0558 | 0.0256 | 0.1371 | 0.0481 |
| Ethanol Correction Factor | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| | | | | | | | | |
| ZERO I | -27 | -1 | -1 | -3 | -3 | -11 | -42 | 58 |
| CAL I | 887 | 854 | 854 | 830 | 830 | 8,545 | 8,158 | 24,938 |
| ZERO F | -14 | 2 | 2 | -8 | -8 | -1 | -119 | 425 |
| CAL F | 679 | 887 | 887 | 811 | 811 | 8,522 | 12,435 | 23,923 |
| ppm | 2,578 | 0 | 1,155 | 970 | 762 | 152 | 12,568 | 16,585 |
| CAL GAS | 851.3 | 851.3 | 851.3 | 851.3 | 851.3 | 8,423 | 8,423 | 24,900 |
| ppm, wet (drift calibrated) | 2,753 | 0 | 1,130 | 1,005 | 791 | 156 | 10,267 | 16,824 |
| ppm, dry | 2,909 | 0 | 1,176 | 1,048 | 838 | 160 | 11,898 | 17,674 |
| lb/dscf | 3.32E-04 | 0.0 | 1.34E-04 | 1.20E-04 | 0.96E-04 | 0.18E-04 | 13.6E-04 | 20.2E-04 |
| lb/hr | 0.66 | 0.0 | 0.27 | 0.05 | 0.04 | 0.01 | 2.69 | 0.68 |
| ton/yr | 2.88 | 0.00 | 1.17 | 0.23 | 0.19 | 0.04 | 11.78 | 2.97 |
| | | | | | | | | |
| **lb/hr, as ethanol** | **1.552** | **0.0** | **0.628** | **0.125** | **0.102** | **0.019** | **6.35** | **1.60** |
| **ton/yr, as ethanol** | **6.80** | **0.0** | **2.75** | **0.549** | **0.445** | **0.083** | **27.8** | **7.01** |

* The tank at location C9-4 was empty during the test.

** dscfm and Bwo for Location C9-8 was taken from the average of data obtained at locations C9-9 and C9-10

*** Bwo for Location C9-B was assumed to be saturated

COORS BREWING COMPANY
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Cellar 9 Vents

## Volumetric Flow Data

| | TANK NO.'S | CONTENTS | VENT FLOW (ACFM) ROTAMETER |
|---|---|---|---|
| | 9B-8,9,10,11 | WBC & YDP | 7.2 |
| | 20,21,22,23 | CONDENSATE | |
| | 9C-2 | LIVE YEAST | 25.0 |
| | 9C-12 | HPF YEAST | 25.0 |
| | 9C-8,9,10 | WASTE BEER | 9.4 |

Volumetric flow data was obtained from pre-set rotometers operated by plant personnel.

## CALIBRATION DATA

# METER BOX FULL TEST CALIBRATION

$\overline{Y_d}$: 1.0070 $\overline{dH@}$: 1.6764

| Qr | Q | dH | dP | Vds | WET TEST METER VOLUME INITIAL | WET TEST METER VOLUME FINAL | WET TEST METER VOLUME Vds | DRY GAS METER VOLUME INITIAL | DRY GAS METER VOLUME FINAL | DRY GAS METER VOLUME Vd | WET TEST METER TEMPERATURES IN | WET TEST METER TEMPERATURES OUT | WET TEST METER TEMPERATURES Tds | DRY GAS METER TEMPERATURES IN | DRY GAS METER TEMPERATURES OUT | DRY GAS METER TEMPERATURES Td | TIME | Yd | dH@ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.000 | 0.9017 | 3.00 | -12.9 | 1.00 | 0.000 | 10.000 | 10.000 | 323.64000 | 333.250 | 9.602 | 74.0 | 74.0 | 74.0 | 90.5 | 01 | 05.5 | 9.10 | 1.0142 | [illegible] |
| 24.000 | 0.9006 | 3.00 | -12.9 | 1.00 | 0.000 | 10.000 | 10.000 | 333.25000 | 342.889 | 9.639 | 74.0 | 74.0 | 74.0 | 92.0 | 02 | 06.0 | 9.13 | 1.0136 | [illegible] |
| 24.000 | 0.6200 | 1.50 | -7.1 | 1.00 | 0.000 | 10.000 | 10.000 | 352.94300 | 362.870 | 9.935 | 74.0 | 74.0 | 74.0 | 88.5 | 04 | 06.0 | 13.05 | 1.0011 | [illegible] |
| 24.000 | 0.6317 | 1.50 | -7.1 | 1.00 | 0.000 | 10.000 | 10.000 | 362.07000 | 372.000 | 9.930 | 74.0 | 74.0 | 74.0 | 90.0 | 04 | 07.0 | 12.93 | 1.0054 | [illegible] |
| 24.000 | 0.3063 | 0.50 | -3.1 | 1.00 | 0.000 | 5.000 | 5.000 | 342.00300 | 347.907 | 5.010 | 74.0 | 74.0 | 74.0 | 87.0 | 03 | 05.0 | 11.20 | 1.0061 | [illegible] |
| 24.000 | 0.3057 | 0.50 | -3.1 | 1.00 | 0.000 | 5.000 | 5.000 | 347.90700 | 352.943 | 5.036 | 74.0 | 74.0 | 74.0 | 88.0 | 04 | 06.0 | 11.27 | 1.0044 | [illegible] |

VACUUM GAUGE CALIBRATION

| STD (Hg) | VAC GAUGE |
|---|---|
| 5.0 | 5.000 |
| 10.0 | 10.000 |
| 15.0 | 15.000 |
| 20.0 | 20.000 |
| 22.0 | 23.000 |

THERMOMETER CALIBRATION

| STANDARD | INLET | OUTLET |
|---|---|---|
| 00 | 00.000 | 00.000 |
| 100 | 100 | 100 |
| 120 | 119 | 120 |
| 140 | 140 | 138 |
| 160 | 160 | 159 |
| 180 | | |

DATE: 15 May 92 OPERATOR: Jonathan Dollinger METER BOX NO.: D-5 CLIENT/OWNER Colorado Incineration : J001:6191

DATE: 8/25/92 METER BOX Yd: 0.9921

METER BOX NUMBER: D-5 OPERATOR: JEFFERY MOLINARO CLIENT/OWNER: COORS BREWING JOB#: [illegible]

METER BOX VACUUM: 15

| Bp | Q | dH | dP | Yds | WET TEST METER VOLUME INITIAL | WET TEST METER VOLUME FINAL | WET TEST METER VOLUME Vds | DRY GAS METER VOLUME INITIAL | DRY GAS METER VOLUME FINAL | DRY GAS METER NET Vd | WET TEST METER TEMPERATURES IN | WET TEST METER TEMPERATURES OUT | WET TEST METER TEMPERATURES Tds | DRY GAS METER TEMPERATURES IN | DRY GAS METER TEMPERATURES OUT | DRY GAS METER TEMPERATURES Td | TIME | Yd | dHe |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25.000 | 0.5100 | 1.00 | -4.9 | 1.00 | 0.000 | 10.009 | 10.009 | 578.900 | 589.025 | 10.125 | 72.0 | 72.0 | 72.0 | 85.0 | 81.00 | 83.0 | 16.30 | [illegible] | [illegible] |
| 25.000 | 0.5118 | 1.00 | -4.9 | 1.00 | 0.000 | 10.008 | 10.008 | 609.500 | 619.622 | 10.122 | 72.0 | 72.0 | 72.0 | 85.0 | 81.50 | 83.6 | 16.27 | [illegible] | [illegible] |
| 25.000 | 0.4989 | 1.00 | -4.9 | 1.00 | 0.000 | 10.000 | 10.000 | 595.200 | 605.315 | 10.115 | 72.0 | 72.0 | 72.0 | 85.0 | 81.00 | 83.0 | 16.68 | [illegible] | [illegible] |

FILE: PTC6265 METHOD 5 AT SPENT GRAIN OUTLET

# Scott Specialty Gases, Inc.

1290 COMBERMERE STREET TROY, MI 48083 PHONE: (313) 589-2950 FAX NO: (313) 588-2134

C A E INSTRUMENT RENTAL
346 WOODWORK LANE
PALATINE, IL. 60067

MAR 23 1992

Date: 03/19/92

Our Project No.: 0538463

Your P O No.: 4767-71500

Gentlemen:

Thank you for choosing Scott for your Specialty gas needs. The analyses for the gases ordered, as reported by our laboratory, are listed below. Results are in volume percent, unless otherwise indicated.

## ANALYTICAL REPORT

Cyl. No. _____ Analytical Accuracy ±1%ACMG

| Component | Concentration |
|---|---|
| PROPANE | 84.49PPM |
| NITROGEN | BALANCE |
| ACUBLEND MASTER GAS | |
| AAL-20230,ALM-001788,ALM-008690 | |

Cyl. No. _____ Analytical Accuracy ±1%ACMG

| Component | Concentration |
|---|---|
| PROPANE | 851.3I |
| NITROGEN | BALAN |
| ACUBLEND MASTER GAS | |
| AAL-5479,ALM-005182,ALM-014803 | |

Cyl. No. _____ Analytical Accuracy ±1%ACMG

| Component | Concentration |
|---|---|
| PROPANE | 851.3PPM |
| NITROGEN | BALANCE |
| ACUBLEND MASTER GAS | |
| AAL-20890,ALM-004394,ALM-010637 | |

Cyl. No. _____ Analytical Accuracy _____

| Component | Concentration |
|---|---|
| | |

Analyst _____

Approved _____

The only liability of this Company for gas which fails to comply with this analysis shall be replacement thereof by the Company without extra cost.

CERTIFIED REFERENCE MATERIALS EPA PROTOCOL GASES

ACUBLEND® CALIBRATION & SPECIALTY GAS MIXTURES PURE GAS

ACCESSORY PRODUCTS CUSTOM ANALYTICAL SERVICES

PLUMBSTEADVILLE, PENNSYLVANIA / SAN BERNARDINO, CALIFORNIA / HOUSTON, TEXAS / WHEELING, ILLINOIS

[illegible] / FREMONT, CALIFORNIA / WAKEFIELD, MASSACHUSETTS / LONGMONT, COLORADO

Scott Specialty Gases, Inc.
1290 COMBERMERE STREET TROY, MI 48083 PHONE: (313) 589-2050 FAX NO. (313) 589-2134

C A E INSTRUEMNT RENTAL
246 WOODWORK LANE
PALATINE, IL. 60067

Date: 07/27/92

Our Project No.: 0534012

Your P.O. No.: 4559-71500

Gentlemen:

Thank you for choosing Scott for your Specialty gas needs. The analyses for the gases ordered, as reported by our laboratory, are listed below. Results are in volume percent, unless otherwise indicated.

## ANALYTICAL REPORT

Cyl. No. _____ Analytical Accuracy ±1%ACMG

| Component | Concentration |
|---|---|
| PROPANE | 54.50PPM |
| NITROGEN | BALANCE |
| ACUBLEND MASTER GAS | |
| ALM-004703, ALM-004944, AAL-9952 | |

Cyl. No. _____ Analytical Accuracy ±1%ACMG

| Component | Concentration |
|---|---|
| PROPANE | 2495PPM |
| NITROGEN | BALANCE |
| ACUBLEND MASTER GAS | |
| ALM-008679, ALM-010619, ALM-010140 | |

Cyl. No. _____ Analytical Accuracy ±1%ACMG

| Component | Concentration |
|---|---|
| PROPANE | 5496PPM |
| NITROGEN | BALANCE |
| ACUBLEND MASTER GAS | |
| ALM-010293, ALM-010029, ALM-011352 | |

Cyl. No. _____ Analytical Accuracy ±1%ACMG

| Component | Concentration |
|---|---|
| PROPANE | 8423PPM |
| NITROGEN | BALANCE |
| ACUBLEND MASTER GAS | |
| ALM-003391, ALM-004786, ALM-004952 | |

Analyst David B Bond

Approved J Shapiro

The only liability of this Company for gas which fails to comply with this analysis shall be replacement thereof by the Company without extra cost.

CERTIFIED REFERENCE MATERIALS EPA PROTOCOL GASES
ACUBLEND* CALIBRATION & SPECIALTY GAS MIXTURES PURE GAS
ACCESSORY PRODUCTS CUSTOM ANALYTICAL SERVICES
PLUMBSTEADVILLE, PENNSYLVANIA / SAN BERNARDINO, CALIFORNIA / HOUSTON, TEXAS / WHEELING, ILLINOIS
SOUTH PLAINFIELD, NEW JERSEY / FREMONT, CALIFORNIA / WAKEFIELD, MASSACHUSETTS / LONGMONT, COLORADO
PENNSYLVANIA / SAN BERNARDINO, CALIFORNIA
MASSACHUSETTS / LONGMONT, COLORADO

# Scott Specialty Gases, Inc.

Shipped From: 500 WEAVER PARK RD
LONGMONT CO 80501
Phone: 303-442-4700 Fax: 303-772-7673

## CERTIFICATE OF ANALYSIS

CLEAN AIR ENGINEERING

6850 NORTH BROADWAY
SUITE D
DENVER CO 80221

PROJECT #: 08-07904
PO#: 6157-65
ITEM #: 08023452 4B
DATE: 6/08/92

CYLINDER #: 40004058
FILL PRESSURE: 2000 PSIG

ANALYTICAL ACCURACY: +/- 2%

| COMPONENT | REQUESTED GAS CONC MOLES | | ANALYSIS (MOLES) | |
|---|---|---|---|---|
| PROPANE | 2.4 | PCT | 2.49 | PCT |
| NITROGEN | | BAL | | BAL |

CGA 350 2000 PSIG QC # 16099208

ANALYST: David Chapman
DAVID CHAPMAN

APPROVED BY: RS
RIC SCHMELTEKOPF

COORS BREWING COMPANY
CAE Project No: 6265-2
Solvent Calibration Data
September 30, 1992

| Trial | Ethanol in grams | lb/dscf Ethanol | FID ppm | RF(1) |
|---|---|---|---|---|
| 1 | 0.0013 | 5.41E-06 | 20.5 | 2.31 |
| 2 | 0.0045 | 1.87E-05 | 72 | 2.28 |
| 3 | 0.0115 | 4.78E-05 | 173 | 2.42 |
| 4 | 0.0116 | 4.83E-05 | 172.5 | 2.45 |
| 5 | 0.0203 | 8.45E-05 | 298.5 | 2.48 |
| 6 | 0.0452 | 1.88E-04 | 728 | 2.26 |
| 7 | 0.1146 | 4.77E-04 | 1839 | 2.27 |
| 8 | 0.1234 | 5.13E-04 | 1,989.6 | 2.26 |
| 9 | 0.1951 | 8.12E-04 | 2969 | 2.39 |
| 10 | 0.7986 | 3.32E-03 | 11,613.0 | 2.51 |
| Average | | | | 2.36 |

Note: RF(1) is a response factor based on lb/dscf

All samples are for 15 minutes with a flow rate of 1 liter/minute

## FIELD DATA

Location: Cellar 9 Run: 1

# Moisture Determination Field Data Sheet

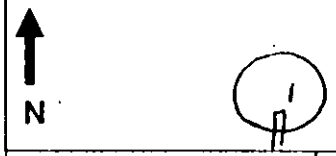


| | |
|---|---|
| Client Coors | Project Number 6265 |
| Plant Golden Co | Unit CELLAR 9-12 |
| Date 6/11/93 | Inlet/Outlet/Stack |
| Meter Operator Doug Gibbons | |
| Probe Operator DG | |

| | |
|---|---|
| Sample Box Number NA | |
| Pyrometer Number NA | |
| Meter Box Number D-5 | |
| Meter ΔH@ 1.676 | Meter $Y_d$ 1.0078 |

| | | | | |
|---|---|---|---|---|
| Leak Rate Before: | 0 | cc/m cf/m @ | 15 | "Hg |
| Leak Rate After: | 0 | cc/m cf/m @ | 15 | "Hg |

Schematic of Testing Location




| | | |
|---|---|---|
| First point all the way IN OUT | Method 4 | |
| Area (ft²) .087 | Port Len. (in.) 1/4" | Gas Flow IN OUT |
| Filter Material NA | | |

| | |
|---|---|
| Ambient Temp. (°F) 76 | Bar. Press. (in. Hg) 24.42 |
| Assumed Moisture (%) | |

| | |
|---|---|
| Heater Box Setting NA | Probe Heater Setting NA |
| Probe Length 6" | Probe Number NA |
| Probe Material teflon | |

| | |
|---|---|
| IGS Bag ID Number NA | |
| % $O_2$ 20.1 | % $CO_2$ 0.3 |
| $H_2O$ (ml) 66 | Silica Gel (gm) 5 |
| Total $V_{lc}$ 71 | |

| | |
|---|---|
| Start Time: 12:53 AM PM | Stop Time: 1:23 AM PM |

| Traverse Point Number | Min/pt Clock Time | Pump Vacuum (in. Hg) | Stack Temp, Ts (°F) | Bath Temp, (°F) | Orifice Setting ΔH (in. $H_2O$) | Initial Volume 459.53 Gas Sample Volume $V_m$ Circle one: (L) (ft³) | Gas Sample Temperature at Dry Gas Meter Inlet $T_{m\ in}$ (°F) | Outlet $T_{m\ out}$ (°F) | Probe Temp. $T_p$ (°F) | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 5.5 | 110 | 53 | 2.0 | 463.91 | 76 | 76 | | | | $B_{ws}$ = 15.7% |
| 1 | 10 | 5.5 | 110 | 53 | 2.0 | 468.12 | 76 | 76 | | | | $M_D$ = 28.85 |
| 1 | 15 | 5.5 | 110 | 53 | 2.0 | 472.43 | 78 | 77 | | | | $M_S$ = 27.36 |
| 1 | 20 | 5.5 | 110 | 53 | 2.0 | 476.76 | 80 | 77 | | | | |
| 1 | 25 | 5.5 | 110 | 54 | 2.0 | 481.08 | 83 | 77 | | | | |
| 1 | 30 | 5.5 | 110 | 55 | 2.0 | 485.43 | 85 | 78 | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | 80 | 76.8 | | | | |
| Average | - | | 110 | | 2.0 | 25.90 | 77.6 | | | | | |
| Total | | | | | | | | 78 | | | | |

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Location: CELLAR 9 Run: 1

# Moisture Determination Field Data Sheet



| | |
|---|---|
| Client COORS | Project Number 6265 |
| Plant Golden Co. | Unit ETO C9-10 |
| Date 6/18/92 | Inlet/Outlet/Stack |
| Meter Operator D. G. | |
| Probe Operator | |

| | |
|---|---|
| Ambient Temp. (°F) 82 | Bar. Press. (in. Hg) 24.42 |
| Assumed Moisture (%) 10-15% | |

| | |
|---|---|
| Heater Box Setting NA | Probe Heater Setting NA |
| Probe Length NA | Probe Number NA |
| Probe Material Stainless steel | |

| | |
|---|---|
| Sample Box Number NA | |
| Pyrometer Number Nutech | |
| Meter Box Number D-5 | |
| Meter ΔH@ 1.676 | Meter $Y_d$ 1.0078 |

| | | | | | |
|---|---|---|---|---|---|
| Leak Rate Before: | 0 | cc/m cf/m @ | 14 | "Hg | |
| Leak Rate After: | 0 | cc/m cf/m @ | 12 | "Hg | |

Schematic of Testing Location

| | | |
|---|---|---|
| First point all the way IN OUT | Method 4 | |
| Area ($ft^2$) .087 | Port Len. (in.) 1/4" | Gas Flow IN OUT |
| Filter Material | | |

| | |
|---|---|
| IGS Bag ID Number NA | |
| % $O_2$ 20.7 | % $CO_2$ 0.2 |
| $H_2O$ (ml) 5 | Silica Gel (gm) 7 |
| Total $V_{lc}$ 12 | |

| | |
|---|---|
| Start Time: 12:18 AM / PM | Stop Time: 12:48 AM / PM |

| Traverse Point Number | Min/pt Clock Time | Pump Vacuum (in. Hg) | Stack Temp, Ts (°F) | Bath Temp, (°F) | Orifice Setting ΔH (in. $H_2O$) | Initial Volume 512.20 Gas Sample Volume $V_m$ Circle one: (L) ($ft^3$) | Gas Sample Temperature at Dry Gas Meter Inlet $T_{m\ in}$ (°F) | Outlet $T_{m\ out}$ (°F) | Probe Temp. $T_p$ (°F) | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 6 | 72 | 52° | 2.0 | 516.74 | 82 | 82 | | | | Bwo = 2.6% |
| 1 | 10 | 6 | 72 | 52° | 2.0 | 521.43 | 85 | 82 | | | | Mo = 28.86 |
| 1 | 15 | 6 | 72 | 52° | 2.0 | 525.85 | 89 | 82 | | | | Mo = 28.58 |
| 1 | 20 | 6 | 72 | 53° | 2.0 | 530.40 | 91 | 82 | | | | |
| 1 | 25 | 6 | 72 | 53° | 2.0 | 534.77 | 93 | 83 | | | | |
| 1 | 30 | 6 | 72 | 54° | 2.0 | 539.09 | 93 | 83 | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Average | | | | | 2.0 | 26.89 | 86 | | | | | |
| Total | | | | | | | | | | | | |

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Location: CELLAR 9 Run: 1

# Moisture Determination Field Data Sheet



| | |
|---|---|
| Client Coors Brewing | Project Number 6265 |
| Plant Golden Co. | Unit 9C6 |
| Date 6/18/92 | Inlet/Outlet/Stack (Outlet) |
| Meter Operator Doug Gribbons | |
| Probe Operator | |

| | |
|---|---|
| Sample Box Number NA | |
| Pyrometer Number NA | |
| Meter Box Number D-5 | |
| Meter ΔH@ 1.676 | Meter $Y_d$ 1.0078 |

| | | | | |
|---|---|---|---|---|
| Leak Rate Before: | 0 | cc/m cf/m @ | 16 | "Hg |
| Leak Rate After: | 0 | cc/m cf/m @ | 10 | "Hg |

Schematic of Testing Location

| | | |
|---|---|---|
| First point all the way IN OUT | Method 4 | |
| Area ($ft^2$) .049 | Port Len. (in.) 1/4" | Gas Flow IN OUT (OUT) |
| Filter Material | | |

| | |
|---|---|
| Ambient Temp. (°F) 80° | Bar. Press. (in. Hg) 24.42 |
| Assumed Moisture (%) 10-15% | |

| | |
|---|---|
| Heater Box Setting | Probe Heater Setting NA |
| Probe Length | Probe Number NA |
| Probe Material Stainless steel | |

| | |
|---|---|
| IGS Bag ID Number | |
| % $O_2$ 19.9 | % $CO_2$ 1.3 |
| $H_2O$ (ml) 10 | Silica Gel (gm) 9 |
| Total $V_{lc}$ 19 | |

| | |
|---|---|
| Start Time: 11:21 AM / PM (AM) | Stop Time: AM / PM |

| Traverse Point Number | Min/pt / Clock Time | Pump Vacuum (in. Hg) | Stack Temp, Ts (°F) | Bath Temp, (°F) | Orifice Setting ΔH (in. $H_2O$) | Initial Volume 485.99 / Gas Sample Volume $V_m$ Circle one: (L) ($ft^3$) | Gas Sample Temperature at Dry Gas Meter: Inlet $T_{m\ in}$ (°F) | Outlet $T_{m\ out}$ (°F) | Probe Temp. $T_p$ (°F) | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 6 | 67 | 50 | 2.0 | 490.27 | 82 | 82 | | | | B.V.O = 4.0 |
| 1 | 10 | 6 | 67 | 50 | 2.0 | 494.57 | 84 | 82 | | | | |
| 1 | 15 | 6 | 67 | 51 | 2.0 | 498.92 | 87 | 82 | | | | |
| 1 | 20 | 6 | 67 | 51 | 2.0 | 503.27 | 89 | 82 | | | | |
| 1 | 25 | 6 | 67 | 52 | 2.0 | 507.59 | 90 | 82 | | | | |
| 1 | 30 | 6 | 67 | 52 | 2.0 | 512.97 | 91 | 82 | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Average | | | | | 2.0 | 26.98 | 85 | | | | | |
| Total | | | | | | | | | | | | |

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Location: 9C - 2 Run: 1

# Moisture Determination Field Data Sheet

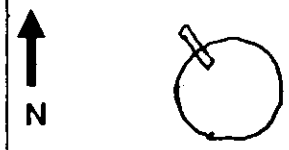


| | |
|---|---|
| Client Coors Brewing | Project Number 6265 |
| Plant Golden Co | Unit 9C-2 |
| Date 6-19-92 | Inlet/outlet/stack TANK |
| Meter Operator Doug Gribbons | |
| Probe Operator DG | |

| | |
|---|---|
| Sample Box Number NA | |
| Pyrometer Number NA | |
| Meter Box Number D-5 | |
| Meter ΔH@ 1.676 | Meter $Y_d$ 1.0078 |

| | |
|---|---|
| Leak Rate Before: 0 cc/m cf/m @ 14 "Hg | |
| Leak Rate After: cc/m cf/m @ "Hg | |

Schematic of Testing Location




| | | |
|---|---|---|
| First point all the way IN OUT | Method 4 | |
| Area ($ft^2$) .087 | Port Len. (in.) 1/4" | Gas Flow IN OUT |
| Filter Material | | |

| | |
|---|---|
| Ambient Temp. (°F) 80° | Bar. Press. (in. Hg) 24.42 |
| Assumed Moisture (%) 10-15% | |

| | |
|---|---|
| Heater Box Setting NA | Probe Heater Setting NA |
| Probe Length 6" | Probe Number NA |
| Probe Material Stainless Steel | |

| | |
|---|---|
| IGS Bag ID Number | |
| % $O_2$ 19.9 | % $CO_2$ 2.8 |
| $H_2O$ (ml) 20 | Silica Gel (gm) 4.5 |
| Total $V_{lc}$ 24.5 | |

Start Time: 12:13 AM (PM) Stop Time: 12:43 AM (PM)

| Traverse Point Number | Min/pt 5 / Clock Time | Pump Vacuum (in. Hg) | Stack Temp, Ts (°F) | Bath Temp, (°F) | Orifice Setting ΔH (in. $H_2O$) | Initial Volume 565.83 / Gas Sample Volume $V_m$ Circle one: (L) ($ft^3$) | Gas Sample Temperature at Dry Gas Meter: Inlet $T_{m\ in}$ (°F) | Outlet $T_{m\ out}$ (°F) | Probe Temp. $T_p$ (°F) | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 6 | | 52 | 2.0 | 570.03 | 83 | 83 | | | | $B_{wc}$ = 5.4% |
| 1 | 10 | 6 | | 52 | 2.0 | 574.29 | 84 | 83 | | | | $M_D$ = 29.24 |
| 1 | 15 | 6 | | 53 | 2.0 | 578.57 | 87 | 83 | | | | $M_s$ = 28.64 |
| 1 | 20 | 6 | | 54 | 2.0 | 582.80 | 89 | 83 | | | | |
| 1 | 25 | 6 | | 55 | 2.0 | 587.03 | 90 | 83 | | | | |
| 1 | 30 | 6 | | 57 | 2.0 | 591.28 | 91 | 83 | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Average | | | | | 2.0 | 25.45 | 85 | | | | | |
| Total | | | | | | | | | | | | |

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Location: 9C-9 Run: 1

# Moisture Determination Field Data Sheet



| | |
|---|---|
| Client Coors Brewing | Project Number 6265 |
| Plant Golden CO | Unit CELLAR 9 |
| Date 6-19-92 | Inlet/outlet/stack TANK |
| Meter Operator Doug Gribbons | |
| Probe Operator Doug Gribbons | |

| | |
|---|---|
| Sample Box Number NA | |
| Pyrometer Number NA | |
| Meter Box Number D-5 | |
| Meter ΔH@ 1.676 | Meter $Y_d$ 1.0078 |

| | | | | |
|---|---|---|---|---|
| Leak Rate Before: | 0 | cc/m cf/m @ | 15 | "Hg |
| Leak Rate After: | | cc/m cf/m @ | | "Hg |

Schematic of Testing Location

| | | |
|---|---|---|
| First point all the way IN OUT | Method 4 | |
| Area ($ft^2$) .087 | Port Len. (in.) 1/4" | Gas Flow IN (OUT) |
| Filter Material | | |

| | |
|---|---|
| Ambient Temp. (°F) 68 | Bar. Press. (in. Hg) 24.42 |
| Assumed Moisture (%) 10-15% | |

| | |
|---|---|
| Heater Box Setting NA | Probe Heater Setting NA |
| Probe Length 6" | Probe Number |
| Probe Material Stainless steel | |

| | |
|---|---|
| IGS Bag ID Number | |
| % $O_2$ 20.0 | % $CO_2$ 0.2 |
| $H_2O$ (ml) 5 | Silica Gel (gm) 21.5 |
| Total $V_{lc}$ 26.5 | |

| | |
|---|---|
| Start Time: 8:42 (AM) / PM | Stop Time: 9:12 (AM) / PM |

| Traverse Point Number | Min/pt Clock Time | Pump Vacuum (in. Hg) | Stack Temp, Ts (°F) | Bath Temp, (°F) | Orifice Setting ΔH (in. $H_2O$) | Initial Volume 539.77 Gas Sample Volume $V_m$ Circle one: (L) ($ft^3$) | Gas Sample Temperature at Dry Gas Meter Inlet $T_{m\ in}$ (°F) | Outlet $T_{m\ out}$ (°F) | Probe Temp. $T_p$ (°F) | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 5 | 74 | 48 | 2.0 | 544.06 | 68 | 67 | | | | Bwc = 5.6% |
| 1 | 10 | 5 | 74 | 48 | 2.0 | 548.39 | 73 | 67 | | | | $M_d$ = 28.85 |
| 1 | 15 | 5 | 74 | 48 | 2.0 | 552.67 | 77 | 68 | | | | $M_s$ = 28.23 |
| 1 | 20 | 5 | 74 | 49 | 2.0 | 557.00 | 83 | 71 | | | | |
| 1 | 25 | 5 | 74 | 47 | 2.0 | 561.27 | 87 | 73 | | | | |
| 1 | 30 | 5 | 74 | 47 | 2.0 | 565.64 | 91 | 75 | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Average | | | | | 2.0 | 25.87 | 75 | | | | | |
| Total | | | | | | | | | | | | |

D:\vpforms\moisture

Location: C9-06 Run: 1

# Velocity Determination Field Data Sheet

Page 1 of 1

| | |
|---|---|
| Client COORS BREWING | Project Number 6265 |
| Plant GOLDEN, CO | Unit C9-06 VENT |
| Date 18 JUNE 92 | Inlet/Outlet/Stack |
| Data Recorder M. HYNES | |
| Probe Operator M. HYNES | |

| | |
|---|---|
| Pyrometer Number Vewicalc | Pitot Cp NA |
| Pitot Leak Check: NA | Before NA After |
| Static Pressure (inches $H_2O$) (+/-) 0.0 | |

Schematic of Testing Location

| | | |
|---|---|---|
| First point all the way | IN | OUT |
| Area ($ft^2$) 0.049 | Port Len (in) 1/4" | Gas Flow IN OUT |

| | |
|---|---|
| Ambient Temp. (°F) 75 | Bar. Press. (in. Hg) 24.42 |
| IGS Bag ID Number R-2 | |
| % $O_2$ 19.9 | % $CO_2$ 1.3 |
| % Moisture: | Assumed/Measured |
| Start Time AM/PM | Stop Time AM/PM |

| Traverse Point Number | Veocity Head ΔPs (FPM) | Stack Temp (°F) | | Traverse Point Number | Velocity Head ΔPs | Stack Temp (°F) | | Traverse Point Number | Velocity Head ΔPs | Stack Temp (°F) | | Traverse Point Number | Velocity Head ΔPs | Stack Temp (°F) | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-1 | 890 | 74 | | | | | | | | | | | | | | 1.3 |
| 2 | 830 | 74 | | | | | | | | | | | | | | 2.3 |
| 2-1 | 880 | 74 | | | | | | | | | | | | | | Bwc = 4.0% |
| 2 | 830 | 74 | | | | | | | | | | | | | | Dorm = 32.5 |
| Total | | | | | | | | | | | | | | | | |
| Average | 858 | 74 | | | | | | | | | | | | | | |

D:\vpforms\velocity

# Orsat Readings

Page 1 of 1

| | |
|---|---|
| Client Coors | Project Number |
| Plant Golden Co | Unit C9 Vent 10 |
| Date 6/18/92 | Fuel Type |
| Orsat ID | Leak Check? ✓ |

$$F_o = \frac{20.9 - \%O_2}{\%CO_2}$$

$F_o$ = 1.083 to 1.230 (for bituminous coal)

| Run Number | Location | Bag ID | Trial | Percent $CO_2$ | Percent $CO_2 + O_2$ | Percent $O_2$ | $F_o$ | Sample Time | Analysis Time | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Vent 10 | BB | 1 | ~~0.2~~ | ~~15.8~~ | ~~15.6~~ | | 12:23 – | 2:07 | DG |
| | C9-10 | | 2 | 0.2 | 20.9 | 20.7 | | | | |
| | | | 3 | 0.2 | 20.8 | 20.6 | | | | |
| | | | Avg. | 0.2 | 20.85 | 20.65 | | | | |
| 1 | C9-2 | C9-2 | 1 | 3.0 | 23.0 | 20.0 | | ~~320p~~ | 320p | GJP |
| | VENT2 | | 2 | ~~22.6~~ 22.5 | 22.6 | 19.8 | | | | |
| | | | 3 | 2.7 | 22.6 | 19.9 | | | | |
| | | | Avg. | 2.75 | 22.6 | 19.85 | | | | |
| 1 | C9-9 | C9-9 | 1 | 0.2 | 20.4 | 20.2 | | 1:23p | 4:05pm | DG |
| | VENT9 | | 2 | 0.3 | 20.2 | 19.9 | | | | |
| | | | 3 | 0.2 | 20.2 | 20.0 | | | | |
| | | | Avg. | 0.2 | 20.2 | 20.0 | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |

CAE P3 ver 1.0
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# Orsat Readings

Page _____ of _____

| | |
|---|---|
| Client COORS BREWING CO. | Project Number 6265 |
| Plant GOLDEN C.O. | Unit CELLAR 9 |
| Date 17 JUNE 92 | Fuel Type NA |
| Orsat ID | Leak Check? O.K. |

$F_o = \frac{20.9 - \%O_2}{\%CO_2}$

$F_o$ = 1.083 to 1.230 (for bituminous coal)

| Run Number | Location | Bag ID | Trial | Percent $CO_2$ | Percent $CO_2 + O_2$ | Percent $O_2$ | $F_o$ | Sample Time | Analysis Time | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | C9-12 | R-1 | 1 | 0.2 | 19.6 | | | 13:00 | 13:30 | MH |
| | | | 2 | 0.2 | 20.2 | 20.0 | | 17 JUNE | | |
| | | | 3 | 0.2 | 20.4 | 20.2 | | | | |
| | | | Avg. | 0.4 | 20.4 | 20.0 | | | | |
| ~~R-2~~ | ~~C9-06~~ | ~~R-2~~ | 1 | 0.3 | | 20.1 | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | 0.3 | | 20.1 | | | | |
| R-2 | C9-06 | R-2 | 1 | 1.4 | 21.2 | 19.8 | | 11:30 | 1200 | MH. |
| | | | 2 | 1.2 | 21.0 | 19.8 | | 18 JUNE | | |
| | | | 3 | 1.2 | 21.2 | 20.0 | | | | |
| | | | Avg. | 1.3 | | 19.9 | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |
| | | | 1 | | | | | | | |
| | | | 2 | | | | | | | |
| | | | 3 | | | | | | | |
| | | | Avg. | | | | | | | |

CAE P3 ver 1.0
D:\vpforms\orsat

[illegible]

[illegible]

| TIME | THU | [illegible] |
|---|---|---|
| SEC | PPM | PPM |
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | 24999 | 82 |
| 00:00:00:29.999 | 24965 | 13 |
| 00:00:00:44.999 | 24956 | 99 |
| 00:00:00:59.998 | 24976 | 83 |
| 00:00:01:14.998 | 25070 | 102 |
| 00:00:01:29.998 | 24957 | 56 |
| 00:00:01:44.998 | 25015 | 15 |
| 00:00:01:59.997 | 24969 | 160 |
| 00:00:02:14.997 | 18567 | 13 |
| 00:00:02:29.997 | 611 | -2 |
| 00:00:02:44.997 | 335 | 83 |
| 00:00:02:59.996 | 260 | 122 |
| 00:00:03:14.996 | 235 | -1 |
| 00:00:03:29.996 | 235 | 169 |
| 00:00:03:44.995 | 189 | 246 |
| 00:00:03:59.995 | 159 | 64 |
| 00:00:04:14.995 | 120 | 15 |
| 00:00:04:29.995 | 134 | 138 |
| 00:00:04:44.994 | 121 | 103 |
| 00:00:04:59.994 | 110 | 184 |
| 00:00:05:14.994 | 126 | 163 |
| 00:00:05:29.994 | 62 | 147 |
| 00:00:05:44.993 | 56 | 67 |
| 00:00:05:59.993 | 38 | 32 |
| 00:00:06:14.993 | 14 | 3 |
| 00:00:06:29.992 | 38 | 12 |
| 00:00:06:44.992 | 34 | -3 |
| 00:00:06:59.992 | 24 | 11 |
| 00:00:07:14.992 | 1 | 25 |
| 00:00:07:29.991 | 19 | 194 |
| 00:00:07:44.991 | 8 | 6 |
| 00:00:07:59.991 | -8 | 95 |
| 00:00:08:14.991 | -21 | 72 |
| 00:00:08:29.990 | -42 | 32 |
| 00:00:08:44.990 | -44 | 144 |
| 00:00:08:59.990 | -40 | 96 |
| 00:00:09:14.989 | -13 | 9 |
| 00:00:09:29.989 | -15 | 156 |
| 00:00:09:44.989 | -24 | 271 |
| 00:00:09:59.989 | 2 | 342 |
| 00:00:10:14.988 | -22 | 376 |
| 00:00:10:29.988 | -39 | 101 |
| 00:00:10:44.988 | -52 | 11 |
| 00:00:10:59.988 | -68 | -3 |
| 00:00:11:14.987 | -37 | 3 |
| 00:00:11:29.987 | -32 | 197 |
| 00:00:11:44.987 | 2249 | 11 |
| 00:00:11:59.986 | 7995 | 80 |
| 00:00:12:14.986 | 8047 | 92 |
| 00:00:12:29.986 | 8041 | 153 |
| 00:00:12:44.986 | 8075 | 30 |
| 00:00:12:59.985 | 8112 | 12 |
| 00:00:13:14.985 | 8111 | 107 |
| 00:00:13:29.985 | 8144 | 56 |
| 00:00:13:44.985 | 8117 | 49 |
| 00:00:13:59.984 | 8110 | 12 |
| 00:00:14:14.984 | 8098 | 36 |
| 00:00:14:29.984 | 8084 | 59 |
| 00:00:14:44.983 | 8100 | 65 |

C9-12

CAL 1A

24900

24900

ZERO CAL

CAL 1A

Pre Cal Run 1
C9-12

Cal Gas - ~~8541~~ 8423 ppm

ZERO 1 = 42 ppm

[illegible]

[illegible]

"TIME" "THI" "THO"

"SEC" "PPM" "PPM"

C9-12

CAL 1A

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | 24999 | 82 |
| 00:00:00:29.999 | 24963 | 13 |
| 00:00:00:44.999 | 24956 | 99 |
| 00:00:00:59.998 | 24976 | 63 |
| 00:00:01:14.998 | 25070 | 102 |
| 00:00:01:29.998 | 24957 | 56 |
| 00:00:01:44.998 | 25015 | 15 |
| 00:00:01:59.997 | 24969 | 160 |
| 00:00:02:14.997 | 18567 | 13 |
| 00:00:02:29.997 | 611 | -2 |
| 00:00:02:44.997 | 335 | 83 |
| 00:00:02:59.996 | 260 | 122 |
| 00:00:03:14.996 | 235 | -1 |
| 00:00:03:29.996 | 235 | 189 |
| 00:00:03:44.995 | 189 | 246 |
| 00:00:03:59.995 | 159 | 64 |
| 00:00:04:14.995 | 120 | 15 |
| 00:00:04:29.995 | 134 | 138 |
| 00:00:04:44.994 | 121 | 103 |
| 00:00:04:59.994 | 110 | 184 |
| 00:00:05:14.994 | 126 | 163 |
| 00:00:05:29.994 | 62 | 147 |
| 00:00:05:44.993 | 56 | 67 |
| 00:00:05:59.993 | 38 | 32 |
| 00:00:06:14.993 | 14 | 3 |
| 00:00:06:29.992 | 38 | 12 |
| 00:00:06:44.992 | 34 | -3 |
| 00:00:06:59.992 | 24 | 11 |
| 00:00:07:14.992 | 1 | 25 |
| 00:00:07:29.991 | 19 | 194 |
| 00:00:07:44.991 | 8 | 8 |
| 00:00:07:59.991 | -8 | 95 |
| 00:00:08:14.991 | -21 | 72 |
| 00:00:08:29.990 | -42 | 32 |
| 00:00:08:44.990 | -44 | 144 |
| 00:00:08:59.990 | -40 | 96 |
| 00:00:09:14.989 | -13 | 9 |
| 00:00:09:29.989 | -15 | 156 |
| 00:00:09:44.989 | -24 | 271 |
| 00:00:09:59.989 | 2 | 342 |
| 00:00:10:14.988 | -22 | 376 |
| 00:00:10:29.988 | -39 | 101 |
| 00:00:10:44.988 | -52 | 11 |
| 00:00:10:59.988 | -68 | -3 |
| 00:00:11:14.987 | -37 | 3 |
| 00:00:11:29.987 | -32 | 197 |
| 00:00:11:44.987 | 2245 | 11 |
| 00:00:11:59.986 | 7995 | 80 |
| 00:00:12:14.986 | 8047 | 92 |
| 00:00:12:29.986 | 8041 | 153 |
| 00:00:12:44.986 | 8076 | 30 |
| 00:00:12:59.985 | 8112 | 12 |
| 00:00:13:14.985 | 8111 | 107 |
| 00:00:13:29.985 | 8144 | 56 |
| 00:00:13:44.985 | 8117 | 49 |
| 00:00:13:59.984 | 8110 | 12 |
| 00:00:14:14.984 | 8098 | 36 |
| 00:00:14:29.984 | 8084 | 59 |
| 00:00:14:44.983 | 8100 | 85 |

24900

24900

ZERO CAL

CAL 1A

Pre Cal Run 1
C9-12

Cal Gas - ~~8541~~ 8423 ppm.

ZERO 1 = 42 ppm

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:16:14.982 | 8164 | 19 |
| 00:00:16:29.982 | 8149 | 61 |
| 00:00:16:44.981 | 8115 | 96 |
| 00:00:16:59.981 | 8132 | 265 |
| 00:00:17:14.981 | 8133 | 112 |
| 00:00:17:29.980 | 8102 | 0 |
| 00:00:17:44.980 | 8125 | 32 |
| 00:00:17:59.980 | 8134 | 77 |
| 00:00:18:14.980 | 8136 | 35 |
| 00:00:18:29.979 | 8175 | 1 |
| 00:00:18:44.979 | 8184 | 4 |
| 00:00:18:59.979 | 8190 | 95 |

Call = 8158 ppm

"COORS BREWING ~~213~~"
"RUN" C09 RUN 1 DIAGNOSTIC
" 6-16-1992"
"15:29:36.89" C9-12 C9-9
"SUR" "THC1 VEN" "THC2 SUR"
" sec" " ppm" " TANK 12 ppm" TANK 9

Run 1
Run 1
C9-12

| | | |
|---|---|---|
| 00:00:00:00.000 | 11866 | 94 |
| 00:00:04:59.999 | 12309 | 72 |
| 00:00:09:59.999 | 13140 | 72 |
| 00:00:14:59.996 | 13182 | 80 |
| 00:00:19:59.998 | 13051 | 83 |
| 00:00:24:59.997 | 13053 | 93 |
| 00:00:29:59.997 | 13159 | 96 |
| 00:00:34:59.997 | 13106 | 102 |
| 00:00:39:59.996 | 13027 | 100 |
| 00:00:44:59.996 | 12907 | 99 |
| 00:00:49:59.995 | 12966 | 100 |
| 00:00:54:59.995 | 12929 | 96 |
| 00:00:59:59.995 | 12812 | 91 |
| 00:01:04:59.994 | 12899 | 95 |
| 00:01:09:59.994 | 12816 | 104 |
| 00:01:14:59.994 | 12851 | 106 |
| 00:01:19:59.993 | 12841 | 100 |
| 00:01:24:59.993 | 12858 | 98 |
| 00:01:29:59.992 | 12922 | 98 |
| 00:01:34:59.992 | 12990 | 96 |
| 00:01:39:59.991 | 12972 | 94 |
| 00:01:44:59.991 | 13020 | 101 |
| 00:01:49:59.991 | 12971 | 109 |
| 00:01:54:59.990 | 12973 | 112 |
| 00:01:59:59.990 | 12904 | 110 |
| 00:02:04:59.989 | 12851 | 112 |
| 00:02:09:59.989 | 12882 | 113 |
| 00:02:14:59.989 | 12872 | 107 |
| 00:02:19:59.988 | 12970 | 106 |
| 00:02:24:59.988 | 13020 | 103 |
| 00:02:29:59.988 | 12918 | 112 |
| 00:02:34:59.987 | 12963 | 104 |
| 00:02:39:59.987 | 12969 | 102 |
| 00:02:44:59.986 | 12963 | 97 |
| 00:02:49:59.986 | 12845 | 92 |
| 00:02:54:59.985 | 12852 | 91 |
| 00:02:59:59.985 | 12872 | 83 |
| 00:03:04:59.985 | 12934 | 84 |
| 00:03:09:59.984 | 12934 | 70 |
| 00:03:14:59.984 | 12949 | 109 |
| 00:03:19:59.983 | 13065 | 176 |
| 00:03:24:59.983 | 12974 | 173 |
| 00:03:29:59.983 | 13059 | 170 |
| [illegible] | [illegible] | [illegible] |

VOID

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:03:59:59.980 | 12397 | 187 |
| 00:04:04:59.980 | 12346 | 153 |
| 00:04:09:59.979 | 12332 | 162 |
| 00:04:14:59.979 | 12339 | 185 |
| 00:04:19:59.978 | 12753 | 136 |
| 00:04:24:59.978 | 12774 | 201 |
| 00:04:29:59.978 | 12797 | 266 |
| 00:04:34:59.978 | 12810 | 306 |
| 00:04:39:59.978 | 12785 | 317 |
| 00:04:44:59.978 | 12788 | 349 |
| 00:04:49:59.978 | 12781 | 388 |
| 00:04:54:59.978 | 12730 | 370 |
| 00:04:59:59.978 | 12747 | 334 |
| 00:05:04:59.974 | 12657 | 296 |
| 00:05:09:59.974 | 12678 | 272 |
| 00:05:14:59.974 | 12607 | 248 |
| 00:05:19:59.974 | 12628 | 196 |
| 00:05:24:59.974 | 12588 | 170 |
| 00:05:29:59.972 | 12572 | 170 |
| 00:05:34:59.972 | 12579 | 167 |
| 00:05:39:59.972 | 12597 | 173 |
| 00:05:44:59.972 | 12609 | 148 |
| 00:05:49:59.970 | 12589 | 153 |
| 00:05:54:59.970 | 12650 | 176 |
| 00:05:59:59.970 | 12612 | 177 |
| 00:06:04:59.970 | 12648 | 219 |
| 00:06:09:59.970 | 12578 | 245 |
| 00:06:14:59.968 | 12448 | 285 |
| 00:06:19:59.968 | 12453 | 380 |
| 00:06:24:59.968 | 12415 | 348 |
| 00:06:29:59.968 | 12414 | 334 |
| 00:06:34:59.966 | 12379 | 305 |
| 00:06:39:59.966 | 12389 | 341 |
| 00:06:44:59.966 | 12537 | 355 |
| 00:06:49:59.966 | 12488 | 328 |
| 00:06:54:59.966 | 12484 | 349 |
| 00:06:59:59.966 | 12423 | 366 |
| 00:07:04:59.964 | 12464 | 381 |
| 00:07:09:59.964 | 12385 | 350 |
| 00:07:14:59.964 | 12362 | 352 |
| 00:07:19:59.964 | 12322 | 342 |
| 00:07:24:59.964 | 12320 | 351 |
| 00:07:29:59.962 | 12311 | 364 |
| 00:07:34:59.962 | 12267 | 392 |
| 00:07:39:59.962 | 12349 | 420 |
| 00:07:44:59.962 | 12251 | 513 |
| 00:07:49:59.960 | 12322 | 613 |
| 00:07:54:59.960 | 12350 | 721 |
| 00:07:59:59.960 | 12375 | 822 |
| 00:08:04:59.960 | 12430 | 911 |
| 00:08:09:59.960 | 12352 | 968 |
| 00:08:14:59.958 | 12409 | 1000 |
| 00:08:19:59.958 | 12390 | 1000 |
| 00:08:24:59.958 | 12262 | 1000 |
| 00:08:29:59.958 | 12221 | 1000 |
| 00:08:34:59.958 | 12190 | 1000 |
| 00:08:39:59.957 | 12249 | 1000 |
| 00:08:44:59.957 | 12271 | 1000 |
| 00:08:49:59.957 | 12191 | 1000 |
| 00:08:54:59.957 | 12277 | 1000 |
| 00:08:59:59.957 | 12359 | 1000 |
| 00:09:04:59.955 | 12364 | 1000 |
| 00:09:09:59.957 | 12333 | 1000 |

T12

T9

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:09:39:59.953 | 12434 | 1000 |
| 00:09:44:59.953 | 12435 | 1000 |
| 00:09:49:59.953 | 12437 | 1000 |
| 00:09:54:59.953 | 12531 | 1000 |
| 00:09:59:59.953 | 12556 | 1000 |
| 00:10:04:59.949 | 12676 | 1000 |
| 00:10:09:59.949 | 12632 | 1000 |
| 00:10:14:59.949 | 12525 | 1000 |
| 00:10:19:59.949 | 12589 | 1000 |
| 00:10:24:59.949 | 12465 | 1000 |
| 00:10:29:59.949 | 12464 | 1000 |
| 00:10:34:59.949 | 12364 | 1000 |
| 00:10:39:59.949 | 12340 | 1000 |
| 00:10:44:59.949 | 12444 | 1000 |
| 00:10:49:59.949 | 12313 | 1000 |
| 00:10:54:59.945 | 12390 | 1000 |
| 00:10:59:59.945 | 12419 | 1000 |
| 00:11:04:59.945 | 12551 | 1000 |
| 00:11:09:59.945 | 12598 | 1000 |
| 00:11:14:59.945 | 12595 | 1000 |
| 00:11:19:59.945 | 12692 | 1000 |
| 00:11:24:59.945 | 12656 | 1000 |
| 00:11:29:59.945 | 12666 | 1000 |
| 00:11:34:59.945 | 12644 | 1000 |
| 00:11:39:59.941 | 12630 | 1000 |
| 00:11:44:59.941 | 12563 | 1000 |
| 00:11:49:59.941 | 12536 | 1000 |
| 00:11:54:59.941 | 12457 | 1000 |
| 00:11:59:59.941 | 12371 | 1000 |
| 00:12:04:59.941 | 12392 | 1000 |
| 00:12:09:59.941 | 12306 | 1000 |
| 00:12:14:59.941 | 12407 | 1000 |
| 00:12:19:59.941 | 12413 | 1000 |
| 00:12:24:59.941 | 12466 | 1000 |
| 00:12:29:59.937 | 12503 | 1000 |
| 00:12:34:59.937 | 12444 | 1000 |
| 00:12:39:59.937 | 12537 | 1000 |
| 00:12:44:59.937 | 12426 | 1000 |
| 00:12:49:59.937 | 12464 | 1000 |
| 00:12:54:59.937 | 12492 | 1000 |
| 00:12:59:59.937 | 12451 | 1000 |
| 00:13:04:59.937 | 12455 | 1000 |
| 00:13:09:59.937 | 12399 | 993 |
| 00:13:14:59.937 | 12407 | 962 |
| 00:13:19:59.933 | 12309 | 888 |
| 00:13:24:59.933 | 12269 | 800 |
| 00:13:29:59.933 | 12294 | 712 |
| 00:13:34:59.933 | 12317 | 637 |
| 00:13:39:59.933 | 12426 | 559 |
| 00:13:44:59.933 | 12400 | 519 |
| 00:13:49:59.933 | 12466 | 543 |
| 00:13:54:59.933 | 12469 | 587 |
| 00:13:59:59.933 | 12539 | 636 |
| 00:14:04:59.929 | 12505 | 670 |
| 00:14:09:59.929 | 12502 | 717 |
| 00:14:14:59.929 | 12540 | 756 |
| 00:14:19:59.929 | 12532 | 785 |
| 00:14:24:59.929 | 12569 | 806 |
| 00:14:29:59.929 | 12461 | 831 |
| 00:14:34:59.929 | 12555 | 859 |
| 00:14:39:59.929 | 12559 | 886 |
| 00:14:44:59.929 | 12551 | 914 |
| 00:14:49:59.929 | 12414 | 926 |
| [illegible] | [illegible] | [illegible] |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:15:24:59.925 | 12416 | 991 |
| 00:15:29:59.925 | 12314 | 994 |
| 00:15:34:59.925 | 12258 | 995 |
| 00:15:39:59.921 | 12206 | 996 |
| 00:15:44:59.921 | 12179 | 997 |
| 00:15:49:59.921 | 12175 | 997 |
| 00:15:54:59.921 | 12147 | 997 |
| 00:15:59:59.921 | 12182 | 997 |
| 00:16:04:59.921 | 12251 | 997 |
| 00:16:09:59.921 | 12186 | 1000 |
| 00:16:14:59.921 | 12096 | 978 |
| 00:16:19:59.921 | 12087 | 970 |
| 00:16:24:59.921 | 12096 | 957 |
| 00:16:29:59.917 | 12088 | 953 |
| 00:16:34:59.917 | 12057 | 948 |
| 00:16:39:59.917 | 12132 | 946 |
| 00:16:44:59.917 | 12231 | 962 |
| 00:16:49:59.917 | 12219 | 961 |
| 00:16:54:59.917 | 12743 | 965 |
| 00:16:59:59.917 | 12902 | 948 |
| 00:17:04:59.917 | 13033 | 921 |

"COORS BREWING ~~C13~~ C09" C9-12 VOID End Run 1 C9-12

"  "

"06:56:20.73"

" 6-17-1992"

"TIME" "THC1" "THC2" CAL 2

"SEC" "PPM" "PPM"

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | 448 | -15 |
| 00:00:00:29.999 | 1615 | -14 |
| 00:00:00:44.999 | -650 | -16 |
| 00:00:00:59.998 | -2264 | -17 |
| 00:00:01:14.998 | -504 | -16 |
| 00:00:01:29.998 | 1584 | -14 |
| 00:00:01:44.998 | -1783 | -16 |
| 00:00:01:59.997 | -2790 | -18 |
| 00:00:02:14.997 | -2490 | -18 |
| 00:00:02:29.997 | -540 | -17 |
| 00:00:02:44.997 | 1454 | -15 |
| 00:00:02:59.996 | 1723 | -14 |
| 00:00:03:14.996 | 1494 | -14 |
| 00:00:03:29.996 | -608 | -15 |
| 00:00:03:44.995 | -1919 | -18 |
| 00:00:03:59.995 | -1866 | -18 |
| 00:00:04:14.995 | -1060 | -17 |
| 00:00:04:29.995 | 535 | -15 |
| 00:00:04:44.994 | 210 | -15 |
| 00:00:04:59.994 | -1840 | -18 |
| 00:00:05:14.994 | -1407 | -17 |
| 00:00:05:29.994 | 1671 | -15 |
| 00:00:05:44.993 | 1464 | -14 |
| 00:00:05:59.993 | 49 | -16 |
| 00:00:06:14.993 | -1460 | -19 |
| 00:00:06:29.992 | -1436 | -18 |
| 00:00:06:44.992 | -616 | -16 |
| 00:00:06:59.992 | 788 | -15 |
| 00:00:07:14.992 | 2053 | -15 |
| 00:00:07:29.991 | 473 | -18 |
| 00:00:07:44.991 | -1883 | -18 |
| 00:00:07:59.991 | -654 | -17 |
| 00:00:08:14.991 | [illegible] | -15 |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| ~~[illegible]~~ | ~~[illegible]~~ | ~~[illegible]~~ |
| 00:00:09:59.989 | -120 | -15 |
| 00:00:10:14.988 | -100 | -13 |
| 00:00:10:29.988 | -128 | -18 |
| ~~[illegible]~~ | ~~[illegible]~~ | ~~[illegible]~~ |
| 00:00:10:59.988 | -105 | -17 |
| 00:00:11:14.987 | -132 | -17 |
| 00:00:11:29.987 | -110 | -15 |
| 00:00:11:44.987 | -108 | -19 |
| 00:00:11:59.986 | -131 | -17 |
| 00:00:12:14.986 | -105 | -16 |
| 00:00:12:29.986 | -121 | -19 |
| 00:00:12:44.986 | -135 | -16 |
| 00:00:12:59.985 | -111 | -15 |
| 00:00:13:14.985 | -105 | -18 |
| 00:00:13:29.985 | -137 | -17 |
| 00:00:13:44.985 | -110 | -12 |
| 00:00:13:59.984 | -107 | -10 |
| 00:00:14:14.984 | -114 | -11 |
| 00:00:14:29.984 | -127 | -11 |
| 00:00:14:44.983 | -87 | -11 |
| 00:00:14:59.983 | -102 | -14 |
| 00:00:15:14.983 | -108 | -12 |
| 00:00:15:29.983 | -75 | -12 |
| 00:00:15:44.982 | -93 | -14 |
| 00:00:15:59.982 | -83 | -9 |
| 00:00:16:14.982 | -66 | -9 |
| 00:00:16:29.982 | -62 | 538 |
| 00:00:16:44.981 | 5848 | 1000 |
| 00:00:16:59.981 | 12285 | 1000 |

"COORS BREWING ~~C15~~"
" " C09

"09:20:33.66"
" 6-17-1992"
"TIME" "THC1" "THC2"
"SEC" "PPM" "PPM"

CAL 2A

Cal 2A

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | 12493 | 8315 |
| 00:00:00:29.999 | 12440 | 8244 |
| 00:00:00:44.999 | 12389 | 8278 |
| 00:00:00:59.998 | 12460 | 8282 |
| 00:00:01:14.998 | 12481 | 8262 |
| 00:00:01:29.998 | 12447 | 8273 |
| 00:00:01:44.998 | 12395 | 8227 |
| 00:00:01:59.997 | 12420 | 8296 |
| 00:00:02:14.997 | 12470 | 8261 |
| 00:00:02:29.997 | 12512 | 8283 |

8423 CAL CHECK

"COORS BREWING ~~C15~~"
" " C07

"10:59:58.47"
" 6-17-1992"
"TIME" "THC1" "THC2"
"SEC" "PPM" "PPM"

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | -9 | -27 |
| 00:00:00:29.999 | -9 | -24 |
| 00:00:00:44.999 | -14 | 20 |
| 00:00:00:59.998 | -8 | -15 |
| 00:00:01:14.998 | -2 | -46 |
| 00:00:01:29.998 | -3 | -45 |
| 00:00:01:44.998 | -3 | -33 |

-10

Pre Cal Run 2
C9-10

Cal Gas = ~~8421~~ 8423 ppm

ZERO 1 = -11

Zero CB

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| 00:00:02:29.997 | -11 | 30 |
| 00:00:02:44.997 | -15 | -2 |
| 00:00:02:59.996 | -2 | -33 |
| 00:00:03:14.996 | -3 | 3055 |
| 00:00:03:29.996 | -7 | 23968 |
| 00:00:03:44.995 | -8 | 24453 |
| 00:00:03:59.995 | -12 | 24773 |
| 00:00:04:14.995 | -8 | 24895 |
| 00:00:04:29.995 | -13 | 24933 |
| 00:00:04:44.994 | -10 | 25024 |
| 00:00:04:59.994 | -15 | 25032 |
| 00:00:05:14.994 | -14 | 25059 |
| 00:00:05:29.994 | 22 | 25129 |
| 00:00:05:44.993 | 28 | 25100 |
| 00:00:05:59.993 | 32 | 25166 |
| 00:00:06:14.993 | 29 | 25198 |
| 00:00:06:29.992 | 21 | 25199 |
| 00:00:06:44.992 | 17 | 25216 |
| 00:00:06:59.992 | 16 | 25205 |
| 00:00:07:14.992 | 16 | 25226 |
| 00:00:07:29.991 | 19 | 25210 |
| 00:00:07:44.991 | 24 | 25263 |
| 00:00:07:59.991 | 29 | 25150 |
| 00:00:08:14.991 | 31 | 25097 |
| 00:00:08:29.990 | 30 | 25109 |
| 00:00:08:44.990 | 25 | 25150 |
| 00:00:08:59.990 | 5312 | 25169 |
| 00:00:09:14.989 | 26650 | 25215 |
| 00:00:09:29.989 | 23915 | 25262 |
| 00:00:09:44.989 | 23909 | 25239 |
| 00:00:09:59.989 | 22224 | 25201 |
| 00:00:10:14.988 | 22096 | 25177 |
| 00:00:10:29.988 | 24086 | 25171 |
| 00:00:10:44.988 | 24885 | 25150 |
| 00:00:10:59.988 | 24409 | 25159 |
| 00:00:11:14.987 | 24213 | 25190 |
| 00:00:11:29.987 | 22804 | 25140 |
| 00:00:11:44.987 | 1705 | 25215 |
| 00:00:11:59.986 | 16 | 25229 |
| 00:00:12:14.986 | 9880 | 25198 |
| 00:00:12:29.986 | 3244 | 25184 |
| 00:00:12:44.986 | 24190 | 25149 |
| 00:00:12:59.985 | 24053 | 25160 |
| 00:00:13:14.985 | 24114 | 25167 |
| 00:00:13:29.985 | 24165 | 25165 |
| 00:00:13:44.985 | 25009 | 25257 |
| 00:00:13:59.984 | 25360 | 25267 |
| 00:00:14:14.984 | 25031 | 25225 |
| 00:00:14:29.984 | 24251 | 25143 |
| 00:00:14:44.983 | 24500 | 25056 |
| 00:00:14:59.983 | 25215 | 25068 |
| 00:00:15:14.983 | 25097 | 25061 |
| 00:00:15:29.983 | 24325 | 25190 |
| 00:00:15:44.982 | 24916 | 25110 |
| 00:00:15:59.982 | 24671 | 25131 |
| 00:00:16:14.982 | 25217 | 25205 |
| 00:00:16:29.982 | 25338 | 24939 |
| 00:00:16:44.981 | 25455 | 23654 |
| 00:00:16:59.981 | 25403 | 2924 |
| 00:00:17:14.981 | 25150 | 336 |
| 00:00:17:29.980 | 25032 | 6597 |
| 00:00:17:44.980 | 4452 | 7441 |
| 00:00:17:59.980 | 630 | 7579 |
| 00:00:18:14.980 | 6600 | 7601 |
| 00:00:18:29.979 | 11764 | 7592 |
| 00:00:18:44.979 | [illegible] | [illegible] |

24700
CAL

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:20:29.977 | [illegible] | 7546 |
| 00:00:20:44.977 | 8353 | [illegible] |
| 00:00:20:59.977 | 8360 | 8107 |
| 00:00:21:14.976 | 8274 | 8179 |
| 00:00:21:29.976 | 8456 | 8326 |
| 00:00:21:44.976 | 8297 | 8353 |
| 00:00:21:59.976 | 8204 | 8385 |
| 00:00:22:14.975 | 8658 | 8429 |
| 00:00:22:29.975 | 8666 | 8439 |
| 00:00:22:44.975 | 8730 | 8400 |
| 00:00:22:59.974 | 8439 | 8372 |
| 00:00:23:14.974 | 8452 | 8365 |
| 00:00:23:29.974 | 8316 | 8356 |
| 00:00:23:44.974 | 8611 | 8349 |
| 00:00:23:59.973 | 8770 | 8399 |
| 00:00:24:14.973 | 8659 | 8405 |
| 00:00:24:29.973 | 8477 | 8437 |
| 00:00:24:44.973 | 8561 | 8426 |
| 00:00:24:59.972 | 8598 | 8381 |
| 00:00:25:14.972 | 8452 | 8374 |
| 00:00:25:29.972 | 8350 | 8353 |
| 00:00:25:44.972 | 8464 | 8343 |
| 00:00:25:59.971 | 8648 | 8362 |
| 00:00:26:14.971 | 8709 | 8424 |
| 00:00:26:29.971 | 8692 | 8414 |
| 00:00:26:44.970 | 8375 | 8371 |
| 00:00:26:59.970 | 8373 | 8326 |
| 00:00:27:14.970 | 8405 | 8211 |
| 00:00:27:29.970 | 8131 | 6899 |
| 00:00:27:44.969 | 8074 | 960 |
| 00:00:27:59.969 | 8093 | 6048 |
| 00:00:28:14.969 | 7141 | 25927 |
| 00:00:28:29.968 | 576 | 27651 |
| 00:00:28:44.968 | 1320 | 27997 |
| 00:00:28:59.968 | 15074 | 28115 |
| 00:00:29:14.968 | 15824 | 28116 |
| 00:00:29:29.967 | 15759 | 28176 |
| 00:00:29:44.967 | 15818 | 28353 |
| 00:00:29:59.967 | 15766 | 28385 |
| 00:00:30:14.967 | 16043 | 28319 |
| 00:00:30:29.966 | 16141 | 28267 |
| 00:00:30:44.966 | 16974 | 28273 |
| 00:00:30:59.966 | 17581 | 28239 |
| 00:00:31:14.966 | 16583 | 28199 |
| 00:00:31:29.965 | 16124 | 28246 |
| 00:00:31:44.965 | 15959 | 28234 |
| 00:00:31:59.965 | 16460 | 28291 |
| 00:00:32:14.964 | 16864 | 28761 |
| 00:00:32:29.964 | 16662 | 29000 |
| 00:00:32:44.964 | 6162 | 29000 |
| 00:00:32:59.964 | 286 | 28628 |
| 00:00:33:14.963 | 300 | 28369 |
| 00:00:33:29.963 | 6518 | 28327 |
| 00:00:33:44.963 | 16118 | 28386 |
| 00:00:33:59.963 | 16397 | 28279 |
| 00:00:34:14.962 | 16095 | 28276 |
| 00:00:34:29.962 | 15698 | 28310 |
| 00:00:34:44.962 | 16170 | 27892 |
| 00:00:34:59.961 | 16156 | 27869 |
| 00:00:35:14.961 | 16278 | 11062 |
| 00:00:35:29.961 | 15871 | 2935 |
| 00:00:35:44.961 | 15844 | 8135 |
| 00:00:35:59.960 | 8260 | 8391 |

DID NOT SAVE

[illegible]

[illegible]

[illegible]

[illegible]

C09

CAL 2B

7-10

USE ZERO FROM UNSAVED CAL

11:38:10.41

" 6-17-1992"

"TIME" "THC1" "THC2"

"SEC" "PPM" "PPM"

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | 8459 | 8440 |
| 00:00:00:29.999 | 8236 | 8453 |
| 00:00:00:44.999 | 8428 | 8473 |
| 00:00:00:59.998 | 5741 | 8540 |
| 00:00:01:14.998 | 5673 | 8541 |
| 00:00:01:29.998 | 7427 | 8513 |
| 00:00:01:44.998 | 8388 | 8482 |
| 00:00:01:59.997 | 8389 | 8472 |
| 00:00:02:14.997 | 8377 | 8484 |
| 00:00:02:29.997 | 8377 | 8419 |
| 00:00:02:44.997 | 8376 | 8469 |
| 00:00:02:59.996 | 8391 | 8453 |
| 00:00:03:14.996 | 8390 | 8456 |
| 00:00:03:29.996 | 8387 | 8513 |
| 00:00:03:44.995 | 8392 | 8512 |
| 00:00:03:59.995 | 8379 | 8488 |
| 00:00:04:14.995 | 8370 | 8443 |
| 00:00:04:29.995 | 8398 | 8446 |
| 00:00:04:44.994 | 8388 | 8521 |
| 00:00:04:59.994 | 8381 | 8534 |
| 00:00:05:14.994 | 8386 | 8485 |
| 00:00:05:29.994 | 8376 | 8452 |
| 00:00:05:44.993 | 8378 | 8429 |
| 00:00:05:59.993 | 8394 | 8417 |
| 00:00:06:14.993 | 8383 | 8316 |
| 00:00:06:29.992 | 8383 | 8032 |
| 00:00:06:44.992 | 8389 | 3358 |
| 00:00:06:59.992 | 8395 | 25260 |
| 00:00:07:14.992 | 8333 | 27701 |
| 00:00:07:29.991 | 4976 | 28101 |
| 00:00:07:44.991 | 28257 | 28250 |
| 00:00:07:59.991 | 28051 | 28304 |
| 00:00:08:14.991 | 27884 | 28258 |
| 00:00:08:29.990 | 27558 | 28378 |
| 00:00:08:44.990 | 28535 | 28387 |
| 00:00:08:59.990 | 28145 | 28443 |
| 00:00:09:14.989 | 27164 | 28423 |
| 00:00:09:29.989 | 28383 | 26497 |
| 00:00:09:44.989 | 27964 | 28522 |
| 00:00:09:59.989 | 27440 | 28520 |
| 00:00:10:14.988 | 20795 | 28424 |
| 00:00:10:29.988 | 21154 | 28507 |
| 00:00:10:44.988 | 16659 | 28437 |
| 00:00:10:59.988 | 16648 | 28486 |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |

| | | |
|---|---|---|
| 00:00:12:59.985 | 16945 | 28520 |
| 00:00:13:14.985 | 16944 | 28532 |
| 00:00:13:29.985 | 16929 | 28616 |
| 00:00:13:44.985 | 16936 | 28626 |
| 00:00:13:59.984 | 17695 | 28478 |
| 00:00:14:14.984 | 24657 | 28541 |
| 00:00:14:29.984 | 24680 | 28609 |
| 00:00:14:44.983 | 24803 | 28661 |
| 00:00:14:59.983 | 24923 | 28617 |
| 00:00:15:14.983 | 25136 | 28595 |
| 00:00:15:29.983 | 25150 | 28579 |
| 00:00:15:44.982 | 25112 | 28632 |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:16:59.981 | [illegible] | [illegible] |
| 00:00:17:14.981 | [illegible] | 8563 |
| 00:00:17:29.980 | 13874 | 8591 |
| 00:00:17:44.980 | 5980 | 8545 |
| 00:00:17:59.980 | 14368 | 8526 |
| 00:00:18:14.980 | 11068 | 8511 |
| 00:00:18:29.979 | 8423 | 8560 |
| 00:00:18:44.979 | 8398 | 8577 |
| 00:00:18:59.979 | 8405 | 8558 |
| 00:00:19:14.979 | 8369 | 8508 |
| 00:00:19:29.978 | 8387 | 8513 |
| 00:00:19:44.978 | 8359 | 8591 |
| 00:00:19:59.978 | 8378 | 8569 |
| 00:00:20:14.978 | 8336 | 8553 |
| 00:00:20:29.977 | 8353 | 8524 |
| 00:00:20:44.977 | 8344 | 8537 |
| 00:00:20:59.977 | 8337 | 8545 |
| 00:00:21:14.976 | 8338 | 8498 |
| 00:00:21:29.976 | 8327 | 8492 |
| 00:00:21:44.976 | 8359 | 8535 |
| 00:00:21:59.976 | 8373 | 8684 |
| 00:00:22:14.975 | 8399 | 8824 |
| 00:00:22:29.975 | 5363 | 3814 |
| 00:00:22:44.975 | 159 | 8825 |
| 00:00:22:59.974 | 477 | 8855 |
| 00:00:23:14.974 | 902 | 8893 |
| 00:00:23:29.974 | 1149 | 8865 |
| 00:00:23:44.974 | 1244 | 8818 |
| 00:00:23:59.973 | 817 | 8821 |
| 00:00:24:14.973 | 732 | 8773 |
| 00:00:24:29.973 | 824 | 8788 |
| 00:00:24:44.973 | 840 | 8792 |
| 00:00:24:59.972 | 861 | 8791 |
| 00:00:25:14.972 | 797 | 8849 |
| 00:00:25:29.972 | 776 | 8813 |
| 00:00:25:44.972 | 776 | 8830 |
| 00:00:25:59.971 | 655 | 8779 |
| 00:00:26:14.971 | 421 | 8792 |
| 00:00:26:29.971 | 466 | 8807 |
| 00:00:26:44.970 | 710 | 8799 |

8423 CAL

8545

CAL 1 = 8545
C9-10

"COORS BREWING C09"
"RUN" [redacted]
" 6-17-1992"
"12:11:20.41" 6.

RUN 2

VOID C9-6

C9-10

Run 2
C9-10

| "TIME" | "THC1 V[illegible]" | "THC2 V10" |
|---|---|---|
| " sec" | " ppm" | " ppm" |
| 00:00:00:00.000 | 807 | 326 |
| 00:00:04:59.999 | 817 | 229 |
| 00:00:09:59.999 | 819 | 546 |
| 00:00:14:59.998 | 821 | 752 |
| 00:00:19:59.998 | 822 | 864 |
| 00:00:24:59.997 | 823 | 923 |
| 00:00:29:59.997 | 825 | 960 |
| 00:00:34:59.997 | 827 | 1096 |
| 00:00:39:59.996 | 828 | 1001 |
| 00:00:44:59.996 | 828 | 831 |
| 00:00:49:59.995 | 830 | 656 |
| 00:00:54:59.995 | 832 | 490 |
| 00:00:59:59.995 | 832 | 344 |
| 00:01:04:59.994 | 833 | 201 |
| 00:01:09:59.994 | 832 | 167 |
| 00:01:14:59.994 | 831 | 170 |
| 00:01:19:59.993 | 817 | 170 |
| 00:01:24:59.993 | 803 | 161 |
| 00:01:29:59.992 | 788 | 139 |

C9-10

Run 2
C9-10

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:01:59:59.990 | 739 | 100 |
| 00:02:04:59.989 | 735 | 97 |
| 00:02:09:59.989 | 731 | 91 |
| 00:02:14:59.988 | 728 | 95 |
| 00:02:19:59.988 | 726 | 89 |
| 00:02:24:59.988 | 725 | 81 |
| 00:02:29:59.988 | 726 | 73 |
| 00:02:34:59.987 | 726 | 69 |
| 00:02:39:59.987 | 726 | 51 |
| 00:02:44:59.986 | 725 | 33 |
| 00:02:49:59.986 | 725 | 27 |
| 00:02:54:59.985 | 725 | 25 |
| 00:02:59:59.985 | 724 | 25 |
| 00:03:04:59.985 | 723 | 24 |
| 00:03:09:59.984 | 722 | 26 |
| 00:03:14:59.984 | 721 | 31 |
| 00:03:19:59.983 | 720 | 34 |
| 00:03:24:59.983 | 718 | 46 |
| 00:03:29:59.983 | 716 | 61 |
| 00:03:34:59.982 | 715 | 71 |
| 00:03:39:59.982 | 713 | 77 |
| 00:03:44:59.981 | 711 | 87 |
| 00:03:49:59.981 | 709 | 94 |
| 00:03:54:59.980 | 707 | 87 |
| 00:03:59:59.980 | 704 | 73 |
| 00:04:04:59.980 | 702 | 63 |
| 00:04:09:59.979 | 701 | 65 |
| 00:04:14:59.979 | 701 | 59 |
| 00:04:19:59.978 | 700 | 52 |
| 00:04:24:59.978 | 702 | 46 |
| 00:04:29:59.978 | 704 | 51 |
| 00:04:34:59.978 | 705 | 62 |
| 00:04:39:59.976 | 703 | 61 |
| 00:04:44:59.976 | 704 | 73 |
| 00:04:49:59.976 | 705 | 81 |
| 00:04:54:59.976 | 703 | 86 |
| 00:04:59:59.976 | 703 | 91 |
| 00:05:04:59.974 | 704 | 77 |
| 00:05:09:59.974 | 706 | 67 |
| 00:05:14:59.974 | 706 | 46 |
| 00:05:19:59.974 | 708 | 47 |
| 00:05:24:59.974 | 711 | 52 |
| 00:05:29:59.972 | 713 | 49 |
| 00:05:34:59.972 | 714 | 52 |
| 00:05:39:59.972 | 716 | 70 |
| 00:05:44:59.972 | 717 | 71 |
| 00:05:49:59.970 | 717 | 58 |
| 00:05:54:59.970 | 717 | 45 |
| 00:05:59:59.970 | 718 | 44 |
| 00:06:04:59.970 | 719 | 42 |
| 00:06:09:59.970 | 720 | 23 |
| 00:06:14:59.968 | 720 | 23 |
| 00:06:19:59.968 | 721 | 21 |
| 00:06:24:59.968 | 722 | 21 |
| 00:06:29:59.968 | 723 | 10 |
| 00:06:34:59.968 | 724 | 6 |
| 00:06:39:59.966 | 725 | 5 |
| 00:06:44:59.966 | 724 | 5 |
| 00:06:49:59.966 | 720 | 3 |
| 00:06:54:59.966 | 715 | 10 |
| [illegible] | [illegible] | [illegible] |

Run 3
C9-10

| | | | |
|---|---|---|---|
| [illegible] | 721 | [illegible] | |
| [illegible] | 721 | [illegible] | |
| [illegible] | 725 | [illegible] | C9-10 |
| [illegible] | 733 | [illegible] | |
| 00:07:29:59.961 | 736 | 15 | VOID |
| 00:07:34:59.961 | 739 | [illegible] | |
| 00:07:39:59.961 | 740 | 7 | |
| 00:07:44:59.961 | 743 | 3 | |
| 00:07:49:59.960 | 746 | -7 | |
| 00:07:54:59.960 | 748 | -12 | |
| 00:07:59:59.960 | 749 | -14 | |
| 00:08:04:59.960 | 749 | -13 | |
| 00:08:09:59.960 | 750 | -17 | |
| 00:08:14:59.958 | 751 | -18 | |
| 00:08:19:59.958 | 752 | -14 | |
| 00:08:24:59.958 | 752 | -15 | |
| 00:08:29:59.958 | 753 | -15 | |
| 00:08:34:59.958 | 754 | -17 | |
| 00:08:39:59.957 | 756 | -16 | |
| 00:08:44:59.957 | 757 | -17 | |
| 00:08:49:59.957 | 757 | -18 | |
| 00:08:54:59.957 | 758 | -18 | |
| 00:08:59:59.957 | 758 | -18 | |
| 00:09:04:59.955 | 759 | -18 | |
| 00:09:09:59.957 | 758 | -19 | |
| 00:09:14:59.953 | 758 | -15 | |
| 00:09:19:59.953 | 759 | -15 | |
| 00:09:24:59.953 | 761 | -12 | |
| 00:09:29:59.953 | 762 | -7 | |
| 00:09:34:59.953 | 763 | -2 | |
| 00:09:39:59.953 | 764 | 1 | |
| 00:09:44:59.953 | 767 | 8 | |
| 00:09:49:59.953 | 769 | 13 | |
| 00:09:54:59.953 | 767 | 20 | |
| 00:09:59:59.953 | 770 | 27 | |
| 00:10:04:59.949 | 769 | 40 | |
| 00:10:09:59.949 | 769 | 53 | |
| 00:10:14:59.949 | 768 | 59 | |
| 00:10:19:59.949 | 768 | 64 | |
| 00:10:24:59.949 | 769 | 66 | |
| 00:10:29:59.949 | 769 | 66 | |
| 00:10:34:59.949 | 772 | 61 | |
| 00:10:39:59.949 | 771 | 56 | |
| 00:10:44:59.949 | 773 | 56 | |
| 00:10:49:59.949 | 773 | 57 | |
| 00:10:54:59.945 | 772 | 59 | |
| 00:10:59:59.945 | 770 | 63 | |
| 00:11:04:59.945 | 770 | 66 | |
| 00:11:09:59.945 | 773 | 69 | |
| 00:11:14:59.945 | 772 | 82 | |
| 00:11:19:59.945 | 776 | 105 | |
| 00:11:24:59.945 | 779 | 132 | |
| 00:11:29:59.945 | 781 | 161 | |
| 00:11:34:59.945 | 781 | 180 | |
| 00:11:39:59.941 | 778 | 203 | |
| 00:11:44:59.941 | 777 | 205 | |
| 00:11:49:59.941 | 776 | 199 | |
| 00:11:54:59.941 | 776 | 188 | |
| 00:11:59:59.941 | 776 | 174 | |
| 00:12:04:59.941 | 777 | 165 | |
| 00:12:09:59.941 | 779 | 150 | |
| 00:12:14:59.941 | 782 | 139 | |
| 00:12:19:59.941 | 782 | 123 | |
| 00:12:24:59.941 | 781 | 110 | |
| 00:12:29:59.937 | 782 | 96 | |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | 785 | [illegible] |
| 00:12:59:59.937 | 785 | 78 |
| 00:13:04:59.937 | 785 | 87 |
| 00:13:09:59.937 | 781 | 119 |
| 00:13:14:59.937 | 783 | 157 |
| 00:13:19:59.933 | 783 | 182 |
| 00:13:24:59.933 | 781 | 200 |
| 00:13:29:59.933 | 782 | 216 |
| 00:13:34:59.933 | 783 | 227 |
| 00:13:39:59.933 | 785 | 217 |
| 00:13:44:59.933 | 786 | 205 |
| 00:13:49:59.933 | 785 | 216 |
| 00:13:54:59.933 | 785 | 231 |
| 00:13:59:59.933 | 785 | 239 |
| 00:14:04:59.929 | 784 | 240 |
| 00:14:09:59.929 | 786 | 237 |
| 00:14:14:59.929 | 785 | 231 |
| 00:14:19:59.929 | 785 | 216 |
| 00:14:24:59.929 | 787 | 193 |
| 00:14:29:59.929 | 786 | 179 |
| 00:14:34:59.929 | 788 | 167 |
| 00:14:39:59.929 | 791 | 154 |
| 00:14:44:59.929 | 795 | 141 |
| 00:14:49:59.929 | 797 | 125 |
| 00:14:54:59.925 | 797 | 104 |
| 00:14:59:59.925 | 798 | 78 |
| 00:15:04:59.925 | 800 | 54 |
| 00:15:09:59.925 | 803 | 45 |
| 00:15:14:59.925 | 801 | 71 |
| 00:15:19:59.925 | 801 | 105 |
| 00:15:24:59.925 | 803 | 152 |
| 00:15:29:59.925 | 806 | 200 |
| 00:15:34:59.925 | 806 | 243 |
| 00:15:39:59.921 | 803 | 268 |
| 00:15:44:59.921 | 805 | 293 |
| 00:15:49:59.921 | 807 | 281 |
| 00:15:54:59.921 | 807 | 269 |
| 00:15:59:59.921 | 807 | 234 |
| 00:16:04:59.921 | 806 | 207 |
| 00:16:09:59.921 | 805 | 184 |
| 00:16:14:59.921 | 803 | 166 |
| 00:16:19:59.921 | 801 | 163 |
| 00:16:24:59.921 | 799 | 161 |
| 00:16:29:59.917 | 800 | 161 |
| 00:16:34:59.917 | 796 | 133 |
| 00:16:39:59.917 | 793 | 109 |
| 00:16:44:59.917 | 795 | 83 |
| 00:16:49:59.917 | 794 | 50 |
| 00:16:54:59.917 | 794 | 47 |
| 00:16:59:59.917 | 793 | 77 |
| 00:17:04:59.917 | 797 | 124 |
| 00:17:09:59.917 | 796 | 171 |
| 00:17:14:59.917 | 795 | 216 |
| 00:17:19:59.914 | 796 | 267 |
| 00:17:24:59.914 | 801 | 289 |
| 00:17:29:59.914 | 802 | 299 |
| 00:17:34:59.914 | 805 | 309 |
| 00:17:39:59.914 | 809 | 317 |
| 00:17:44:59.914 | 813 | 316 |
| 00:17:49:59.914 | 814 | 306 |
| 00:17:54:59.914 | 813 | 293 |
| [illegible] | [illegible] | [illegible] |

Void

C9-10

Run 2
C9-10

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:18:29:59.906 | 815 | 345 |
| 00:18:34:59.906 | 819 | 291 |
| 00:18:39:59.906 | 822 | 331 |
| 00:18:44:59.906 | 820 | 356 |
| 00:18:49:59.906 | 822 | 371 |
| 00:18:54:59.906 | 824 | 361 |
| 00:18:59:59.906 | 824 | 352 |
| 00:19:04:59.906 | 825 | 340 |
| 00:19:09:59.906 | 822 | 331 |
| 00:19:14:59.906 | 820 | 330 |
| 00:19:19:59.906 | 820 | 324 |
| 00:19:24:59.906 | 819 | 324 |
| 00:19:29:59.906 | 818 | 322 |
| 00:19:34:59.906 | 816 | 325 |
| 00:19:39:59.906 | 815 | 328 |
| 00:19:44:59.906 | 817 | 331 |
| 00:19:49:59.906 | 815 | 334 |
| 00:19:54:59.906 | 816 | 332 |
| 00:19:59:59.906 | 814 | 333 |
| 00:20:04:59.898 | 815 | 332 |
| 00:20:09:59.898 | 814 | 331 |
| 00:20:14:59.898 | 813 | 329 |
| 00:20:19:59.898 | 811 | 326 |

END RUN 2
C9-10

"COORS BREWING ~~C13~~"
" " C09 V010 C9-10
"08:59:04.63"
" 6-18-1992"
"TIME" "THC1" "THC2"
"SEC" "PPM" "PPM"

START PRE CAL RUN 3

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | 82 | 8430 |
| 00:00:00:29.999 | 27 | 8542 |
| 00:00:00:44.999 | 3065 | 8564 |
| 00:00:00:59.998 | 6971 | 8508 |
| 00:00:01:14.998 | 7068 | 8503 |
| 00:00:01:29.998 | 7118 | 8506 |
| 00:00:01:44.998 | 7156 | 8501 |
| 00:00:01:59.997 | 7140 | 8492 |
| 00:00:02:14.997 | 7174 | 8488 |
| 00:00:02:29.997 | 7206 | 8534 |
| 00:00:02:44.997 | 7202 | 8535 |
| 00:00:02:59.996 | 7233 | 8529 |
| 00:00:03:14.996 | 7239 | 8512 |
| 00:00:03:29.996 | 7206 | 8428 |
| 00:00:03:44.995 | 7199 | 8379 |
| 00:00:03:59.995 | 7195 | 6271 |
| 00:00:04:14.995 | 7177 | 642 |
| 00:00:04:29.995 | 7242 | 203 |
| 00:00:04:44.994 | 7160 | 86 |
| 00:00:04:59.994 | 7080 | 7 |
| 00:00:05:14.994 | 512 | 3 |
| 00:00:05:29.994 | 46 | -18 |
| 00:00:05:44.993 | 14 | 9 |
| 00:00:05:59.993 | 19 | 2 |
| 00:00:06:14.993 | -8 | -6 |
| 00:00:06:29.992 | -6 | -12 |
| 00:00:06:44.992 | -2 | -39 |
| 00:00:06:59.992 | 1 | -16 |
| 00:00:07:14.992 | -17 | -6 |
| 00:00:07:29.991 | -27 | 39 |
| [illegible] | [illegible] | [illegible] |

Cal 1 = 8523 ppm

ZERO CAL = -1

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:09:14.999 | -41 | 34 |
| 00:00:09:29.999 | -39 | 27 |
| 00:00:09:44.999 | -34 | 12 |
| 00:00:09:59.999 | -35 | 7 |
| 00:00:10:14.998 | -46 | -15 |
| 00:00:10:29.998 | -43 | -35 |
| 00:00:10:44.998 | -35 | -34 |
| 00:00:10:59.998 | -10 | -21 |
| 00:00:11:14.987 | -12 | -16 |
| 00:00:11:29.987 | -42 | -24 |
| 00:00:11:44.987 | -35 | 2 |
| 00:00:11:59.986 | -30 | 37 |
| 00:00:12:14.986 | -52 | 1 |
| 00:00:12:29.986 | -25 | 2 |
| 00:00:12:44.986 | -30 | -6 |
| 00:00:12:59.985 | -27 | -25 |
| 00:00:13:14.985 | -40 | -43 |
| 00:00:13:29.985 | -40 | -38 |
| 00:00:13:44.985 | -20 | -31 |
| 00:00:13:59.984 | -51 | -16 |
| 00:00:14:14.984 | -32 | -3 |
| 00:00:14:29.984 | -45 | 0 |
| 00:00:14:44.983 | -44 | 1 |
| 00:00:14:59.983 | -42 | 4 |
| 00:00:15:14.983 | -49 | 38 |
| 00:00:15:29.983 | -25 | 56 |
| 00:00:15:44.982 | -45 | 57 |
| 00:00:15:59.982 | -40 | 439 |
| 00:00:16:14.982 | -1 | 14014 |
| 00:00:16:29.982 | -32 | 29000 |
| 00:00:16:44.981 | -27 | 29000 |
| 00:00:16:59.981 | 851 | 29000 |
| 00:00:17:14.981 | 3791 | 29000 |
| 00:00:17:29.980 | 22820 | 29000 |
| 00:00:17:44.980 | 29000 | 29000 |
| 00:00:17:59.980 | 29000 | 29000 |
| 00:00:18:14.980 | 29000 | 29000 |
| 00:00:18:29.979 | 29000 | 29000 |
| 00:00:18:44.979 | 29000 | 28605 |
| 00:00:18:59.979 | 29000 | 28313 |
| 00:00:19:14.979 | 29000 | 28358 |
| 00:00:19:29.978 | 29000 | 28334 |
| 00:00:19:44.978 | 29000 | 28224 |
| 00:00:19:59.978 | 29000 | 28245 |
| 00:00:20:14.978 | 29000 | 25426 |
| 00:00:20:29.977 | 29000 | 24286 |
| 00:00:20:44.977 | 29000 | 25478 |
| 00:00:20:59.977 | 29000 | 25917 |
| 00:00:21:14.976 | 29000 | 25985 |
| 00:00:21:29.976 | 29000 | 26107 |
| 00:00:21:44.976 | 29000 | 26113 |

"COORS BREWING CO"
" "

"09:20:22.18"
" 6-19-1992"
"TIME" "TH01" "TH02"
"SEC" "PPM" "PPM"

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | 5473 | 5425 |
| 00:00:00:29.999 | 5481 | 5440 |
| 00:00:00:44.999 | 5437 | 5446 |

CAL 3A

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:02:14.997 | [illegible] | [illegible] |
| 00:00:02:29.997 | [illegible] | 5350 |
| 00:00:02:44.997 | 5444 | 5331 |
| 00:00:02:59.996 | 5445 | 3952 |
| 00:00:03:14.996 | 5457 | 381 |
| 00:00:03:29.996 | 5456 | 68 |
| 00:00:03:44.995 | 5465 | 49 |
| 00:00:03:59.995 | 5387 | 29 |
| 00:00:04:14.995 | 761 | -5 |
| 00:00:04:29.995 | 85 | 10 |
| 00:00:04:44.994 | 49 | 18 |
| 00:00:04:59.994 | 32 | 11 |
| 00:00:05:14.994 | 22 | -15 |
| 00:00:05:29.994 | 10 | -15 |
| 00:00:05:44.993 | 17 | 5 |
| 00:00:05:59.993 | 10 | 5 |
| 00:00:06:14.993 | -1 | -20 |
| 00:00:06:29.992 | 4 | -8 |
| 00:00:06:44.992 | -2 | 6 |
| 00:00:06:59.992 | 2 | 10 |
| 00:00:07:14.992 | -4 | 640 |
| 00:00:07:29.991 | -5 | 886 |
| 00:00:07:44.991 | -0 | 653 |
| 00:00:07:59.991 | -7 | 824 |
| 00:00:08:14.991 | -11 | 839 |
| 00:00:08:29.990 | 1092 | 843 |
| 00:00:08:44.990 | 867 | 822 |
| 00:00:08:59.990 | 850 | 842 |
| 00:00:09:14.989 | 856 | 849 |
| 00:00:09:29.989 | 857 | 822 |
| 00:00:09:44.989 | 853 | 816 |
| 00:00:09:59.989 | 847 | 833 |
| 00:00:10:14.988 | 845 | 843 |
| 00:00:10:29.988 | 843 | 823 |
| 00:00:10:44.989 | 845 | 798 |
| 00:00:10:59.988 | 841 | 254 |
| 00:00:11:14.987 | 363 | 41 |
| 00:00:11:29.987 | 366 | 922 |
| 00:00:11:44.987 | 570 | 1164 |

54/55

-3 ZERO CAL

851.3 PPM

"COORS BREWING 009"
"RUN"
" 6-18-1992"
"09:41:43.88"
"TIME" "THC1 04" "THC2 08"
" sec" " ppm" " ppm"

| | | |
|---|---|---|
| 00:00:00:00.000 | -30 | 1201 |
| 00:00:04:59.999 | -31 | 1189 |
| 00:00:09:59.999 | -30 | 1170 |
| 00:00:14:59.998 | -30 | 1165 |
| 00:00:19:59.998 | -30 | 1155 |
| 00:00:24:59.997 | -31 | 1139 |
| 00:00:29:59.997 | -32 | 1140 |
| 00:00:34:59.997 | -32 | 1135 |
| 00:00:39:59.996 | -32 | 1136 |
| 00:00:44:59.996 | -32 | 1129 |
| 00:00:49:59.996 | -32 | 1123 |
| 00:00:54:59.995 | -32 | 1127 |
| 00:00:59:59.995 | -32 | 1124 |
| 00:01:04:59.994 | -31 | 1106 |
| 00:01:09:59.994 | -31 | 1095 |
| 00:01:14:59.994 | -31 | 1089 |

START RUN 3
C9-4
C9-8

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:01:39:59.951 | -31 | 1065 |
| 00:01:44:59.951 | -31 | 1055 |
| 00:01:49:59.951 | -31 | 1054 |
| 00:01:54:59.950 | -31 | 1045 |
| 00:01:59:59.950 | -31 | 1037 |
| 00:02:04:59.989 | -31 | 1018 |
| 00:02:09:59.989 | -31 | 990 |
| 00:02:14:59.989 | -31 | 963 |
| 00:02:19:59.988 | -31 | 947 |
| 00:02:24:59.988 | -31 | 921 |
| 00:02:29:59.988 | -30 | 876 |
| 00:02:34:59.987 | -31 | 836 |
| 00:02:39:59.987 | -30 | 838 |
| 00:02:44:59.986 | -30 | 834 |
| 00:02:49:59.986 | -30 | 830 |
| 00:02:54:59.985 | -30 | 832 |
| 00:02:59:59.985 | -30 | 852 |
| 00:03:04:59.985 | -30 | 879 |
| 00:03:09:59.984 | -30 | 870 |
| 00:03:14:59.984 | -31 | 868 |
| 00:03:19:59.982 | -30 | 846 |
| 00:03:24:59.983 | -30 | 817 |
| 00:03:29:59.983 | -30 | 783 |
| 00:03:34:59.982 | -30 | 760 |
| 00:03:39:59.982 | -30 | 774 |
| 00:03:44:59.981 | -29 | 766 |
| 00:03:49:59.981 | -30 | 775 |
| 00:03:54:59.980 | -30 | 815 |
| 00:03:59:59.980 | -30 | 843 |
| 00:04:04:59.980 | -30 | 838 |
| 00:04:09:59.979 | -30 | 833 |
| 00:04:14:59.979 | -30 | 860 |
| 00:04:19:59.978 | -30 | 862 |
| 00:04:24:59.978 | -31 | 841 |
| 00:04:29:59.978 | -31 | 859 |
| 00:04:34:59.978 | -10 | 848 |
| 00:04:39:59.976 | 60 | 858 |
| 00:04:44:59.976 | 63 | 831 |
| 00:04:49:59.976 | 221 | 870 |
| 00:04:54:59.976 | 407 | 969 |
| 00:04:59:59.976 | 595 | 1055 |
| 00:05:04:59.974 | 763 | 1191 |
| 00:05:09:59.974 | 883 | 1283 |
| 00:05:14:59.974 | 1070 | 1385 |
| 00:05:19:59.974 | 1103 | 1447 |
| 00:05:24:59.974 | 1108 | 1409 |
| 00:05:29:59.972 | 1110 | 1364 |
| 00:05:34:59.972 | 1111 | 1324 |
| 00:05:39:59.972 | 1112 | 1300 |
| 00:05:44:59.972 | 1113 | 1286 |
| 00:05:49:59.970 | 1113 | 1282 |
| 00:05:54:59.970 | 1113 | 1307 |
| 00:05:59:59.970 | 1113 | 1324 |
| 00:06:04:59.970 | 1114 | 1338 |
| 00:06:09:59.970 | 1114 | 1350 |
| 00:06:14:59.968 | 1115 | 1360 |
| 00:06:19:59.968 | 1115 | 1342 |
| 00:06:24:59.968 | 1117 | 1344 |
| 00:06:29:59.968 | 1118 | 1356 |
| 00:06:34:59.968 | 1119 | 1357 |
| 00:05:39:59.966 | 1120 | 1352 |
| [illegible] | [illegible] | [illegible] |

END C9-4
END C9-8

START C9-6
C9-9

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:07:34:59.961 | 1119 | 1265 |
| 00:07:39:59.962 | 1119 | 1260 |
| 00:07:44:59.962 | 1119 | 1277 |
| 00:07:49:59.960 | 1119 | 1271 |
| 00:07:54:59.960 | 1119 | 1260 |
| 00:07:59:59.960 | 1120 | 1250 |
| 00:08:04:59.960 | 1121 | 1265 |
| 00:08:09:59.960 | 1121 | 1265 |
| 00:08:14:59.958 | 1121 | 1244 |
| 00:08:19:59.958 | 1122 | 1232 |
| 00:08:24:59.958 | 1122 | 1232 |
| 00:08:29:59.958 | 1124 | 1224 |
| 00:08:34:59.958 | 1125 | 1222 |
| 00:08:39:59.957 | 1127 | 1215 |
| 00:08:44:59.957 | 1127 | 1214 |
| 00:08:49:59.957 | 1128 | 1213 |
| 00:08:54:59.957 | 1127 | 1201 |
| 00:08:59:59.957 | 1127 | 1206 |
| 00:09:04:59.955 | 1127 | 1179 |
| 00:09:09:59.957 | 1127 | 1166 |
| 00:09:14:59.953 | 1128 | 1159 |
| 00:09:19:59.953 | 1128 | 1151 |
| 00:09:24:59.953 | 1129 | 1141 |
| 00:09:29:59.953 | 1130 | 1141 |
| 00:09:34:59.953 | 1130 | 1165 |
| 00:09:39:59.953 | 1131 | 1181 |
| 00:09:44:59.953 | 1132 | 1197 |
| 00:09:49:59.953 | 1133 | 1204 |
| 00:09:54:59.953 | 1135 | 1181 |
| 00:09:59:59.953 | 1135 | 1116 |
| 00:10:04:59.949 | 1135 | 1055 |
| 00:10:09:59.949 | 1135 | 986 |
| 00:10:14:59.949 | 1136 | 858 |
| 00:10:19:59.949 | 1137 | 742 |
| 00:10:24:59.949 | 1136 | 663 |
| 00:10:29:59.949 | 1137 | 612 |
| 00:10:34:59.949 | 1137 | 558 |
| 00:10:39:59.949 | 1138 | 519 |
| 00:10:44:59.949 | 1137 | 514 |
| 00:10:49:59.949 | 1138 | 523 |
| 00:10:54:59.945 | 1139 | 524 |
| 00:10:59:59.945 | 1139 | 501 |
| 00:11:04:59.945 | 1140 | 491 |
| 00:11:09:59.945 | 1140 | 473 |
| 00:11:14:59.945 | 1140 | 499 |
| 00:11:19:59.945 | 1140 | 519 |
| 00:11:24:59.945 | 1140 | 532 |
| 00:11:29:59.945 | 1140 | 551 |
| 00:11:34:59.945 | 1140 | 568 |
| 00:11:39:59.941 | 1140 | 583 |
| 00:11:44:59.941 | 1141 | 575 |
| 00:11:49:59.941 | 1141 | 521 |
| 00:11:54:59.941 | 1142 | 495 |
| 00:11:59:59.941 | 1143 | 513 |
| 00:12:04:59.941 | 1144 | 505 |
| 00:12:09:59.941 | 1144 | 467 |
| 00:12:14:59.941 | 1144 | 482 |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:11:54:59.937 | 1150 | 534 |
| 00:12:59:59.937 | 1150 | 687 |
| 00:13:04:59.937 | 1150 | 778 |
| 00:13:09:59.937 | 1151 | 914 |
| 00:13:14:59.937 | 1151 | 1095 |
| 00:13:19:59.933 | 1151 | 1224 |
| 00:13:24:59.933 | 1151 | 1235 |
| 00:13:29:59.933 | 1151 | 1241 |
| 00:13:34:59.933 | 1150 | 1226 |
| 00:13:39:59.933 | 1149 | 1192 |
| 00:13:44:59.933 | 1149 | 1178 |
| 00:13:49:59.933 | 1149 | 1105 |
| 00:13:54:59.933 | 1150 | 947 |
| 00:13:59:59.933 | 1152 | 811 |
| 00:14:04:59.929 | 1154 | 635 |
| 00:14:09:59.929 | 1155 | 561 |
| 00:14:14:59.929 | 1158 | 403 |
| 00:14:19:59.929 | 1161 | 289 |
| 00:14:24:59.929 | 1165 | 294 |
| 00:14:29:59.929 | 1168 | 294 |
| 00:14:34:59.929 | 1172 | 295 |
| 00:14:39:59.925 | 1175 | 294 |
| 00:14:44:59.925 | 1179 | 302 |
| 00:14:45:59.929 | 1181 | 312 |
| 00:14:54:59.925 | 1184 | 319 |
| 00:14:55:59.925 | 1186 | 302 |
| 00:15:04:59.925 | 1188 | 262 |
| 00:15:09:59.925 | 1190 | 264 |
| 00:15:14:59.925 | 1191 | 261 |
| 00:15:19:59.925 | 1192 | 277 |
| 00:15:24:59.925 | 1192 | 353 |
| 00:15:29:59.925 | 1191 | 436 |
| 00:15:34:59.925 | 1191 | 537 |
| 00:15:39:59.921 | 1189 | 625 |
| 00:15:44:59.921 | 1188 | 665 |
| 00:15:49:59.921 | 1188 | 688 |
| 00:15:54:59.921 | 1188 | 653 |
| 00:15:59:59.921 | 1188 | 590 |
| 00:16:04:59.921 | 1187 | 560 |
| 00:16:09:59.921 | 1187 | 518 |
| 00:16:14:59.921 | 1186 | 480 |
| 00:16:19:59.921 | 1185 | 461 |
| 00:16:24:59.921 | 1184 | 421 |
| 00:16:29:59.917 | 1183 | 425 |
| 00:16:34:59.917 | 1181 | 427 |
| 00:16:39:59.917 | 1180 | 395 |
| 00:16:44:59.917 | 1179 | 385 |
| 00:16:49:59.917 | 1178 | 394 |
| 00:16:54:59.917 | 1177 | 429 |
| 00:16:55:59.917 | 1177 | 430 |
| 00:17:04:59.917 | 1177 | 409 |
| 00:17:09:59.917 | 1177 | 435 |
| 00:17:14:59.917 | 1177 | 447 |
| 00:17:19:59.914 | 1177 | 458 |
| 00:17:24:59.914 | 1177 | 468 |
| 00:17:29:59.914 | 1176 | 467 |
| 00:17:34:59.914 | 1175 | 622 |
| 00:17:39:59.914 | 1176 | 755 |
| 00:17:44:59.914 | 1175 | 586 |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:15:14:59.914 | 1177 | 1117 |
| 00:15:19:59.914 | 1176 | 1010 |
| 00:15:24:59.914 | 1177 | 874 |
| 00:15:29:59.906 | 1176 | 761 |
| 00:15:34:59.906 | 1175 | 666 |
| 00:15:39:59.906 | 1173 | 581 |
| 00:15:44:59.906 | 1172 | 567 |
| 00:18:49:59.906 | 1172 | 541 |
| 00:18:54:59.906 | 1170 | 530 |
| 00:18:59:59.906 | 1170 | 497 |
| 00:19:04:59.906 | 1169 | 476 |
| 00:19:09:59.906 | 1169 | 465 |
| 00:19:14:59.906 | 1168 | 456 |
| 00:19:19:59.906 | 1168 | 464 |
| 00:19:24:59.906 | 1169 | 462 |
| 00:19:29:59.906 | 1168 | 476 |
| 00:19:34:59.906 | 1169 | 483 |
| 00:19:39:59.906 | 1170 | 479 |
| 00:19:44:59.906 | 1171 | 473 |
| 00:19:49:59.906 | 1172 | 461 |
| 00:19:54:59.906 | 1173 | 458 |
| 00:19:59:59.906 | 1175 | 460 |
| 00:20:04:59.898 | 1177 | 445 |
| 00:20:09:59.898 | 1178 | 443 |
| 00:20:14:59.898 | 1179 | 449 |
| 00:20:19:59.898 | 1180 | 467 |
| 00:20:24:59.898 | 1181 | 473 |
| 00:20:29:59.898 | 1181 | 476 |
| 00:20:34:59.898 | 1182 | 489 |
| 00:20:39:59.898 | 1183 | 492 |
| 00:20:44:59.898 | 1183 | 477 |
| 00:20:49:59.898 | 1184 | 470 |
| 00:20:54:59.898 | 1184 | 463 |
| 00:20:59:59.898 | 1185 | 449 |
| 00:21:04:59.898 | 1185 | 445 |
| 00:21:09:59.898 | 1186 | 450 |
| 00:21:14:59.898 | 1186 | 470 |
| 00:21:19:59.898 | 1186 | 485 |
| 00:21:24:59.898 | 1186 | 493 |
| 00:21:29:59.898 | 1187 | 498 |
| 00:21:34:59.898 | 1187 | 502 |
| 00:21:39:59.898 | 1187 | 503 |
| 00:21:44:59.890 | 1187 | 501 |
| 00:21:49:59.890 | 1188 | 502 |
| 00:21:54:59.890 | 1187 | 515 |
| 00:21:59:59.890 | 1186 | 529 |
| 00:22:04:59.890 | 1185 | 534 |
| 00:22:09:59.890 | 1185 | 538 |
| 00:22:14:59.890 | 1184 | 540 |
| 00:22:19:59.890 | 1184 | 538 |
| 00:22:24:59.890 | 1184 | 515 |
| 00:22:29:59.890 | 1185 | 490 |
| 00:22:34:59.890 | 1185 | 456 |
| 00:22:39:59.890 | 1186 | 408 |
| 00:22:44:59.890 | 1186 | 369 |
| 00:22:49:59.890 | 1186 | 322 |
| 00:22:54:59.890 | 1187 | 296 |
| 00:22:59:59.890 | 1188 | 269 |

"COORS BREWING C13"

" "

"08:58:00.42"

END RUN 3
C9-6
C9-9

CAL 4

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| 00:00:00:14.999 | 1151 | 55 |
| 00:00:00:29.999 | 1153 | 29 |
| 00:00:00:44.999 | 1160 | 78 |
| 00:00:00:59.998 | 1226 | 77 |
| 00:00:01:14.998 | 2559 | 248 |
| 00:00:01:29.999 | 1820 | 42 |
| 00:00:01:44.998 | 1639 | 19 |
| 00:00:01:59.997 | 1486 | -0 |
| 00:00:02:14.997 | 1174 | -15 |
| 00:00:02:29.997 | 207 | -17 |
| 00:00:02:44.997 | 152 | 3 |
| 00:00:02:59.996 | 129 | 8 |
| 00:00:03:14.996 | 113 | 3 |
| 00:00:03:29.996 | 98 | -23 |
| 00:00:03:44.995 | 86 | -23 |
| 00:00:03:59.995 | 64 | -26 |
| 00:00:04:14.995 | 69 | -24 |
| 00:00:04:29.995 | 65 | -3 |
| 00:00:04:44.994 | 51 | 4 |
| 00:00:04:59.994 | 39 | -6 |
| 00:00:05:14.994 | 28 | -21 |
| 00:00:05:29.994 | 24 | -22 |
| 00:00:05:44.993 | 21 | -15 |
| 00:00:05:59.993 | 18 | -12 |
| 00:00:06:14.993 | 14 | -22 |
| 00:00:06:29.992 | 10 | -27 |
| 00:00:06:44.992 | 6 | -26 |
| 00:00:06:59.992 | 4 | -27 |
| 00:00:07:14.992 | 2 | -26 |
| 00:00:07:29.991 | 1 | -20 |
| 00:00:07:44.991 | 0 | -21 |
| 00:00:07:59.991 | -1 | -17 |
| 00:00:08:14.991 | -1 | -7 |
| 00:00:08:29.990 | 7 | -2 |
| 00:00:08:44.990 | 2 | 2 |
| 00:00:08:59.990 | 2 | 325 |
| 00:00:09:14.989 | 1 | 778 |
| 00:00:09:29.989 | 0 | 787 |
| 00:00:09:44.989 | -2 | 786 |
| 00:00:09:59.989 | -2 | 787 |
| 00:00:10:14.988 | 237 | 781 |
| 00:00:10:29.988 | 863 | 784 |
| 00:00:10:44.988 | 881 | 800 |
| 00:00:10:59.988 | 887 | 805 |
| 00:00:11:14.987 | 891 | 817 |
| 00:00:11:29.987 | 890 | 824 |
| 00:00:11:44.987 | 887 | 822 |
| 00:00:11:59.986 | 883 | 820 |
| 00:00:12:14.986 | 885 | 819 |
| 00:00:12:29.986 | 887 | 799 |
| 00:00:12:44.986 | 882 | 791 |
| 00:00:12:59.985 | 886 | 813 |
| 00:00:13:14.985 | 882 | 813 |
| 00:00:13:29.985 | 881 | 785 |
| 00:00:13:44.985 | 878 | 784 |
| 00:00:13:59.984 | 884 | 795 |
| 00:00:14:14.984 | 886 | 716 |
| 00:00:14:29.984 | 877 | 91 |
| 00:00:14:44.983 | 877 | 20 |
| 00:00:14:59.983 | 874 | 15 |
| 00:00:15:14.983 | 879 | 25 |

2 -8 CHECK

887

811 851 CHECK

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:17:44.[illegible] | 33 | 35 |
| 00:00:17:53.[illegible] | 29 | -1 |
| 00:00:18:14.[illegible] | 31 | 19 |
| 00:00:18:29.979 | 33 | 31 |
| 00:00:18:44.979 | 31 | 31 |
| 00:00:18:59.979 | 27 | -0 |
| 00:00:19:14.979 | 31 | 25 |
| 00:00:19:29.978 | 28 | 15 |
| 00:00:19:44.978 | 25 | -1 |
| 00:00:19:59.978 | 27 | 23 |
| 00:00:20:14.978 | 26 | 11 |
| 00:00:20:29.977 | 22 | 4 |
| 00:00:20:44.977 | 26 | 27 |
| 00:00:20:59.977 | 21 | -2 |
| 00:00:21:14.976 | 21 | 12 |
| 00:00:21:29.976 | 25 | 27 |
| 00:00:21:44.976 | 19 | -3 |
| 00:00:21:59.976 | 20 | 16 |
| 00:00:22:14.975 | 21 | 15 |
| 00:00:22:29.975 | 17 | -4 |
| 00:00:22:44.975 | 14 | 7 |
| 00:00:22:59.974 | 19 | 26 |
| 00:00:23:14.974 | 18 | 10 |
| 00:00:23:29.974 | 12 | 6 |
| 00:00:23:44.974 | 19 | 27 |
| 00:00:23:59.973 | 14 | 2 |
| 00:00:24:14.973 | 14 | 13 |
| 00:00:24:29.973 | 15 | 21 |
| 00:00:24:44.973 | 12 | 1 |
| 00:00:24:59.972 | 17 | 22 |
| 00:00:25:14.972 | 11 | -1 |
| 00:00:25:29.972 | 15 | 23 |
| 00:00:25:44.972 | 11 | -2 |
| 00:00:25:59.971 | 13 | 23 |
| 00:00:26:14.971 | 8 | -2 |
| 00:00:26:29.971 | 13 | 22 |
| 00:00:26:44.970 | 10 | -1 |
| 00:00:26:59.970 | 13 | 22 |
| 00:00:27:14.970 | 8 | -3 |
| 00:00:27:29.970 | 9 | 22 |
| 00:00:27:44.969 | 8 | 3 |
| 00:00:27:59.969 | 11 | 26 |
| 00:00:28:14.969 | 7 | -1 |
| 00:00:28:29.968 | 10 | 22 |
| 00:00:28:44.968 | 6 | -1 |
| 00:00:28:59.968 | 10 | 23 |
| 00:00:29:14.968 | 7 | 8 |
| 00:00:29:29.967 | 9 | 24 |
| 00:00:29:44.967 | 5 | 2 |
| 00:00:29:59.967 | 11 | 25 |
| 00:00:30:14.967 | 5 | 1 |
| 00:00:30:29.966 | 7 | 16 |
| 00:00:30:44.966 | 5 | 13 |
| 00:00:30:59.966 | 4 | 5 |
| 00:00:31:14.966 | 9 | 18 |
| 00:00:31:29.965 | 5 | 12 |
| 00:00:31:44.965 | 8 | 21 |
| 00:00:31:59.965 | 5 | 3 |
| 00:00:32:14.964 | 8 | 17 |

| | | |
|---|---|---|
| [illegible] | | - |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:33:44.962 | -1 | -12 |
| 00:00:33:59.963 | -1 | 7 |
| 00:00:34:14.962 | -9 | -22 |
| 00:00:34:29.962 | -1 | -0 |
| 00:00:34:44.962 | -8 | -12 |
| 00:00:34:59.961 | -13 | -20 |
| 00:00:35:14.961 | -9 | 6 |
| 00:00:35:29.961 | -14 | -23 |
| 00:00:35:44.961 | -12 | -3 |
| 00:00:35:59.960 | -11 | 6 |
| 00:00:36:14.960 | -16 | -24 |
| 00:00:36:29.960 | -15 | -7 |
| 00:00:36:44.959 | -15 | -10 |
| 00:00:36:59.959 | -19 | -23 |
| 00:00:37:14.959 | -15 | 1 |
| 00:00:37:29.959 | -16 | -19 |
| 00:00:37:44.958 | -21 | -24 |
| 00:00:37:59.958 | -17 | -1 |
| 00:00:38:14.958 | -15 | 2 |
| 00:00:38:29.958 | -20 | -28 |
| 00:00:38:44.957 | -20 | -11 |
| 00:00:38:59.957 | -17 | 2 |
| 00:00:39:14.957 | -20 | -29 |
| 00:00:39:29.957 | -20 | -16 |
| 00:00:39:44.956 | -17 | 0 |
| 00:00:39:59.956 | -20 | -20 |
| 00:00:40:14.956 | -23 | -27 |
| 00:00:40:29.956 | -18 | -6 |
| 00:00:40:44.955 | -19 | -1 |
| 00:00:40:59.955 | -22 | -27 |

"COORS BREWING C13"
" "

"11:28:09.25"
" 6-19-1992"
"TIME" "THC1" "THC2"
"SEC" "PPM" "PPM"

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.993 | -21 | -9 |

"COORS BREWING C09"
" "

"11:44:31.48"
" 6-19-1992"
"TIME" "THC1" "THC2"
"SEC" "PPM" "PPM"

CAL 4A Ca[illegible]

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.995 | 3201 | 50 |
| 00:00:00:29.999 | 3054 | 53 |
| 00:00:00:44.999 | 2675 | 54 |
| 00:00:00:59.998 | 2666 | 63 |
| 00:00:01:14.998 | 2649 | 73 |
| 00:00:01:29.999 | 2642 | 59 |
| 00:00:01:44.998 | 2642 | 62 |
| 00:00:01:59.997 | 2650 | 37 |
| 00:00:02:14.997 | 2646 | -21 |
| 00:00:02:29.997 | 2660 | -44 |
| 00:00:02:44.997 | 2652 | -37 |
| 00:00:02:59.996 | 2653 | -2 |
| 00:00:03:14.996 | 2652 | 29 |
| 00:00:03:29.996 | 2652 | 57 |
| 00:00:03:44.995 | 2643 | 72 |
| 00:00:03:59.995 | 2527 | 67 |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:05:29.994 | 73 | -13 |
| 00:00:05:44.993 | 53 | 30 |
| 00:00:05:59.993 | 45 | 29 |
| 00:00:06:14.993 | 35 | 36 |
| 00:00:06:29.992 | 31 | 7 |
| 00:00:06:44.992 | 29 | -34 |
| 00:00:06:59.992 | 27 | -65 |
| 00:00:07:14.992 | 22 | -72 |
| 00:00:07:29.991 | 19 | -83 |
| 00:00:07:44.991 | 13 | -37 |
| 00:00:07:59.991 | 11 | 7 |
| 00:00:08:14.991 | 3 | 26 |
| 00:00:08:29.990 | 7 | 29 |
| 00:00:08:44.990 | 0 | 31 |
| 00:00:08:59.990 | 5 | -5 |
| 00:00:09:14.989 | 1 | -57 |
| 00:00:09:29.989 | 4 | -86 |
| 00:00:09:44.989 | -2 | -73 |
| 00:00:09:59.989 | -1 | -50 |
| 00:00:10:14.988 | -9 | -29 |
| 00:00:10:29.988 | -8 | -13 |
| 00:00:10:44.988 | -11 | 34 |
| 00:00:10:59.988 | -9 | 28 |
| 00:00:11:14.987 | -5 | -18 |
| 00:00:11:29.987 | -8 | -65 |
| 00:00:11:44.987 | -5 | -76 |
| 00:00:11:59.986 | -11 | -55 |
| 00:00:12:14.986 | -11 | -20 |
| 00:00:12:29.986 | -15 | 15 |
| 00:00:12:44.985 | -15 | 15 |
| 00:00:12:59.985 | -17 | 34 |
| 00:00:13:14.985 | -16 | 1642 |
| 00:00:13:29.985 | -17 | 24393 |
| 00:00:13:44.985 | -17 | 16330 |
| 00:00:13:59.984 | -19 | 24445 |
| 00:00:14:14.984 | -15 | 24445 |
| 00:00:14:29.984 | -11 | 24395 |
| 00:00:14:44.983 | -11 | 24450 |
| 00:00:14:59.983 | -13 | 24442 |
| 00:00:15:14.983 | -9 | 24438 |
| 00:00:15:29.983 | -16 | 24417 |
| 00:00:15:44.982 | -14 | 24408 |
| 00:00:15:59.982 | -12 | 24386 |
| 00:00:16:14.982 | -23 | 15306 |
| 00:00:16:29.982 | -28 | 72 |
| 00:00:16:44.981 | -19 | 60 |
| 00:00:16:55.981 | -10 | 26 |
| 00:00:17:14.981 | -15 | 50 |
| 00:00:17:29.980 | -18 | 72 |
| 00:00:17:44.980 | -16 | 99 |
| 00:00:17:59.980 | -22 | 73 |
| 00:00:18:14.980 | -18 | 28 |
| 00:00:18:29.979 | -18 | 20 |
| 00:00:18:44.979 | -15 | 8 |
| 00:00:18:59.979 | -16 | 34 |
| 00:00:19:14.979 | -19 | 21 |
| 00:00:19:29.978 | -18 | 39 |
| 00:00:19:44.978 | -21 | 47 |
| 00:00:19:59.978 | -22 | 36 |
| 00:00:20:14.978 | -21 | 33 |
| 00:00:20:29.977 | -23 | 86 |
| [illegible] | [illegible] | [illegible] |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 15315 |
| [illegible] | -21 | 24060 |
| [illegible] | -20 | 24440 |
| 00:00:22:44.975 | -19 | 24551 |
| 00:00:22:59.974 | -16 | 24642 |
| 00:00:23:14.974 | -18 | 24728 |
| 00:00:23:29.974 | -19 | 24839 |
| 00:00:23:44.974 | -20 | 24860 |
| 00:00:23:59.973 | -24 | 24979 |
| 00:00:24:14.973 | -27 | 25007 |
| 00:00:24:29.973 | -24 | 24984 |
| 00:00:24:44.973 | -24 | 24535 |
| 00:00:24:59.972 | -25 | 24058 |
| 00:00:25:14.972 | -25 | 23949 |
| 00:00:25:29.972 | -19 | 23919 |
| 00:00:25:44.972 | -21 | 24536 |
| 00:00:25:59.971 | -18 | 5513 |
| 00:00:26:14.971 | -20 | 583 |
| 00:00:26:29.971 | -21 | 3696 |
| 00:00:26:44.970 | -20 | 7658 |
| 00:00:26:59.970 | -11 | 7380 |
| 00:00:27:14.970 | -20 | 7293 |
| 00:00:27:29.970 | -22 | 7310 |
| 00:00:27:44.959 | -26 | 7298 |
| 00:00:27:59.969 | -24 | 7140 |
| 00:00:28:14.969 | -23 | 1546 |
| 00:00:28:29.968 | -24 | 330 |
| 00:00:28:44.968 | -24 | 190 |
| 00:00:28:59.968 | -20 | 142 |
| 00:00:29:14.968 | -21 | 116 |
| 00:00:29:29.967 | -22 | 107 |
| 00:00:29:44.967 | -22 | 83 |
| 00:00:29:59.967 | -22 | 77 |
| 00:00:30:14.967 | -22 | 80 |
| 00:00:30:29.966 | -22 | 2018 |
| 00:00:30:44.966 | -23 | 7100 |
| 00:00:30:59.966 | -20 | 7440 |
| 00:00:31:14.966 | -21 | 7542 |
| 00:00:31:29.965 | -25 | 7581 |
| 00:00:31:44.965 | -24 | 7625 |
| 00:00:31:59.965 | -24 | 7596 |
| 00:00:32:14.964 | -24 | 7585 |
| 00:00:32:29.964 | -23 | 7619 |
| 00:00:32:44.964 | -22 | 7637 |
| 00:00:32:59.964 | -22 | 7656 |
| 00:00:33:14.963 | -30 | 7638 |
| 00:00:33:29.963 | -29 | 7638 |
| 00:00:33:44.963 | -27 | 7878 |
| 00:00:33:59.963 | -28 | 7887 |
| 00:00:34:14.962 | -22 | 7955 |
| 00:00:34:29.962 | -22 | 7842 |
| 00:00:34:44.962 | -22 | 8156 |
| 00:00:34:59.961 | -19 | 8234 |
| 00:00:35:14.961 | -21 | 8193 |
| 00:00:35:29.961 | -22 | 8205 |
| 00:00:35:44.961 | -24 | 8180 |
| 00:00:35:59.960 | -22 | 8211 |
| 00:00:36:14.960 | -25 | 8259 |
| 00:00:36:29.960 | -26 | 8307 |
| 00:00:36:44.959 | -26 | 8304 |
| 00:00:36:59.959 | -27 | 8327 |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:00:39:44.957 | -24 | [illegible] |
| 00:00:39:59.957 | -22 | 8145 |
| 00:00:39:14.957 | -22 | 4188 |
| 00:00:39:29.957 | -26 | 340 |
| 00:00:39:44.956 | -25 | 5920 |
| 00:00:39:59.956 | -21 | 25347 |
| 00:00:40:14.956 | -24 | 26354 |
| 00:00:40:29.956 | -22 | 26636 |
| 00:00:40:44.955 | -23 | 26784 |
| 00:00:40:59.955 | -23 | 26789 |
| ~~00:00:41:14.955~~ | ~~-27~~ | ~~26898~~ |
| 00:00:41:29.954 | -27 | 26893 |
| 00:00:41:44.954 | -23 | 26986 |
| 00:00:41:59.954 | -25 | 26981 |
| 00:00:42:14.954 | -27 | 27018 |

"COORS BREWING CO5"
"RUN"
" 6-19-1992"
"12:37:41.72"
"TIME" "THC1 V2" "THC2 AC"
" sec" " ppm" " ppm"

| | | |
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| 00:00:00:00.000 | 2784 | 24561 |
| 00:00:04:59.999 | 2818 | 28494 |
| 00:00:09:59.999 | 2822 | 29962 |
| 00:00:14:59.998 | 2826 | 30380 |
| 00:00:19:59.998 | 2828 | 30600 |
| 00:00:24:59.997 | 2830 | 30865 |
| 00:00:29:59.997 | 2831 | 31071 |
| 00:00:34:59.997 | 2834 | 34207 |
| 00:00:39:59.996 | 2836 | 37242 |
| 00:00:44:59.996 | 2836 | 39986 |
| 00:00:49:59.995 | 2836 | 42892 |
| 00:00:54:59.995 | 2836 | 45307 |
| 00:00:59:59.995 | 2837 | 47178 |
| 00:01:04:59.994 | 2838 | 46399 |
| 00:01:09:59.994 | 2839 | 45116 |
| 00:01:14:59.994 | 2839 | 43988 |
| 00:01:19:59.993 | 2839 | 42607 |
| 00:01:24:59.993 | 2839 | 41633 |
| 00:01:29:59.992 | 2837 | 41278 |
| 00:01:34:59.992 | 2836 | 40850 |
| 00:01:39:59.991 | 2834 | 40527 |
| 00:01:44:59.991 | 2833 | 40241 |
| 00:01:49:59.991 | 2833 | 40000 |
| 00:01:54:59.990 | 2831 | 39783 |
| 00:01:59:59.990 | 2831 | 39366 |
| 00:02:04:59.989 | 2830 | 39193 |
| 00:02:09:59.989 | 2830 | 38448 |
| 00:02:14:59.989 | 2829 | 37450 |
| 00:02:19:59.988 | 2829 | 36498 |
| 00:02:24:59.988 | 2829 | 35588 |
| 00:02:29:59.988 | 2829 | 34873 |
| 00:02:34:59.987 | 2827 | 34009 |
| 00:02:39:59.987 | 2826 | 33581 |
| 00:02:44:59.986 | 2825 | 33389 |
| 00:02:49:59.986 | 2824 | 33040 |
| 00:02:54:59.985 | 2824 | 32416 |
| 00:02:59:59.985 | 2824 | 31573 |
| 00:03:04:59.985 | 2826 | 30619 |
| 00:03:09:59.984 | 2825 | 29786 |
| [illegible] | [illegible] | [illegible] |

CAL

CAL

RUN 4

NOT SAVED ON DISK

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] |
| 00:03:44:59.951 | 2911 | 29147 |
| 00:03:45:59.951 | 2908 | 29654 |
| 00:03:54:59.950 | 2907 | 30151 |
| 00:03:55:59.950 | 2906 | 30700 |
| 00:04:04:59.950 | 2903 | 31095 |

| | | |
|---|---|---|
| 00:04:09:59.978 | 2802 | 31743 |
| 00:04:14:59.978 | 2801 | 32373 |
| 00:04:19:59.976 | 2799 | 32632 |
| 00:04:24:59.978 | 2796 | 33056 |
| 00:04:29:59.976 | 2794 | 33061 |
| 00:04:34:59.976 | 2794 | 32979 |
| 00:04:39:59.976 | 2792 | 32673 |
| 00:04:44:59.976 | 2789 | 32349 |
| 00:04:49:59.976 | 2789 | 32124 |
| 00:04:54:59.976 | 2788 | 31883 |
| 00:04:59:59.976 | 2789 | 28343 |
| 00:05:04:59.974 | 2787 | 24278 |
| 00:05:09:59.974 | 2788 | 21919 |
| 00:05:14:59.974 | 2789 | 19613 |
| 00:05:19:59.974 | 2789 | 17489 |
| 00:05:24:59.974 | 2787 | 15473 |
| 00:05:29:59.972 | 2784 | 17000 |
| 00:05:34:59.972 | 2781 | 19341 |
| 00:05:39:59.972 | 2780 | 20032 |
| 00:05:44:59.972 | 2777 | 20998 |
| 00:05:49:59.970 | 2775 | 22151 |
| 00:05:54:59.970 | 2774 | 23094 |
| 00:05:59:59.970 | 2774 | 23855 |
| 00:06:04:59.970 | 2774 | 24441 |
| 00:06:09:59.970 | 2773 | 25194 |
| 00:06:14:59.968 | 2773 | 25726 |
| 00:06:19:59.968 | 2773 | 25951 |
| 00:06:24:59.968 | 2771 | 26099 |
| 00:06:29:59.968 | 2769 | 26725 |
| 00:06:34:59.968 | 2767 | 27461 |
| 00:06:39:59.966 | 2766 | 28177 |
| 00:06:44:59.966 | 2767 | 28277 |
| 00:06:49:59.966 | 2767 | 32042 |
| 00:06:54:59.966 | 2768 | 35798 |
| 00:06:59:59.966 | 2770 | 38171 |
| 00:07:04:59.964 | 2770 | 38518 |
| 00:07:09:59.964 | 2769 | 40786 |
| 00:07:14:59.964 | 2767 | 42027 |
| 00:07:19:59.964 | 2766 | 38974 |
| 00:07:24:59.964 | 2764 | 36503 |
| 00:07:29:59.962 | 2763 | 35308 |
| 00:07:34:59.962 | 2762 | 36101 |
| 00:07:39:59.962 | 2762 | 34981 |
| 00:07:44:59.962 | 2762 | 35449 |
| 00:07:49:59.960 | 2762 | 36254 |
| 00:07:54:59.960 | 2762 | 36808 |
| 00:07:59:59.960 | 2762 | 36981 |
| 00:08:04:59.960 | 2762 | 37018 |
| 00:08:09:59.960 | 2762 | 37001 |
| 00:08:14:59.958 | 2761 | 37219 |
| 00:08:19:59.958 | 2761 | 37211 |
| 00:08:24:59.958 | 2760 | 36814 |
| 00:08:29:59.958 | 2758 | 36929 |
| 00:08:34:59.958 | 2757 | 37101 |
| 00:08:39:59.957 | 2754 | 37154 |
| 00:08:44:59.957 | 2752 | 36958 |
| 00:08:49:59.957 | 2750 | 37093 |
| 00:08:54:59.957 | 2749 | 37543 |
| 00:08:59:59.957 | 2747 | 37589 |
| 00:09:04:59.955 | 2747 | 37648 |
| 00:09:09:59.957 | 2746 | 37969 |
| 00:09:14:59.953 | 2747 | 38342 |
| 00:09:19:59.953 | 2748 | 38559 |

| | | |
|---|---|---|
| 00:09:34:59.9[illegible] | 2746 | [illegible] |
| 00:09:39:59.9[illegible] | 2748 | [illegible] |
| 00:09:44:59.9[illegible] | 2749 | [illegible] |
| 00:09:49:59.9[illegible] | 2744 | [illegible] |
| 00:09:54:59.9[illegible] | 2743 | [illegible] |
| 00:09:59:59.9[illegible] | 2743 | [illegible] |
| 00:10:04:59.949 | 2742 | [illegible] |
| 00:10:09:59.949 | 2741 | [illegible] |
| 00:10:14:59.949 | 2739 | 39625 |
| 00:10:19:59.949 | 2738 | 39277 |
| 00:10:24:59.949 | 2741 | 39768 |
| 00:10:29:59.949 | 2742 | 38092 |
| 00:10:34:59.949 | 2744 | 37432 |
| 00:10:39:59.949 | 2746 | 36788 |
| 00:10:44:59.949 | 2748 | 36243 |
| 00:10:49:59.949 | 2748 | 35780 |
| 00:10:54:59.945 | 2745 | 35342 |
| 00:10:59:59.945 | 2743 | 34974 |
| 00:11:04:59.945 | 2739 | 34705 |
| 00:11:09:59.945 | 2736 | 34584 |
| 00:11:14:59.945 | 2734 | 34464 |
| 00:11:19:59.945 | 2732 | 34400 |
| 00:11:24:59.945 | 2730 | 34414 |
| 00:11:29:59.945 | 2726 | 34475 |
| 00:11:34:59.945 | 2728 | 34460 |
| 00:11:39:59.941 | 2726 | 34249 |
| 00:11:44:59.941 | 2724 | 34025 |
| 00:11:49:59.941 | 2721 | 33932 |
| 00:11:54:59.941 | 2718 | 33943 |
| 00:11:59:59.941 | 2717 | 33977 |
| 00:12:04:59.941 | 2714 | 34064 |
| 00:12:09:59.941 | 2713 | 34252 |
| 00:12:14:59.941 | 2712 | 34471 |
| 00:12:19:59.941 | 2711 | 34580 |
| 00:12:24:59.941 | 2711 | 34658 |
| 00:12:29:59.937 | 2710 | 34772 |
| 00:12:34:59.937 | 2709 | 34878 |
| 00:12:39:59.937 | 2708 | 34906 |
| 00:12:44:59.937 | 2707 | 34909 |
| 00:12:49:59.937 | 2705 | 34771 |
| 00:12:54:59.937 | 2702 | 34505 |
| 00:12:59:59.937 | 2698 | 34289 |
| 00:13:04:59.937 | 2675 | 35284 |
| 00:13:09:59.937 | 2639 | 37254 |
| 00:13:14:59.937 | 2590 | 37950 |
| 00:13:19:59.933 | 2536 | 38930 |
| 00:13:24:59.933 | 2480 | 39468 |
| 00:13:29:59.933 | 2422 | 39570 |
| 00:13:34:59.933 | 2383 | 38261 |
| 00:13:39:59.932 | 2357 | 36204 |
| 00:13:44:59.933 | 2345 | 35436 |
| 00:13:49:59.933 | 2341 | 34675 |
| 00:13:54:59.933 | 2336 | 34463 |
| 00:13:59:59.933 | 2323 | 34712 |
| 00:14:04:59.929 | 2306 | 35113 |
| 00:14:09:59.929 | 2288 | 34829 |
| 00:14:14:59.929 | 2270 | 34264 |
| 00:14:19:59.929 | 2250 | 33787 |
| 00:14:24:59.929 | 2235 | 33303 |
| 00:14:29:59.929 | 2232 | 33575 |
| 00:14:34:59.929 | 2236 | 33260 |
| 00:14:39:59.929 | 2244 | 32034 |
| 00:14:44:59.929 | 2260 | 31687 |
| 00:14:49:59.929 | 2281 | 30916 |
| 00:14:54:59.925 | 2303 | 30376 |

| | | |
|---|---|---|
| [illegible] | [illegible] | [illegible] |
| 00:15:14:59.925 | [illegible] | [illegible] |
| 00:15:19:59.925 | [illegible] | [illegible] |
| 00:15:24:59.925 | [illegible] | [illegible] |
| 00:15:19:59.925 | 2366 | 30374 |
| 00:15:24:59.925 | 2360 | 30865 |
| 00:15:29:59.925 | 1979 | 31161 |
| 00:15:34:59.925 | 1580 | 31327 |
| 00:15:39:59.921 | 1181 | 31482 |
| 00:15:44:59.921 | 781 | 31681 |
| 00:15:49:59.921 | 377 | 32105 |
| 00:15:54:59.921 | -18 | 32380 |
| 00:15:59:59.921 | -33 | 32776 |
| 00:16:04:59.921 | -34 | 33157 |
| 00:16:09:59.921 | -35 | 33613 |
| 00:16:14:59.921 | -35 | 33808 |
| 00:16:19:59.921 | -35 | 33769 |
| 00:16:24:59.921 | -35 | 33602 |
| 00:16:29:59.917 | -35 | 33277 |
| 00:16:34:59.917 | -34 | 32649 |
| 00:16:39:59.917 | -34 | 31896 |
| 00:16:44:59.917 | -34 | 31323 |
| 00:16:49:59.917 | -34 | 30933 |
| 00:16:54:59.917 | -34 | 30644 |
| 00:16:59:59.917 | -34 | 30607 |
| 00:17:04:59.917 | -34 | 30780 |
| 00:17:09:59.917 | -34 | 31055 |
| 00:17:14:59.917 | -34 | 31375 |
| 00:17:19:59.914 | -34 | 31697 |
| 00:17:24:59.914 | -34 | 32117 |
| 00:17:29:59.914 | -34 | 32457 |
| 00:17:34:59.914 | -34 | 32569 |
| 00:17:39:59.914 | -34 | 32885 |
| 00:17:44:59.914 | -34 | 33067 |
| 00:17:49:59.914 | -34 | 33093 |
| 00:17:54:59.914 | -34 | 34025 |
| 00:17:59:59.914 | -34 | 35157 |
| 00:18:04:59.910 | -34 | 35519 |
| 00:18:09:59.910 | -34 | 35084 |
| 00:18:14:59.914 | -34 | 34336 |
| 00:18:19:59.914 | -34 | 33847 |
| 00:18:24:59.914 | -34 | 32628 |
| 00:18:29:59.906 | -34 | 31208 |
| 00:18:34:59.906 | -35 | 30767 |
| 00:18:39:59.906 | -34 | 30783 |
| 00:18:44:59.906 | -34 | 30945 |
| 00:18:49:59.906 | -34 | 31005 |
| 00:18:54:59.906 | -34 | 30745 |
| 00:18:59:59.906 | -34 | 30515 |
| 00:19:04:59.906 | -34 | 30010 |
| 00:19:09:59.906 | -34 | 29818 |
| 00:19:14:59.906 | -34 | 29620 |
| 00:19:19:59.906 | -34 | 29404 |
| 00:19:24:59.906 | -34 | 29388 |
| 00:19:29:59.906 | -34 | 29406 |
| 00:19:34:59.906 | -34 | 29689 |
| 00:19:39:59.906 | -34 | 29990 |
| 00:19:44:59.906 | -34 | 30373 |
| 00:19:49:59.906 | -34 | 30763 |
| 00:19:54:59.906 | -34 | 31024 |
| 00:19:59:59.906 | -34 | 31218 |
| 00:20:04:59.898 | -34 | 31290 |
| 00:20:09:59.898 | -34 | 31214 |
| 00:20:14:59.898 | -34 | 31203 |
| 00:20:19:59.898 | -34 | 31080 |

Loss of Igo. CAJ
6/20/92

| | | |
|---|---|---|
| [illegible] | -34 | [illegible] |
| [illegible] | -34 | [illegible] |
| [illegible] | -34 | 31057 |
| 00:20:49:59.895 | -34 | 30442 |
| 00:20:54:59.895 | -34 | 29615 |
| 00:20:59:59.898 | -34 | 28600 |
| 00:21:04:59.898 | -34 | 27437 |
| 00:21:09:59.898 | -34 | 26006 |
| 00:21:14:59.898 | -34 | 22626 |
| 00:21:19:59.898 | -34 | 18468 |
| 00:21:24:59.898 | -34 | 14335 |
| 00:21:29:59.898 | -34 | 10281 |
| 00:21:34:59.898 | -34 | 6355 |
| 00:21:39:59.898 | -34 | 2562 |
| 00:21:44:59.890 | -34 | 991 |
| 00:21:49:59.890 | -34 | 8819 |
| 00:21:54:59.990 | -34 | 15528 |
| 00:21:59:59.890 | -34 | 19577 |
| 00:22:04:59.890 | -34 | 23194 |
| 00:22:09:59.890 | -34 | 26792 |
| 00:22:14:59.890 | -34 | 30330 |
| 00:22:19:59.890 | -34 | 26178 |
| 00:22:24:59.890 | -34 | 23308 |
| 00:22:29:59.890 | -34 | 23338 |
| 00:22:34:59.890 | -34 | 24064 |
| 00:22:39:59.890 | -35 | 24938 |
| 00:22:44:59.890 | -34 | 25668 |
| 00:22:49:59.890 | -35 | 26269 |
| 00:22:54:59.890 | -35 | 26987 |
| 00:22:59:59.890 | -35 | 27449 |
| 00:23:04:59.890 | -35 | 26204 |
| 00:23:09:59.890 | -34 | 21856 |
| 00:23:14:59.890 | -35 | 17379 |
| 00:23:19:59.882 | -34 | 12837 |
| 00:23:24:59.082 | -34 | 10145 |
| 00:23:29:59.882 | -34 | 8856 |
| 00:23:34:59.882 | -34 | 9687 |
| 00:23:39:59.882 | -34 | 14204 |
| 00:23:44:59.882 | -34 | 19264 |
| 00:23:49:59.882 | -34 | 24227 |
| 00:23:54:59.882 | -34 | 27238 |
| 00:23:59:59.882 | -34 | 29209 |
| 01:00:04:59.882 | -34 | 30372 |
| 01:00:09:59.882 | -34 | 30760 |
| 01:00:14:59.882 | -34 | 30913 |
| 01:00:19:59.882 | -34 | 31486 |
| 01:00:24:59.882 | -34 | 32118 |
| 01:00:29:59.882 | -34 | 32356 |
| 01:00:34:59.882 | -34 | 32681 |
| 01:00:39:59.882 | -34 | 33145 |
| 01:00:44:59.882 | -34 | 33376 |
| 01:00:49:59.882 | -34 | 28902 |
| 01:00:54:59.875 | -34 | 23326 |
| 01:00:59:59.875 | -34 | 17795 |
| 01:01:04:59.875 | -34 | 12394 |
| 01:01:09:59.875 | -34 | 9187 |
| 01:01:14:59.875 | -34 | 5975 |
| 01:01:19:59.875 | -34 | 7344 |
| 01:01:24:59.875 | -34 | 9922 |
| 01:01:29:59.875 | -34 | 12869 |
| 01:01:34:59.875 | -33 | 16098 |
| 01:01:39:59.875 | 315 | 17166 |
| 01:01:44:59.875 | 750 | 18404 |
| 01:01:49:59.875 | 1180 | 19922 |
| 01:01:54:59.875 | 1610 | 21341 |

SAUGBATA AS F.T.V. 6/20/92
RUN 4
no check

"COORS BREWING C09"
" "
"16:05:52.93"
" 6-21-1992"
"TIME" "THC1" "THC2"
"SEC" "PPM" "PPM"

| | | |
|---|---|---|
| 00:00:00:00.000 | 0 | 0 |
| 00:00:00:14.999 | 2622 | 187 |
| 00:00:00:29.999 | 2625 | 252 |
| 00:00:00:44.999 | 2627 | 226 |
| 00:00:00:59.998 | 2628 | 225 |
| 00:00:01:14.998 | 2619 | 257 |
| 00:00:01:29.998 | 2593 | 192 |
| 00:00:01:44.998 | 1263 | 181 |
| 00:00:01:59.997 | 749 | 160 |
| 00:00:02:14.997 | 658 | 103 |
| 00:00:02:29.997 | 282 | 81 |
| 00:00:02:44.997 | 112 | 94 |
| 00:00:02:59.996 | 83 | 76 |
| 00:00:03:14.996 | 66 | 86 |
| 00:00:03:29.996 | 55 | 405 |
| 00:00:03:44.995 | 45 | 11123 |
| 00:00:03:59.995 | 35 | 8618 |
| 00:00:04:14.995 | 29 | 710 |
| 00:00:04:29.995 | 19 | 296 |
| 00:00:04:44.994 | 21 | 207 |
| 00:00:04:59.994 | 19 | 194 |
| 00:00:05:14.994 | 10 | 133 |
| 00:00:05:29.994 | 9 | 81 |
| 00:00:05:44.993 | 16 | 99 |
| 00:00:05:59.993 | 13 | 49 |
| 00:00:06:14.993 | 9 | 81 |
| 00:00:06:29.992 | 2 | 70 |
| 00:00:06:44.992 | -1 | 72 |
| 00:00:06:59.992 | -0 | 103 |
| 00:00:07:14.992 | 5 | 70 |
| 00:00:07:29.991 | 6 | 72 |
| 00:00:07:44.991 | 6 | 16 |
| 00:00:07:59.991 | 1 | 60 |
| 00:00:08:14.991 | -1 | 62 |
| 00:00:08:29.990 | -5 | 62 |
| 00:00:08:44.990 | -6 | 60 |
| 00:00:08:59.990 | -11 | 90 |
| 00:00:09:14.989 | -6 | 33 |
| 00:00:09:29.989 | -1 | 54 |
| 00:00:09:44.989 | -0 | 52 |
| 00:00:09:59.989 | 0 | 5 |

CAL 5

Cal 5

START PRE CAL
RUN 5
C9-2
C9-B

CAL GAS ~~8544~~ 8423 ppm

| | | |
|---|---|---|
| 00:00:10:29.988 | -5 | 49 |
| 00:00:10:44.988 | -9 | 60 |
| 00:00:10:59.988 | -8 | 37 |
| 00:00:11:14.987 | -12 | 50 |
| 00:00:11:29.987 | 24 | 86 |
| 00:00:11:44.987 | -15 | 63 |
| 00:00:11:59.986 | -18 | 44 |
| 00:00:12:14.986 | -21 | 33 |
| 00:00:12:29.986 | -8 | 42 |
| 00:00:12:44.986 | -7 | 39 |
| 00:00:12:59.985 | -5 | -5 |
| 00:00:13:14.985 | -4 | 13 |
| 00:00:13:29.985 | -4 | 36 |
| 00:00:13:44.985 | -9 | 50 |
| 00:00:13:59.984 | -17 | 34 |
| 00:00:14:14.984 | -13 | 57 |
| 00:00:14:29.984 | -19 | 83 |
| 00:00:14:44.983 | -14 | 33 |
| 00:00:14:59.983 | -6 | 54 |
| 00:00:15:14.983 | -8 | 28 |
| 00:00:15:29.983 | -9 | 11 |
| 00:00:15:44.982 | -12 | 49 |
| 00:00:15:59.982 | -8 | 49 |
| 00:00:16:14.982 | -16 | 29 |
| 00:00:16:29.982 | -16 | 67 |
| 00:00:16:44.981 | -7 | 80 |
| 00:00:16:59.981 | -13 | 24 |
| 00:00:17:14.981 | -12 | 21 |
| 00:00:17:29.980 | -13 | 34 |
| 00:00:17:44.980 | -7 | 57 |
| 00:00:17:59.980 | -12 | 39 |
| 00:00:18:14.980 | -5 | -0 |
| 00:00:18:29.979 | -5 | 21 |
| 00:00:18:44.979 | -9 | 50 |
| 00:00:18:59.979 | -10 | 50 |
| 00:00:19:14.979 | -14 | 41 |
| 00:00:19:29.978 | -17 | 75 |
| 00:00:19:44.978 | -20 | 31 |
| 00:00:19:59.978 | -13 | 23 |
| 00:00:20:14.978 | -10 | 2 |
| 00:00:20:29.977 | -6 | 41 |
| 00:00:20:44.977 | -11 | 44 |
| 00:00:20:59.977 | -14 | 39 |
| 00:00:21:14.976 | -18 | 67 |
| 00:00:21:29.976 | -16 | 50 |
| 00:00:21:44.976 | -12 | 21 |
| 00:00:21:59.976 | -4 | 21 |
| 00:00:22:14.975 | -9 | 21 |
| 00:00:22:29.975 | -15 | 41 |
| 00:00:22:44.975 | -20 | 47 |
| 00:00:22:59.974 | -16 | 52 |
| 00:00:23:14.974 | -5 | -0 |
| 00:00:23:29.974 | -6 | 47 |
| 00:00:23:44.974 | -10 | 29 |
| 00:00:23:59.973 | -10 | -0 |
| 00:00:24:14.973 | -10 | 34 |
| 00:00:24:29.973 | -13 | 36 |
| 00:00:24:44.973 | -19 | 36 |
| 00:00:24:59.972 | -14 | 54 |
| 00:00:25:14.972 | -22 | 75 |
| 00:00:25:29.972 | -26 | 2635 |
| 00:00:25:44.972 | -26 | 3452 |
| 00:00:25:59.971 | -25 | 7285 |
| 00:00:26:14.971 | -16 | 7407 |
| 00:00:26:29.971 | -13 | 7479 |

C9-2 C9-B

ZERO CAL = C9-2 = -6 ppm
C9-B = 25 ppm

| | | | |
|---|---|---|---|
| 00:00:26:44.970 | -14 | 7462 | |
| 00:00:26:59.970 | -14 | 7463 | |
| 00:00:27:14.970 | -16 | 7435 | |
| 00:00:27:29.970 | -20 | 7495 | |
| 00:00:27:44.969 | -19 | 7464 | |
| 00:00:27:59.969 | -21 | 7502 | |
| 00:00:28:14.969 | -20 | 7539 | |
| 00:00:28:29.968 | -23 | 7516 | |
| 00:00:28:44.968 | -26 | 7526 | |
| 00:00:28:59.968 | -21 | 7490 | |
| 00:00:29:14.968 | -7 | 7502 | |
| 00:00:29:29.967 | -14 | 7474 | |
| 00:00:29:44.967 | -13 | 7482 | |
| 00:00:29:59.967 | -20 | 7511 | |
| 00:00:30:14.967 | -15 | 7489 | |
| 00:00:30:29.966 | -24 | 7529 | |
| 00:00:30:44.966 | -23 | 7485 | |
| 00:00:30:59.966 | -10 | 7786 | |
| 00:00:31:14.966 | -15 | 7777 | |
| 00:00:31:29.965 | -15 | 7757 | |
| 00:00:31:44.965 | -13 | 7749 | |
| 00:00:31:59.965 | -17 | 7803 | 8 |
| 00:00:32:14.964 | -20 | 7806 | |
| 00:00:32:29.964 | -18 | 7816 | |
| 00:00:32:44.964 | -18 | 7811 | |
| 00:00:32:59.964 | -17 | 7775 | |
| 00:00:33:14.963 | -16 | 7788 | |
| 00:00:33:29.963 | -18 | 7791 | |
| 00:00:33:44.963 | -18 | 7811 | |
| 00:00:33:59.963 | -28 | 7814 | |
| 00:00:34:14.962 | -24 | 8232 | |
| 00:00:34:29.962 | -31 | 8535 | CAL 1 = C9-B = 8498 ppm |
| 00:00:34:44.962 | -14 | 8503 | |
| 00:00:34:59.961 | -17 | 8493 | |
| 00:00:35:14.961 | -15 | 8460 | |
| 00:00:35:29.961 | -15 | 8486 | |
| 00:00:35:44.961 | -22 | 8485 | |
| 00:00:35:59.960 | -27 | 8400 | 8423 Cal. |
| 00:00:36:14.960 | -27 | 8438 | |
| 00:00:36:29.960 | -27 | 8459 | |
| 00:00:36:44.959 | -28 | 8428 | |
| 00:00:36:59.959 | -25 | 8390 | |
| 00:00:37:14.959 | -15 | 8413 | |
| 00:00:37:29.959 | -19 | 8369 | |
| 00:00:37:44.958 | -17 | 8382 | |
| 00:00:37:59.958 | -16 | 8394 | |
| 00:00:38:14.958 | -23 | 8301 | |
| 00:00:38:29.958 | -26 | 8019 | |
| 00:00:38:44.957 | -23 | 8037 | |
| 00:00:38:59.957 | -27 | 8009 | |
| 00:00:39:14.957 | -22 | 7917 | |
| 00:00:39:29.957 | -18 | 2254 | |
| 00:00:39:44.956 | -17 | 887 | |
| 00:00:39:59.956 | -16 | 758 | |
| 00:00:40:14.956 | -23 | 737 | |
| 00:00:40:29.956 | -22 | 195 | |
| 00:00:40:44.955 | -28 | 106 | |
| 00:00:40:59.955 | -18 | 55 | |
| 00:00:41:14.955 | -15 | 13 | |
| 00:00:41:29.954 | -16 | 33 | |
| 00:00:41:44.954 | -22 | 60 | |
| 00:00:41:59.954 | -28 | 83 | |
| 00:00:42:14.954 | -24 | 52 | |
| 00:00:42:29.953 | -19 | 39 | |
| 00:00:42:44.953 | -17 | 2 | |

| | | |
|---|---|---|
| 00:00:43:29.952 | -16 | 33 |
| 00:00:43:44.952 | -16 | 26 |
| 00:00:43:59.952 | -19 | 33 |
| 00:00:44:14.951 | -17 | 44 |
| 00:00:44:29.951 | -17 | 16 |
| 00:00:44:44.951 | -19 | 39 |
| 00:00:44:59.951 | -23 | 44 |
| 00:00:45:14.950 | -30 | 83 |
| 00:00:45:29.950 | -28 | 86 |
| 00:00:45:44.950 | -26 | 57 |
| 00:00:45:59.949 | -22 | 20 |
| 00:00:46:14.949 | -14 | 50 |
| 00:00:46:29.949 | -15 | 39 |
| 00:00:46:44.949 | -17 | 10 |
| 00:00:46:59.948 | -18 | 697 |
| 00:00:47:14.948 | -20 | 6883 |
| 00:00:47:29.948 | -27 | 25757 |
| 00:00:47:44.947 | -20 | 26797 |
| 00:00:47:59.947 | -24 | 27132 |
| 00:00:48:14.947 | -30 | 27259 |
| 00:00:48:29.947 | -29 | 27326 |
| 00:00:48:44.947 | -23 | 27301 |
| 00:00:48:59.946 | -21 | 27311 |
| 00:00:49:14.946 | -20 | 27367 |
| 00:00:49:29.946 | -18 | 27321 |
| 00:00:49:44.945 | -18 | 27288 |
| 00:00:49:59.945 | -22 | 27350 |
| 00:00:50:14.945 | -25 | 27341 |
| 00:00:50:29.945 | -25 | 27360 |
| 00:00:50:44.944 | -29 | 27324 |
| 00:00:50:59.944 | -26 | 27316 |
| 00:00:51:14.944 | -17 | 27313 |
| 00:00:51:29.944 | -18 | 27271 |
| 00:00:51:44.943 | -22 | 27329 |
| 00:00:51:59.943 | -23 | 27342 |
| 00:00:52:14.943 | -27 | 27414 |
| 00:00:52:29.942 | -25 | 27420 |
| 00:00:52:44.942 | -22 | 27437 |
| 00:00:52:59.942 | -14 | 27485 |
| 00:00:53:14.942 | -20 | 27474 |
| 00:00:53:29.941 | -21 | 27463 |
| 00:00:53:44.941 | -19 | 27461 |
| 00:00:53:59.941 | -18 | 27420 |
| 00:00:54:14.940 | -18 | 27450 |
| 00:00:54:29.940 | -19 | 27438 |
| 00:00:54:44.940 | -17 | 27399 |
| 00:00:54:59.940 | -23 | 27415 |
| 00:00:55:14.939 | -18 | 27411 |
| 00:00:55:29.939 | -20 | 27363 |
| 00:00:55:44.939 | -22 | 27386 |
| 00:00:55:59.939 | -22 | 27373 |
| 00:00:56:14.938 | -24 | 27370 |
| 00:00:56:29.938 | -32 | 27396 |
| 00:00:56:44.938 | -30 | 27463 |
| 00:00:56:59.937 | -25 | 26178 |
| 00:00:57:14.937 | -27 | 24502 |
| 00:00:57:29.937 | -30 | 24613 |
| 00:00:57:44.937 | -28 | 24609 |
| 00:00:57:59.937 | -24 | 24557 |
| 00:00:58:14.936 | -25 | 24574 |
| 00:00:58:29.936 | -21 | 24598 |
| 00:00:58:44.936 | -22 | 24601 |
| 00:00:58:59.935 | -20 | 24795 |
| 00:00:59:14.935 | -17 | 24801 |
| 00:00:59:29.935 | -21 | 24782 |

Clerk 24 Sunshine 5:09 PM
4:00 pm
Call check SUN Dan

| | | | |
|---|---|---|---|
| 00:00:59:59.934 | -19 | 24798 | |
| 00:01:00:14.934 | -24 | 24827 | |
| 00:01:00:29.934 | -24 | 24917 | |
| 00:01:00:44.933 C9-2 | -22 | 24963 | C9-B |
| 00:01:00:59.933 | -26 | 24998 | |
| 00:01:01:14.933 | -29 | 25011 | |
| 00:01:01:29.933 | -28 | 25055 | |
| 00:01:01:44.932 | -26 | 25018 | |
| 00:01:01:59.932 | -17 | 25077 | |
| 00:01:02:14.932 | -20 | 25119 | |
| 00:01:02:29.932 | -19 | 25111 | |
| 00:01:02:44.931 | -31 | 25132 | |
| 00:01:02:59.931 | -26 | 25140 | |
| 00:01:03:14.931 | -32 | 25177 | |
| 00:01:03:29.930 | -26 | 24976 | |
| 00:01:03:44.930 | -19 | 24976 | |
| 00:01:03:59.930 | -17 | 24940 | |
| 00:01:04:14.930 | -19 | 24917 | 24938 |
| 00:01:04:29.929 | -18 | 24941 | |
| 00:01:04:44.929 | -19 | 24954 | |
| 00:01:04:59.929 | -24 | 24924 | |
| 00:01:05:14.928 | -26 | 24945 | |
| 00:01:05:29.928 | -27 | 24961 | |
| 00:01:05:44.928 | -26 | 24954 | |
| 00:01:05:59.928 | -19 | 24919 | |
| 00:01:06:14.927 | -17 | 24823 | |
| 00:01:06:29.927 | -21 | 24287 | |
| 00:01:06:44.927 | -29 | 24058 | |
| 00:01:06:59.927 | -30 | 24007 | |
| 00:01:07:14.927 | -20 | 24007 | |
| 00:01:07:29.926 | -21 | 16554 | |
| 00:01:07:44.926 | -28 | 4504 | |
| 00:01:07:59.926 | -25 | 2573 | |
| 00:01:08:14.925 | -20 | 2404 | |
| 00:01:08:29.925 | -21 | 2329 | |
| 00:01:08:44.925 | -27 | 1927 | |
| 00:01:08:59.924 | -29 | 244 | |
| 00:01:09:14.924 | -20 | 140 | |
| 00:01:09:29.924 | -20 | 96 | |
| 00:01:09:44.924 | -24 | 114 | |
| 00:01:09:59.923 | -26 | 94 | |
| 00:01:10:14.923 | -29 | 111 | |
| 00:01:10:29.923 | -20 | 73 | |
| 00:01:10:44.922 | -18 | 51 | |
| 00:01:10:59.922 | -22 | 73 | |
| 00:01:11:14.922 | -26 | 88 | |
| 00:01:11:29.922 | -24 | 64 | |
| 00:01:11:44.921 | -19 | 59 | |
| 00:01:11:59.921 | -12 | 47 | |
| 00:01:12:14.921 | -25 | 77 | |
| 00:01:12:29.921 | -22 | 88 | |
| 00:01:12:44.920 | -16 | 57 | |
| 00:01:12:59.920 | -36 | 37 | 58 |
| 00:01:13:14.920 | -20 | 65 | |
| 00:01:13:29.919 | -21 | 73 | |
| 00:01:13:44.919 | -12 | 44 | |
| 00:01:13:59.919 | -14 | 49 | |
| 00:01:14:14.919 | -18 | 64 | |
| 00:01:14:29.918 | -21 | 80 | |
| 00:01:14:44.918 | 640 | 59 | |
| 00:01:14:59.918 | 2080 | 41 | |
| 00:01:15:14.917 | 2409 | 31 | |
| 00:01:15:29.917 | 2503 | 57 | |
| 00:01:15:44.917 | 2532 | 68 | |
| 00:01:15:59.917 | 2550 | 3664 | |

santana 5:10 pm Sunday
24,900 ppm Cal ~~check~~
RUN 5
PRE TEST CAL RUN 5 24,900 PPM CAL GAS

0 Cal Check
PRE TEST CAL CHECK ZERO

~~CAL GAS = 2526~~
~~CAL 1 = C9-2 = 2499~~

| | | |
|---|---|---|
| 00:01:16:29.916 | 2580 | 10456 |
| 00:01:16:44.916 | 2586 | 5335 |
| 00:01:16:59.916 | 2581 | 4103 |
| 00:01:17:14.916 | 2580 | 10169 |
| 00:01:17:29.915 | 2581 | 7030 |

"COORS BREWING C09"
"RUN"
" 6-21-1992"
"17:26:07.31"

C9-2 C9-B

"TIME" "THC1 V2" "THC2 AC"

START RUN 5
C9-2
C9-B

| " sec" | " ppm" | " ppm" |
|---|---|---|
| 00:00:00:00.000 | 2592 | 5469 |
| 00:00:04:59.999 | 2609 | 7634 |
| 00:00:09:59.999 | 2630 | 8216 |
| 00:00:14:59.998 | 2639 | 9114 |
| 00:00:19:59.998 | 2644 | 10837 |
| 00:00:24:59.997 | 2649 | 11816 |
| 00:00:29:59.997 | 2652 | 12705 |
| 00:00:34:59.997 | 2662 | 15544 |
| 00:00:39:59.996 | 2665 | 15587 |
| 00:00:44:59.996 | 2667 | 14724 |
| 00:00:49:59.995 | 2671 | 14108 |
| 00:00:54:59.995 | 2672 | 16328 |
| 00:00:59:59.995 | 2672 | 16697 |
| 00:01:04:59.994 | 2673 | 14502 |
| 00:01:09:59.994 | 2673 | 14664 |
| 00:01:14:59.994 | 2673 | 14968 |
| 00:01:19:59.993 | 2672 | 14310 |
| 00:01:24:59.993 | 2673 | 10615 |
| 00:01:29:59.992 | 2674 | 8876 |
| 00:01:34:59.992 | 2675 | 8812 |
| 00:01:39:59.991 | 2675 | 8637 |
| 00:01:44:59.991 | 2676 | 8700 |
| 00:01:49:59.991 | 2674 | 9778 |
| 00:01:54:59.990 | 2675 | 10969 |
| 00:01:59:59.990 | 2677 | 12355 |
| 00:02:04:59.989 | 2677 | 13676 |
| 00:02:09:59.989 | 2678 | 15334 |
| 00:02:14:59.989 | 2679 | 17273 |
| 00:02:19:59.988 | 2682 | 18366 |
| 00:02:24:59.988 | 2682 | 19869 |
| 00:02:29:59.988 | 2681 | 20766 |
| 00:02:34:59.987 | 2681 | 21740 |
| 00:02:39:59.987 | 2681 | 22484 |
| 00:02:44:59.986 | 2680 | 22317 |
| 00:02:49:59.986 | 2680 | 21830 |
| 00:02:54:59.985 | 2680 | 20998 |
| 00:02:59:59.985 | 2681 | 20181 |
| 00:03:04:59.985 | 2680 | 18800 |
| 00:03:09:59.984 | 2679 | 17489 |
| 00:03:14:59.984 | 2680 | 16583 |
| 00:03:19:59.983 | 2680 | 15551 |
| 00:03:24:59.983 | 2680 | 14560 |
| 00:03:29:59.983 | 2679 | 13537 |
| 00:03:34:59.982 | 2679 | 12381 |
| 00:03:39:59.982 | 2678 | 11273 |
| 00:03:44:59.981 | 2678 | 10644 |
| 00:03:49:59.981 | 2678 | 10211 |
| 00:03:54:59.980 | 2679 | 9959 |
| 00:03:59:59.980 | 2681 | 9834 |
| 00:04:04:59.980 | 2684 | 10297 |
| 00:04:09:59.979 | 2685 | 10923 |
| 00:04:14:59.979 | 2686 | 11544 |
| 00:04:19:59.978 | 2686 | 12089 |
| 00:04:24:59.978 | 2686 | 12712 |

Run 5

| | | | | |
|---|---|---|---|---|
| 00:04:34:59.978 | | 2684 | 11556 | |
| 00:04:39:59.976 | | 2685 | 9557 | |
| 00:04:44:59.976 | | 2688 | 7405 | C9-2 |
| 00:04:49:59.976 | | 2689 | 5262 | |
| 00:04:54:59.976 | C9-2 | 2692 | 2900 | C9-B |
| 00:04:59:59.976 | | 2694 | 632 | |
| 00:05:04:59.974 | | 2693 | 309 | |
| 00:05:09:59.974 | | 2694 | 269 | |
| 00:05:14:59.974 | | 2691 | 426 | |
| 00:05:19:59.974 | | 2692 | 966 | |
| 00:05:24:59.974 | | 2695 | 1685 | |
| 00:05:29:59.972 | | 2695 | 2564 | |
| 00:05:34:59.972 | | 2698 | 3241 | |
| 00:05:39:59.972 | | 2698 | 3848 | |
| 00:05:44:59.972 | | 2699 | 4279 | |
| 00:05:49:59.970 | | 2698 | 4322 | |
| 00:05:54:59.970 | | 2692 | 4233 | |
| 00:05:59:59.970 | | 2690 | 4123 | |
| 00:06:04:59.970 | | 2688 | 4328 | |
| 00:06:09:59.970 | | 2688 | 4195 | |
| 00:06:14:59.968 | | 2690 | 3768 | |
| 00:06:19:59.968 | | 2692 | 3443 | |
| 00:06:24:59.968 | | 2695 | 3299 | |
| 00:06:29:59.968 | | 2696 | 3302 | |
| 00:06:34:59.968 | | 2699 | 3597 | |
| 00:06:39:59.966 | | 2702 | 4528 | |
| 00:06:44:59.966 | | 2703 | 5779 | |
| 00:06:49:59.966 | | 2705 | 7151 | |
| 00:06:54:59.966 | | 2707 | 7810 | |
| 00:06:59:59.966 | | 2710 | 8767 | |
| 00:07:04:59.964 | | 2722 | 9552 | |
| 00:07:09:59.964 | | 2753 | 10146 | |
| 00:07:14:59.964 | | 2780 | 10993 | |
| 00:07:19:59.964 | | 2796 | 11882 | |
| 00:07:24:59.964 | | 2810 | 16624 | |
| 00:07:29:59.962 | | 2819 | 22786 | |
| 00:07:34:59.962 | | 2816 | 28831 | |
| 00:07:39:59.962 | | 2793 | 34641 | |
| 00:07:44:59.962 | | 2764 | 39606 | |
| 00:07:49:59.960 | | 2726 | 44120 | |
| 00:07:54:59.960 | | 2685 | 44874 | |
| 00:07:59:59.960 | | 2644 | 43640 | |
| 00:08:04:59.960 | | 2603 | 42213 | |
| 00:08:09:59.960 | | 2565 | 40680 | |
| 00:08:14:59.958 | | 2539 | 39650 | |
| 00:08:19:59.958 | | 2535 | 38989 | |
| 00:08:24:59.958 | | 2538 | 38128 | |
| 00:08:29:59.958 | | 2546 | 36642 | |
| 00:08:34:59.958 | | 2554 | 34817 | |
| 00:08:39:59.957 | | 2560 | 33334 | |
| 00:08:44:59.957 | | 2562 | 31882 | |
| 00:08:49:59.957 | | 2563 | 30634 | |
| 00:08:54:59.957 | | 2562 | 30353 | |
| 00:08:59:59.957 | | 2556 | 30815 | |
| 00:09:04:59.955 | | 2547 | 31850 | |
| 00:09:09:59.957 | | 2538 | 33081 | |
| 00:09:14:59.953 | | 2530 | 32775 | |
| 00:09:19:59.953 | | 2526 | 31460 | |
| 00:09:24:59.953 | | 2525 | 27527 | |
| 00:09:29:59.953 | | 2530 | 21971 | |
| 00:09:34:59.953 | | 2540 | 16169 | |
| 00:09:39:59.953 | | 2550 | 10117 | |
| 00:09:44:59.953 | | 2561 | 7500 | |
| 00:09:49:59.953 | | 2567 | 5551 | |
| 00:09:54:59.953 | | 2570 | 5981 | |

Run 5
C9-2
C9-B

| | | | |
|---|---|---|---|
| 00:10:04:59.949 | | 2571 | 9841 |
| 00:10:09:59.949 | | 2571 | 11644 |
| 00:10:14:59.949 | | 2569 | 11751 C9-B |
| 00:10:19:59.949 | C9-2 | 2568 | 11536 |
| 00:10:24:59.949 | | 2567 | 11042 |
| 00:10:29:59.949 | | 2567 | 10561 |
| 00:10:34:59.949 | | 2567 | 10154 |
| 00:10:39:59.949 | | 2568 | 9820 |
| 00:10:44:59.949 | | 2569 | 9446 |
| 00:10:49:59.949 | | 2569 | 9452 |
| 00:10:54:59.945 | | 2569 | 8671 |
| 00:10:59:59.945 | | 2569 | 7152 |
| 00:11:04:59.945 | | 2567 | 5586 |
| 00:11:09:59.945 | | 2536 | 4092 |
| 00:11:14:59.945 | | 2497 | 2526 |
| 00:11:19:59.945 | | 2456 | 881 |
| 00:11:24:59.945 | | 2418 | 432 |
| 00:11:29:59.945 | | 2380 | 1408 |
| 00:11:34:59.945 | | 2342 | 2693 |
| 00:11:39:59.941 | | 2332 | 3757 |
| 00:11:44:59.941 | | 2332 | 4804 |
| 00:11:49:59.941 | | 2349 | 5665 |
| 00:11:54:59.941 | | 2354 | 6109 |
| 00:11:59:59.941 | | 2360 | 6042 |
| 00:12:04:59.941 | | 2351 | 5649 |
| 00:12:09:59.941 | | 2340 | 5692 |
| 00:12:14:59.941 | | 2325 | 5957 |
| 00:12:19:59.941 | | 2300 | 6492 |
| 00:12:24:59.941 | | 2286 | 7270 |
| 00:12:29:59.937 | | 2279 | 8018 |
| 00:12:34:59.937 | | 2295 | 8881 |
| 00:12:39:59.937 | | 2320 | 9635 |
| 00:12:44:59.937 | | 2347 | 10264 |
| 00:12:49:59.937 | | 2373 | 11023 |
| 00:12:54:59.937 | | 2396 | 14652 |
| 00:12:59:59.937 | | 2413 | 20293 |
| 00:13:04:59.937 | | 2420 | 26091 |
| 00:13:09:59.937 | | 2420 | 31817 |
| 00:13:14:59.937 | | 2417 | 37304 |
| 00:13:19:59.933 | | 2417 | 42105 |
| 00:13:24:59.933 | | 2411 | 43390 |
| 00:13:29:59.933 | | 2407 | 42477 |
| 00:13:34:59.933 | | 2411 | 41156 |
| 00:13:39:59.933 | | 2417 | 39945 |
| 00:13:44:59.933 | | 2425 | 38644 |
| 00:13:49:59.933 | | 2430 | 37310 |
| 00:13:54:59.933 | | 2439 | 36448 |
| 00:13:59:59.933 | | 2446 | 35469 |
| 00:14:04:59.929 | | 2449 | 34406 |
| 00:14:09:59.929 | | 2453 | 33162 |
| 00:14:14:59.929 | | 2457 | 31999 |
| 00:14:19:59.929 | | 2461 | 31296 |
| 00:14:24:59.929 | | 2465 | 30755 |
| 00:14:29:59.929 | | 2469 | 30628 |
| 00:14:34:59.929 | | 2473 | 31055 |
| 00:14:39:59.929 | | 2477 | 31420 |
| 00:14:44:59.929 | | 2480 | 31798 |
| 00:14:49:59.929 | | 2483 | 32277 |
| 00:14:54:59.925 | | 2486 | 32686 |
| 00:14:59:59.925 | | 2488 | 32380 |
| 00:15:04:59.925 | | 2489 | 31782 |
| 00:15:09:59.925 | | 2491 | 30391 |
| 00:15:14:59.925 | | 2492 | 27733 |
| 00:15:19:59.925 | | 2492 | 24806 |
| 00:15:24:59.925 | | 2493 | 21710 |

| | | | |
|---|---|---|---|
| 00:15:34:59.925 | | 2494 | 16527 |
| 00:15:39:59.921 | | 2495 | 14608 |
| 00:15:44:59.921 | | 2494 | 13999 |
| 00:15:49:59.921 | | 2494 | 13556 |
| 00:15:54:59.921 | | 2493 | 13210 |
| 00:15:59:59.921 | | 2493 | 12735 |
| 00:16:04:59.921 | | 2493 | 12347 |
| 00:16:09:59.921 | | 2493 | 12097 |
| 00:16:14:59.921 | | 2495 | 12030 |
| 00:16:19:59.921 | | 2497 | 12475 |
| 00:16:24:59.921 | | 2499 | 13269 |
| 00:16:29:59.917 | | 2503 | 14155 |
| 00:16:34:59.917 | | 2511 | 15213 |
| 00:16:39:59.917 | | 2518 | 16061 |
| 00:16:44:59.917 | C9-2 | 2526 | 16773 C9-B |
| 00:16:49:59.917 | | 2531 | 16848 |
| 00:16:54:59.917 | | 2538 | 16524 |
| 00:16:59:59.917 | | 2542 | 16285 |
| 00:17:04:59.917 | | 2537 | 15970 |
| 00:17:09:59.917 | | 2538 | 16188 |
| 00:17:14:59.917 | | 2535 | 16596 |
| 00:17:19:59.914 | | 2538 | 17256 |
| 00:17:24:59.914 | | 2544 | 19964 |

END RUN 5
C9-2
C9-B

"COORS BREWING C09"

| | | | |
|---|---|---|---|
| 00:15:34:59.925 | | 2494 | 16527 |
| 00:15:39:59.921 | | 2495 | 14608 |
| 00:15:44:59.921 | | 2494 | 13999 |
| 00:15:49:59.921 | | 2494 | 13556 |
| 00:15:54:59.921 | | 2493 | 13210 |
| 00:15:59:59.921 | | 2493 | 12735 |
| 00:16:04:59.921 | | 2493 | 12347 |
| 00:16:09:59.921 | | 2493 | 12097 |
| 00:16:14:59.921 | | 2495 | 12030 |
| 00:16:19:59.921 | | 2497 | 12475 |
| 00:16:24:59.921 | | 2499 | 13269 |
| 00:16:29:59.917 | | 2503 | 14155 |
| 00:16:34:59.917 | | 2511 | 15213 |
| 00:16:39:59.917 | | 2518 | 16061 |
| 00:16:44:59.917 | C9-2 | 2526 | 16773 C9-B |
| 00:16:49:59.917 | | 2531 | 16848 |
| 00:16:54:59.917 | | 2538 | 16524 |
| 00:16:59:59.917 | | 2542 | 16285 |
| 00:17:04:59.917 | | 2537 | 15970 |
| 00:17:09:59.917 | | 2538 | 16188 |
| 00:17:14:59.917 | | 2535 | 16596 |
| 00:17:19:59.914 | | 2538 | 17256 |
| 00:17:24:59.914 | | 2544 | 19964 |

END RUN 5
C9-2
C9-B

"COORS BREWING C09"
" "
"11:01:49.37"
" 6-22-1992"
"TIME" "THC1" "THC2"
"SEC" "PPM" "PPM"

Cal

POST CAL RUN 5
C9-2
C9-B

| | | | |
|---|---|---|---|
| 00:00:00:00.000 | | 0 | 0 |
| 00:00:00:14.999 | | 111 | 41151 |
| 00:00:00:29.999 | | 91 | 41110 |
| 00:00:00:44.999 | | 77 | 41410 |
| 00:00:00:59.998 | C9-2 | 49 | 40063 |
| 00:00:01:14.998 | | 50 | 39281 C9-B |
| 00:00:01:29.998 | | 36 | 38745 |
| 00:00:01:44.998 | | 40 | 38146 |
| 00:00:01:59.997 | | 39 | 37786 |
| 00:00:02:14.997 | | 26 | 36694 |
| 00:00:02:29.997 | | 22 | 36382 |
| 00:00:02:44.997 | | 27 | 36502 |
| 00:00:02:59.996 | | 20 | 37389 |
| 00:00:03:14.996 | | 8 | 38244 |
| 00:00:03:29.996 | | 4 | 38018 |
| 00:00:03:44.995 | | 13 | 38060 |
| 00:00:03:59.995 | | 11 | 38265 |
| 00:00:04:14.995 | | 4 | 29163 |
| 00:00:04:29.995 | | 1 | 19974 |
| 00:00:04:44.994 | | 8 | 13457 |
| 00:00:04:59.994 | | 13 | 9543 |
| 00:00:05:14.994 | | 1 | 7228 |
| 00:00:05:29.994 | | -6 | 6022 |
| 00:00:05:44.993 | | 2 | 5246 |
| 00:00:05:59.993 | | 6 | 4647 |
| 00:00:06:14.993 | | -4 | 4220 |
| 00:00:06:29.992 | | -9 | 3872 |
| 00:00:06:44.992 | | 3 | 3529 |
| 00:00:06:59.992 | | 0 | 3229 |
| 00:00:07:14.992 | | -8 | 3024 |
| 00:00:07:29.991 | | -1 | 2791 |
| 00:00:07:44.991 | | 1 | 2577 |
| 00:00:07:59.991 | | -6 | 2428 |
| 00:00:08:14.991 | | -6 | 2284 |
| 00:00:08:29.990 | | 0 | 1999 |
| 00:00:08:44.990 | | -7 | 1834 |

| | | |
|---|---|---|
| 00:00:09:14.989 | -1 | 2303 |
| 00:00:09:29.989 | -8 | 1344 |
| 00:00:09:44.989 | -12 | 1261 |
| 00:00:09:59.989 | -4 | 1165 |
| 00:00:10:14.988 | -3 | 1060 |
| 00:00:10:29.988 | -11 | 1017 |
| 00:00:10:44.988 | -17 | 970 |
| 00:00:10:59.988 | -4 | 900 |
| 00:00:11:14.987 | -6 | 856 |
| 00:00:11:29.987 | -11 | 815 |
| 00:00:11:44.987 | -13 | 814 |
| 00:00:11:59.986 | -6 | 744 |
| 00:00:12:14.986 | -1 | 697 |
| 00:00:12:29.986 | -8 | 710 |
| 00:00:12:44.986 | -11 | 710 |
| 00:00:12:59.985 | -15 | 705 |
| 00:00:13:14.985 | -11 | 671 |
| 00:00:13:29.985 | -6 | 622 |
| 00:00:13:44.985 | -9 | 612 |
| 00:00:13:59.984 | -14 | 604 |
| 00:00:14:14.984 | -18 | 596 |
| 00:00:14:29.984 | -7 | 557 |
| 00:00:14:44.983 | -10 | 539 |
| 00:00:14:59.983 | -13 | 537 |
| 00:00:15:14.983 | -20 | 568 |
| 00:00:15:29.983 | -4 | 519 |
| 00:00:15:44.982 | -8 | 493 |
| 00:00:15:59.982 | -14 | 490 |
| 00:00:16:14.982 | -17 | 490 |
| 00:00:16:29.982 | -17 | 493 |
| 00:00:16:44.981 | -11 | 462 |
| 00:00:16:59.981 | -15 | 490 |
| 00:00:17:14.981 | -7 | 451 |
| 00:00:17:29.980 | -16 | 466 |
| 00:00:17:44.980 | -11 | 426 |
| 00:00:17:59.980 | -15 | 464 |
| 00:00:18:14.980 | -11 | 449 |
| 00:00:18:29.979 | -13 | 444 |
| 00:00:18:44.979 | -15 | 451 |
| 00:00:18:59.979 | -12 | 430 |
| 00:00:19:14.979 | -13 | 449 |
| 00:00:19:29.978 | -10 | 413 |
| 00:00:19:44.978 | -16 | 423 |
| 00:00:19:59.978 | -16 | 415 |
| 00:00:20:14.978 | -10 | 389 |
| 00:00:20:29.977 | 106 | 383 |
| 00:00:20:44.977 | 638 | 391 |
| 00:00:20:59.977 | 661 | 360 |
| 00:00:21:14.976 | 669 | 332 |
| 00:00:21:29.976 | 666 | 340 |
| 00:00:21:44.976 | 667 | 386 |
| 00:00:21:59.976 | 676 | 332 |
| 00:00:22:14.975 | 679 | 308 |
| 00:00:22:29.975 | 666 | 343 |
| 00:00:22:44.975 | 668 | 370 |
| 00:00:22:59.974 | 669 | 340 |
| 00:00:23:14.974 | 676 | 2458 |
| 00:00:23:29.974 | 681 | 21750 |
| 00:00:23:44.974 | 677 | 16034 |
| 00:00:23:59.973 | 670 | 19422 |
| 00:00:24:14.973 | 680 | 23491 |
| 00:00:24:29.973 | 681 | 23634 |
| 00:00:24:44.973 | 678 | 23760 |
| 00:00:24:59.972 | 677 | 23800 |
| 00:00:25:14.972 | 681 | 23787 |

-14

425

CAL CHECK

| | | |
|---|---|---|
| 00:00:25:44.972 | 677 | 23861 |
| 00:00:25:59.971 | 672 | 23955 |
| 00:00:26:14.971 | 684 | 23919 |
| 00:00:26:29.971 | 683 | 23913 |
| 00:00:26:44.970 | 674 | 23906 |

677

23923

## CAE Source Testing

CAE engineers are professional experts in air pollution emission measurements. They possess an in-depth understanding of both the emission sources as well as the control equipment being evaluated. Our engineers select the significant variables to be measured during a test program in order to provide the most meaningful data. CAE can help clients develop a plan for evaluating and controlling emissions to meet legislative standards. CAE utilizes the most appropriate EPA, ASME or NIOSH method depending upon situational requirements.

These services include:

- Compliance planning and status determination
- Pollution control device performance evaluation
- Emission inventories ($O_2$, CO, $CO_2$, $SO_2$, $SO_3$, NOx, TRS, multi-metals and particulates)
- Visual emissions monitoring
- Velocity and temperature traversing
- CEMS PST audits
- In situ resistivity and particle sizing measurements
- Total hydrocarbon determination

## CAE Combustion

Because of the regulatory and operational complexity of incinerators, CAE has developed this specialty testing department. This group provides a wide variety of engineering consulting services for municipal incinerators, hospital waste incinerators and RCRA/TSCA incinerators. CAE is highly experienced in all phases of compliance testing for combustion systems from development of the sampling and analytical matrix to performance of all data reduction, validation and reporting.

The combustion group provides engineering consulting services for:

- Trial burn assistance
- DRE determination
- Municipal refuse incinerator testing
- Boiler efficiency studies
- HVT sampling
- Continuous emission monitoring consulting
- Design calculations
- Air pollution control permits
- Energy recovery design
- Multi-metals sampling
- Volatile/semi-volatile organics
- RCRA/TSCA incinerator testing
- Air toxic assessments
- Hospital waste incineration

## CAE Analytical Services

CAE's in-house laboratory provides technically accurate and timely chemical analysis. We can perform analyses for a variety of organics and inorganics including NOx, $SO/SO_2$, $H_2S$, VOCs and chlorides. Our comprehensive quality control program guarantees the accuracy of any analysis. CAE Analytical prides itself on providing clients with the most modern, accurate and cost-effective sample preparation and analysis available. We offer a full range of qualitative and quantitative analytical services including:

- Air quality
- Water quality
- Toxic and hazardous waste identification
- Occupational safety and health

The staff uses a variety of instrumental and wet chemical methods including:

- Chemical spectroscopy
- Gas chromatography of air, liquids, soil and water samples
- Atomic absorption spectroscopy of water soluble analytes
- EPA Method 25 analysis

## CAE Mobile Laboratories

CAE has developed mobile analytical laboratories in response to an increasing customer demand for faster turnaround of test results. CAE's mobile laboratories are equipped with state-of-the-art instrumentation, and are staffed with experienced chemists. On-site analysis also results in significant reduction in analytical costs.

Our services include:

- Portable gas chromatography
- Identification and characterization of VOCs
- Analysis of unstable compounds
- Soil and water screening
- Total reduced sulfur (TRS) characterization and EPA Methods 15 and 16
- Ambient emissions testing for OSHA and NIOSH compliance
- Well monitoring sample screening
- Fugitive emissions

## CAE Diagnostic Services

CAE Diagnostic Services offers performance diagnosis and troubleshooting services for electrostatic precipitators and flow control of directing devices. This group provides computer modeling, laboratory resistivity measurements, physical flow modeling, field testing and particulate characterization. Computer modeling applications include resistivity, precipitator performance and gas flow. Three-dimensional scale models of pollution control equipment, system ductwork or stacks can determine the gas flow distribution, pressure drop and proper vaning for overall system efficiency.

Futhermore, the Diagnostic department performs the following:

- Inspection and evaluation of precipitator characteristics
- Laboratory resistivity studies
- 3-D gas flow modeling
- Particulate characterization: resistivity, size, density, chemistry
- Field flow measurement
- ESP evaluation and consulting
- Selection of coals
- Fluid dynamics

## CAE Express

CAE Express provides emergency equipment sales. Delivery is guaranteed within 24 hours for:

- Source sampling equipment
- Source sampling supplies
- CEM system hardware

## CAE Instrument Rental

CAE Instrument Rental offers a diversified line of gas monitors of gas monitors for both source and ambient air applications including $O_2$, $CO_2$, CO, NOx, $SO_2$ and THC. A variety of industrial hygiene and personal survey tools are available as well as data acquisition systems, calibration materials and sampling supplies.

Our equipment includes:

- Source gas monitors
- Ambient air monitors
- Source gas sampling equipment
- Industrial hygiene tools
- Field screening equipment
- Calibration materials

## CAE Offices

**Corporate Office:**
500 W. Wood Street
Palatine, Illinois 60067
708-991-3300
800-627-0033

**Regional Offices:**
**California**
1017 Mark Avenue
Carpinteria, California 93013
805-684-0070

**Colorado**
6850 N. Broadway, Suite D
Denver, Colorado 80221
303-650-9745

**Pennsylvania**
Pittsburgh International Industrial Park
301 Hightech Drive
Oakdale, Pennsylvania 15071
412-695-2950

**International Offices:**
**Belgium**
Brusselsesteenweg 70A
1860 Meise, Belgium

**United Kingdom**
29 Shefford Road
Clifton, Bedfordshire
SG17 5RG

## CAE Departments

CAE Analytical
CAE Combustion
CAE Diagnostic
CAE Europe
CAE Express
CAE Instrument Rental
CAE Seminars
CAE Source Testing
CAE VOC Services

EMISSION FACTORS ARE BASED ON ESTIMATED ANNUAL PRODUCTION.
THEREFORE, DATA ARE D RATED.

D. Emission Data/Mass Flux Rates/Emission Factors

| Test ID | Parameter | Units | Live yeast | Aging yeast (dead) | Aging yeast (live) | waste beer | | | Lysed yeast | Ethanol condensate | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Values reported | | | | | | | | |
| | | | C9-2 | C9-4 | C9-6 | C9-8 | C9-9 | C9-10 | C9-12 | C9-B | AVERAGE |
| 1 | Stack temperature | Deg F | 80 | 80 | 80 | 75 | 68 | 82 | 76 | 84 | |
| CAN WASTE | Moisture | % | 5.4 | 4 | 4 | 4.1 | 5.6 | 2.6 | 13.7 | 4.8 | |
| FILLER OFF | Oxygen | % | 19.9 | 19.9 | 19.9 | 20.4 | 20 | 20.7 | 20.1 | ND | |
| ROOM STORAGE | Volumetric flow, actual | acfm | 42 | 42 | 42 | 9.4 | 9.4 | 9.4 | 42 | 7.2 | |
| VENT TANKS | Volumetric flow, standard | dscfm | 33 | 33 | 33 | 7.4 | 7.5 | 7.3 | 33 | 5.6 | |
| | Isokinetic variation | % | NA | NA | NA | NA | NA | NA | NA | NA | |
| Circle: Production or feed rate Capacity: | | 1000 bbl/hr | 2.374 | 2.374 | 2.374 | 2.374 | 2.374 | 2.374 | 2.374 | 2.374 | |
| | Pollutant concentrations: | | | | | | | | | | |
| | THC as propane | ppmdv | 2909 | 0 | 1176 | 1048 | 838 | 160 | 11898 | 17674 | |
| | CO2 | % | 2.8 | 2.8 | 1.3 | 0.2 | 0.2 | 0.2 | 0.3 | ND | |
| | Pollutant mass flux rates: | | | | | | | | | | |
| | THC as propane | lb/hr | 0.658 | 0.0000 | 0.266 | 0.0531 | 0.0431 | 0.0080 | 2.69 | 0.678 | 0.5495 |
| | THC as ethanol (CF = 2.36) | lb/hr | 1.55 | 0.00 | 0.628 | 0.125 | 0.102 | 0.0189 | 6.35 | 1.60 | 1.2969 |
| | CO2 | lb/hr | 6.37 | 6.37 | 2.96 | 0.102 | 0.103 | 0.101 | 0.683 | ND | 2.0858 |
| | Emission factors: | | | | | | | | | | |
| | THC as propane | lb/1000 bbl | 2.77E-01 | 0.00E+00 | 1.12E-01 | 2.24E-02 | 1.81E-02 | 3.37E-03 | 1.13E+00 | 2.86E-01 | 1.85E+00 |
| | THC as ethanol | lb/1000 bbl | 6.54E-01 | 0.00E+00 | 2.64E-01 | 5.28E-02 | 4.28E-02 | 7.96E-03 | 2.67E+00 | 6.74E-01 | 4.37E+00 |
| | CO2 | lb/1000 bbl | 2.68E+00 | 2.68E+00 | 1.25E+00 | 4.30E-02 | 4.36E-02 | 4.24E-02 | 2.87E-01 | 0.00E+00 | 7.03E+00 |

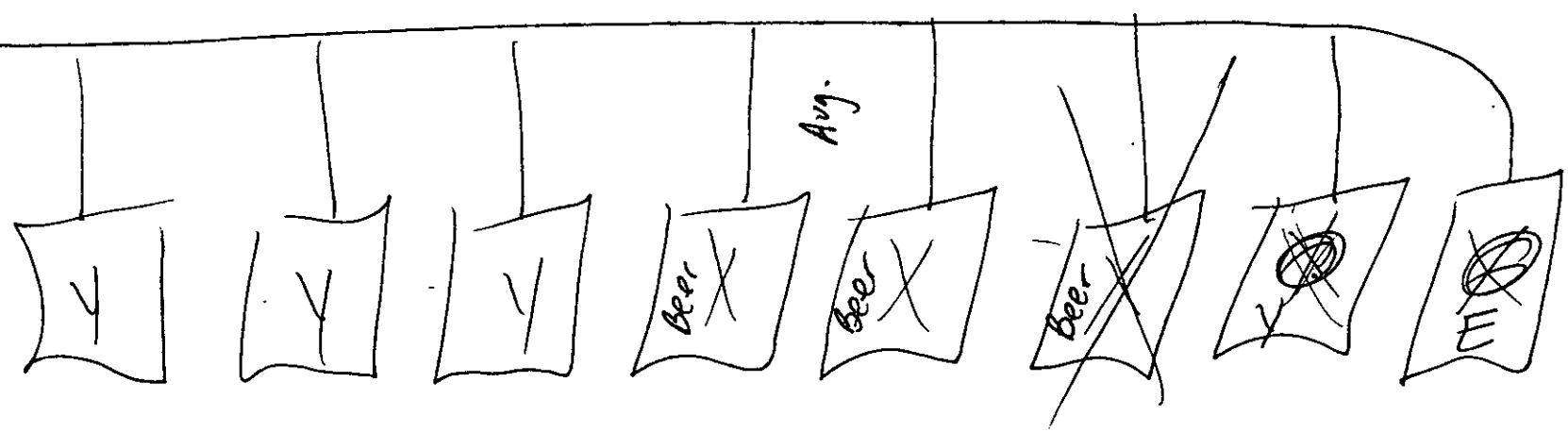
THIS WILL BE AN E RATED EMISSION FACTOR...PROCESS RATE ASSUMPTION OF CONSTANT PRODUCTION THROUGHOUT THE YEAR

Sect. 4. Ref 14
4-Coors

D. Emission Data/Mass Flux Rates/Emission Factors

| Test ID | Parameter | Units | C9-8 | C9-9 | AVERAGE |
|---|---|---|---|---|---|
| 1 | Stack temperature | Deg F | 75 | 68 | |
| WASTE | Moisture | % | 4.1 | 5.6 | |
| BEER | Oxygen | % | 20.4 | 20 | |
| STORAGE | Volumetric flow, actual | acfm | 9.4 | 9.4 | |
| TANKS | Volumetric flow, standard | dscfm | 7.4 | 7.5 | |
| | Isokinetic variation | % | NA | NA | |
| Circle: Production or feed rate Capacity: | | 1000 bbl/hr | 2.374 | 2.374 | |
| | Pollutant concentrations: | | | | |
| | THC as propane | ppmdv | 1048 | 838 | |
| | CO2 | % | 0.2 | 0.2 | |
| | Pollutant mass flux rates: | | | | |
| | THC as propane | lb/hr | 0.0531 | 0.0431 | |
| | THC as ethanol (CF = 2.36) | lb/hr | 0.125 | 0.102 | |
| | CO2 | lb/hr | 0.102 | 0.103 | |
| | Emission factors: multiply run average by 8 to represent all tanks. | | | | |
| | THC as propane | lb/1000 bbl | 0.022 | 0.018 | 0.16 |
| | THC as ethanol | lb/1000 bbl | 0.053 | 0.043 | 0.38 |
| | CO2 | lb/1000 bbl | 0.043 | 0.044 | 0.35 |

Questionable validity!! Do not use!

THIS WILL BE AN E RATED EMISSION FACTOR...PROCESS RATE ASSUMPTION OF CONSTANT PROD

7.7 lb/1000 bbl