

## Analytical Summary Report

Analysis Method: Walkley Black

Reviewed By: apatel

Parameter: TOC

Supervisor Review By: AMANDEEP

Run Number: LB87323

Constant: 0.399

Balance ID: WC SC-4

| Reagent/Standard                      | Lot/Log # |
|---------------------------------------|-----------|
| 1N Dicromate Solution for WB          | WP54774   |
| 0.5N Ferrous Sulfate Solution for WB  | WP54773   |
| Potassium Hydrogen Phthalate, 500 gms | W1455     |
| Ferrouin Indicator-0.025M, 120ML      | W2125     |

| Seq | LabID     | ClientID           | TrueVal<br>(mL/g) | DL | Sample<br>Wt (ml) | K2Cr2O7<br>(ml) | K2Cr2O7<br>(N) | FeSO4<br>Initial | FeSO4<br>Final | FeSO4<br>Diff | FeSO4<br>(N) | % TOC | TOC, PPM | Anal Date  | Anal<br>Time |
|-----|-----------|--------------------|-------------------|----|-------------------|-----------------|----------------|------------------|----------------|---------------|--------------|-------|----------|------------|--------------|
| 1   | LB87323BL | LB87323BL          |                   | 1  | 0.27              | 10.00           | 1.00           | 0.00             | 20.00          | 20.00         | 0.50         | 0.00  | 0        | 05/09/2017 | 10:00        |
| 2   | LB87323BS | LB87323BS          | 470000            | 1  | 0.06              | 10.00           | 1.00           | 0.00             | 5.80           | 5.80          | 0.50         | 47.22 | 472150   | 05/09/2017 | 10:05        |
| 3   | I2895-23  | SB-01-2.0-3.0      |                   | 1  | 0.81              | 10.00           | 1.00           | 0.00             | 10.40          | 10.40         | 0.50         | 2.36  | 23644    | 05/09/2017 | 10:11        |
| 4   | I2895-24  | SB-01-COMP (0-2.0) |                   | 1  | 0.30              | 10.00           | 1.00           | 0.00             | 5.40           | 5.40          | 0.50         | 9.71  | 97090    | 05/09/2017 | 10:15        |
| 5   | I2895-25  | SB-02-3.0-4.0      |                   | 1  | 1.97              | 10.00           | 1.00           | 0.00             | 12.20          | 12.20         | 0.50         | 0.79  | 7899     | 05/09/2017 | 10:20        |
| 6   | I2895-26  | SB-02-COMP (0-3.0) |                   | 1  | 1.80              | 10.00           | 1.00           | 0.00             | 9.60           | 9.60          | 0.50         | 1.15  | 11527    | 05/09/2017 | 10:26        |
| 7   | I2895-27  | SB-05-6.0-7.0      |                   | 1  | 1.84              | 10.00           | 1.00           | 0.00             | 6.80           | 6.80          | 0.50         | 1.43  | 14312    | 05/09/2017 | 10:31        |
| 8   | I2895-28  | SB-07-5.5-6.5      |                   | 1  | 0.32              | 10.00           | 1.00           | 0.00             | 5.20           | 5.20          | 0.50         | 9.23  | 92269    | 05/09/2017 | 10:37        |
| 9   | I2895-29  | SB-07-COMP (0-5.5) |                   | 1  | 0.66              | 10.00           | 1.00           | 0.00             | 5.60           | 5.60          | 0.50         | 4.35  | 43527    | 05/09/2017 | 10:44        |
| 10  | I2895-30  | SB-08-2.0-3.0      |                   | 1  | 0.47              | 10.00           | 1.00           | 0.00             | 5.20           | 5.20          | 0.50         | 6.28  | 62821    | 05/09/2017 | 10:51        |
| 11  | I2895-31  | SB-08-COMP (0-2.0) |                   | 1  | 1.85              | 10.00           | 1.00           | 0.00             | 5.00           | 5.00          | 0.50         | 1.62  | 16176    | 05/09/2017 | 10:57        |
| 12  | I2895-32  | SB-12-2.0-3.0      |                   | 1  | 1.11              | 10.00           | 1.00           | 0.00             | 5.20           | 5.20          | 0.50         | 2.66  | 26600    | 05/09/2017 | 11:02        |

$$\% \text{ TOC} = \frac{[\text{K2Cr2O7 (ml)} * \text{K2Cr2O7 (N)}] - [\text{FeSO4 Diff (mL)} * \text{FeSO4 (N)}]}{\text{Sampl t Wt}} * \text{Constant}$$

Sampl t Wt

$$\text{Toc, PPM} = \% \text{ TOC} * 10000$$

| Seq | LabID       | ClientID               | TrueVal<br>(mL/g) | DL | Sample<br>Wt (ml) | K2Cr2O7<br>(ml) | K2Cr2O7<br>(N) | FeSO4<br>Initial | FeSO4<br>Final | FeSO4<br>Diff | FeSO4<br>(N) | % TOC | TOC, PPM | Anal Date  | Anal<br>Time |
|-----|-------------|------------------------|-------------------|----|-------------------|-----------------|----------------|------------------|----------------|---------------|--------------|-------|----------|------------|--------------|
| 13  | I2895-33    | SB-12-COMP (0-2.0)     |                   | 1  | 0.45              | 10.00           | 1.00           | 0.00             | 5.60           | 5.60          | 0.50         | 6.38  | 63840    | 05/09/2017 | 11:08        |
| 14  | I2895-33DUP | SB-12-COMP (0-2.0) DUP |                   | 1  | 0.46              | 10.00           | 1.00           | 0.00             | 5.40           | 5.40          | 0.50         | 6.33  | 63320    | 05/09/2017 | 11:14        |

$$\% \text{ TOC} = \frac{[\text{K2Cr2O7 (ml)} * \text{K2Cr2O7 (N)}] - [\text{FeSO4 Diff (mL)} * \text{FeSO4 (N)}]}{\text{Sample Wt}} * \text{Constant}$$

Sample Wt

$$\text{Toc, PPM} = \% \text{ TOC} * 10000$$

LB 87823

## WORKLIST(Hardcopy Internal Chain)

WorkList Name : TOCWB050317 WorkList ID : 98075 Date : 5/3/2017 12:39:06 PM

| Due Date   | Matrix | Sample   | Test | Preservative | Customer | Storage Location | Customer Sample   | Collect Date | Method        |
|------------|--------|----------|------|--------------|----------|------------------|-------------------|--------------|---------------|
| 05/04/2017 | Solid  | I2895-23 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-01-2.0-3.0     | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-24 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-01-COMP(0-2.0) | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-25 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-02-3.0-4.0     | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-26 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-02-COMP(0-3.0) | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-27 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-05-6.0-7.0     | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-28 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-07-5.5-6.5     | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-29 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-07-COMP(0-5.5) | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-30 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-08-2.0-3.0     | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-31 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-08-COMP(0-2.0) | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-32 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-12-2.0-3.0     | 04/26/2017   | Walkley Black |
| 05/04/2017 | Solid  | I2895-33 | TOC  | Cool 4 deg C | LIRO01   | D41              | SB-12-COMP(0-2.0) | 04/26/2017   | Walkley Black |

Note:- samples are air dried overnight & then ground to less than 0.5 mm (in mortar)

Date/Time 5/8/2017 3:30 PM

Received by: ABRelinquished by: AB

Date/Time 5/8/2017 4:15 PM

Received by: CPRelinquished by: AB