# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202093

| Dimock Residential GW Site- 1201028<br>1202029 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 02/16/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 02/16/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 02/16/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 02/16/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | NO | * | DK | 02/16/2012 |

*LCS Recovery for Anionic Surfactants (124%) was outside acceptance limits (85-115) in B202093-BS1 for Surfactants (MBAS)*

*LCS Recovery for Anionic Surfactants (120%) was outside acceptance limits (85-115) in B202093-BSD1 for Surfactants (MBAS)*

*No qualifier needed for high recovery since samples are both ND.*

| | | | | |
|---|---|---|---|---|
| LCS's analyzed at the required frequency? | YES | * | DK | 02/16/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 02/16/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 02/16/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 02/16/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 02/16/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 02/16/2012 |

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202093

| Dimock Residential GW Site- 1201028 1202029 | Analysis | Matrix |
|---|---|---|
| | Surfactants (MBAS) | Aqueous |

| | | | |
|---|---|---|---|
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 02/16/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 02/16/2012 |

| Data review | | | Analyst Initials | Date |
|---|---|---|---|---|
| Was data peer reviewed? | YES | * | JH | 02/16/2012 |

* = Automated Response from Promium

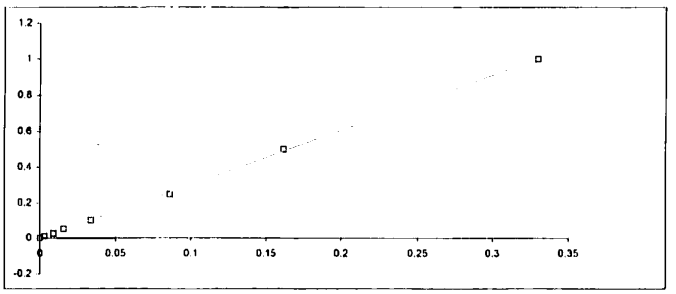
| | |
|---|---|
| Initial Calibration Date: 1/26/2012 | **Batch ID:** B202072 |
| Analyst: Dkay | Analysis Date/Time: 2/16/12 10:18 |
| Units: mg/L | Wavelength: 652 |
| Analyte: Anionic Surfactants | |

| Measured Response | Standards LD | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

**LINEAR EQUATION**

y=a+bx

| | |
|---|---|
| a= | 0.0004306 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF

Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Sample Absorbance | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.032 | 10:18 | 100 | 1 | 0.096 | 0.096 |
| ICB | | | 0 | 10:18 | 100 | 1 | -0.001 | -0.001 |
| 1202029-01 | FB18 | Sample | -0.001 | 10:18 | 100 | 1 | -0.004 | -0.004 |
| 1202029-02 | HW07 | Sample | 0.002 | 10:18 | 100 | 1 | 0.005 | 0.005 |
| B202093-BS1 | - | LCS | 0.107 | 10:18 | 100 | 2 | 0.324 | 0.648 |
| B202093-BSD1 | - | LCS Dup | 0.104 | 10:18 | 100 | 2 | 0.315 | 0.630 |
| B202093-MS1 | 1202029-02 | Matrix Spike | 0.184 | 10:18 | 100 | 1 | 0.558 | 0.558 |
| MDL #6 | | | 0.016 | 10:18 | 100 | 1 | 0.047 | 0.047 |
| MDL #7 | | | 0.016 | 10:18 | 100 | 1 | 0.047 | 0.047 |
| CCV | | | 0.030 | 10:18 | 100 | 1 | 0.090 | 0.090 |
| CCB | | | 0.000 | 10:18 | 100 | 1 | -0.001 | -0.001 |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202093
## Matrix: Aqueous

Prepared by: DK
Prepared on: 02/16/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2B0804 | Chloroform | 02/07/2017 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1202029-01 | <300 | | |
| | 1202029-02 | <300 | | |
| | B202093-BS1 | <300 | D2A2526 | |
| | B202093-BSD1 | <300 | D2A2526 | |
| | B202093-MS1 | <300 | D2A2527 | 1202029-02 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S202040**

Instrument: Hach DR 5000

**Printed: 2/16/2012 10:15:30AM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202040-CAL1 | QC | D2A2528 |
| | S202040-CAL2 | QC | D2A2529 |
| | S202040-CAL3 | QC | D2A2530 |
| | S202040-CAL4 | QC | D2A2531 |
| | S202040-CAL5 | QC | D2A2532 |
| | S202040-CAL6 | QC | D2A2533 |
| | S202040-CAL7 | QC | D2A2534 |
| | S202040-ICV1 | QC | D2A2531 |
| | S202040-ICB1 | QC | |
| | S202040-CCV1 | QC | D2A2531 |
| | S202040-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202029-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202029-01 | Surfactants (MBAS) | |
| | B202093-BS1 | QC | |
| | B202093-BSD1 | QC | |
| | B202093-MS1 | QC | |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202081

| Dimock Residential GW Site- 1201028<br>1202023 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 02/15/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 02/15/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 02/15/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 02/15/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 02/15/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 02/15/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 02/15/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 02/15/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 02/15/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 02/15/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 02/15/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 02/15/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 02/15/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202081

| Dimock Residential GW Site- 1201028<br>1202023 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * JH 02/15/2012

* = Automated Response from Promium

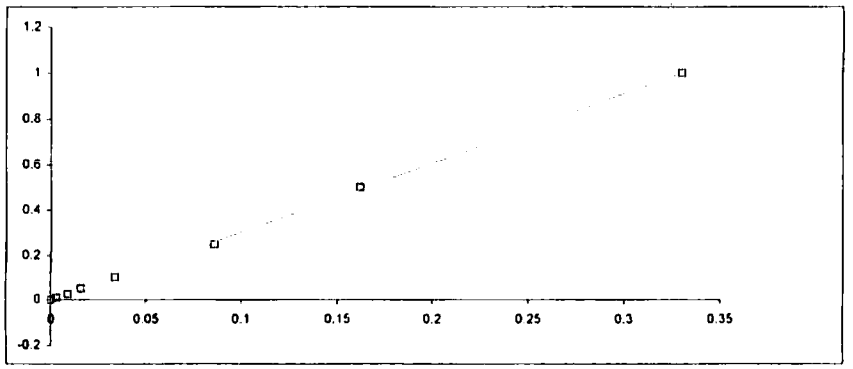
| | | | |
|---|---|---|---|
| Initial Calibration Date: | 1/26/2012 | Batch ID: | B202072 |
| Analyst: | Okay | Analysis Date/Time: | 2/15/12 1:47 |
| Units: | mg/L | Wavelength: | 652 |
| Analyte: | Anionic Surfactants | | |

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION

y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF

Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Sample Absorbance | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.031 | 2/15/12 1:47 | 100 | 1 | 0.093 | 0.093 |
| ICB | | | 0 | 2/15/12 1:47 | 100 | 1 | -0.001 | -0.001 |
| 1202023-01 | FB17 | Sample | -0.001 | 2/15/12 1:47 | 100 | 1 | -0.004 | -0.004 |
| 1202023-02 | HW03 | Sample | 0.003 | 2/15/12 1:47 | 100 | 1 | 0.008 | 0.008 |
| 1202023-03 | HW03z | Sample | 0.003 | 2/15/12 1:47 | 100 | 1 | 0.008 | 0.008 |
| 1202023-04 | HW57 | Sample | 0.001 | 2/15/12 1:47 | 100 | 1 | 0.002 | 0.002 |
| 1202023-05 | HW57-P | Sample | -0.003 | 2/15/12 1:47 | 100 | 1 | -0.010 | -0.010 |
| 1202023-06 | HW58 | Sample | -0.001 | 2/15/12 1:47 | 100 | 1 | -0.004 | -0.004 |
| 1202023-07 | HW59 | Sample | 0.002 | 2/15/12 1:47 | 100 | 1 | 0.005 | 0.005 |
| CCV | | | 0.030 | 2/15/12 1:47 | 100 | 1 | 0.090 | 0.090 |
| CCB | | | 0.000 | 2/15/12 1:47 | 100 | 1 | -0.001 | -0.001 |
| B202081-BS1 | - | LCS | 0.163 | 2/15/12 1:47 | 100 | 1 | 0.494 | 0.494 |
| B202081-BSD1 | - | LCS Dup | 0.167 | 2/15/12 1:47 | 100 | 1 | 0.506 | 0.506 |
| B202081-MS1 | 1202023-02 | Matrix Spike | 0.135 | 2/15/12 1:47 | 100 | 1 | 0.409 | 0.409 |
| CCV | | | 0.030 | 2/15/12 1:47 | 100 | 1 | 0.090 | 0.090 |
| CCB | | | 0.000 | 2/15/12 1:47 | 100 | 1 | -0.001 | -0.001 |




DIM0044531

DIM0044487

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202081
## Matrix: Aqueous

Prepared by: DK
Prepared on: 02/15/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2B0804 | Chloroform | 02/07/2017 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| [redacted] | [redacted] | [redacted] | | |
| | 1202023-02 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | 1202023-04 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | 1202023-06 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | B202081-BS1 | <300 | D2A2526 | |
| [redacted] | [redacted] | [redacted] | [redacted] | |
| | B202081-MS1 | <300 | D2A2527 | 1202023-02 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S202036**

Instrument: Hach DR 5000

**Printed: 2/15/2012 1:51:56PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202036-CAL1 | QC | D2A2528 |
| | S202036-CAL2 | QC | D2A2529 |
| | S202036-CAL3 | QC | D2A2530 |
| | S202036-CAL4 | QC | D2A2531 |
| | S202036-CAL5 | QC | D2A2532 |
| | S202036-CAL6 | QC | D2A2533 |
| | S202036-CAL7 | QC | D2A2534 |
| | S202036-ICV1 | QC | D2A2531 |
| | S202036-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202023-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202023-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202023-03 | Surfactants (MBAS) | |
| | S202036-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202023-04 | Surfactants (MBAS) | |
| | S202036-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202023-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202023-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202023-07 | Surfactants (MBAS) | |
| | B202081-BS1 | QC | |
| | B202081-BSD1 | QC | |
| | B202081-MS1 | QC | |
| | S202036-CCB2 | QC | |
| | S202036-CCV2 | QC | D2A2531 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202072

| Dimock Residential GW Site- 1201028<br>1202022 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | JH | 02/14/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | JH | 02/14/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | JH | 02/14/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | JH | 02/14/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | NO | * | JH | 02/14/2012 |

*LCS Recovery for Anionic Surfactants (119%) was outside acceptance limits (85-115) in B202072-BSD1 for Surfactants (MBAS)*

*No qualifier was needed due to samples being ND. No high sample bias*

| | | | | |
|---|---|---|---|---|
| LCS's analyzed at the required frequency? | YES | * | JH | 02/14/2012 |
| LCS RPD less than or equal to 20? | YES | * | JH | 02/14/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | JH | 02/14/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | JH | 02/14/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | JH | 02/14/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | JH | 02/14/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | JH | 02/14/2012 |

* = Automated Response from Promium

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202072

| Dimock Residential GW Site- 1201028 1202022 | Analysis | Matrix |
|---|---|---|
| | Surfactants (MBAS) | Aqueous |

| | | | |
|---|---|---|---|
| ICB/CCB result less than the reporting limit? | YES | JH | 02/14/2012 |

| Data review | | Analyst Initials | Date |
|---|---|---|---|
| Was data peer reviewed? | YES * | DK | 02/14/2012 |

* = Automated Response from Promium

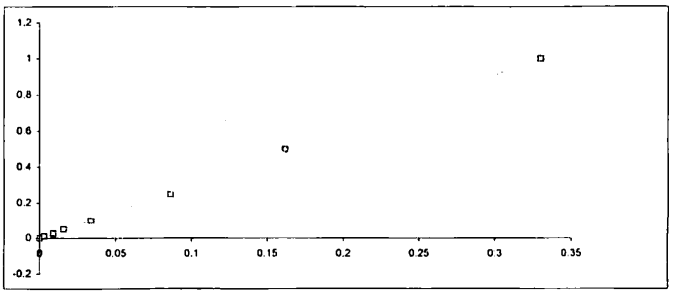
| | |
|---|---|
| Initial Calibration Date: 1/26/2012 | **Batch ID:** B202072 |
| Analyst: Jhale | Analysis Date/Time: 2/14/12 11:18 |
| Units: mg/L | Wavelength: 652 |
| Analyte: Anionic Surfactants | |

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

**LINEAR EQUATION**

y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF

Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Sample Absorbance | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.031 | 2/14/12 11:18 | | 1 | 0.093 | 0.093 |
| ICB | | | -0.001 | 2/14/12 11:18 | | 1 | -0.004 | -0.004 |
| 1202022-01 | FB16 | Sample | 0.001 | 2/14/12 11:18 | | 1 | 0.002 | 0.002 |
| 1202022-02 | HW11 | Sample | 0.001 | 2/14/12 11:18 | | 1 | 0.002 | 0.002 |
| 1202022-03 | HW11-P | Sample | 0.001 | 2/14/12 11:18 | | 1 | 0.002 | 0.002 |
| 1202022-04 | HW27 | Sample | -0.002 | 2/14/12 11:18 | | 1 | -0.007 | -0.007 |
| 1202022-05 | HW27r | Sample | 0.001 | 2/14/12 11:18 | | 1 | 0.002 | 0.002 |
| 1202022-06 | HW53 | Sample | -0.002 | 2/14/12 11:18 | | 1 | -0.007 | -0.007 |
| 1202022-07 | HW53-P | Sample | 0.000 | 2/14/12 11:18 | | 1 | -0.001 | -0.001 |
| 1202022-08 | HW55 | Sample | 0.000 | 2/14/12 11:18 | | 1 | -0.001 | -0.001 |
| CCV | | | 0.030 | 2/14/12 11:18 | | 1 | 0.090 | 0.090 |
| CCB | | | 0.000 | 2/14/12 11:18 | | 1 | -0.001 | -0.001 |
| B202072-BS1 | - | LCS | 0.172 | 2/14/12 11:18 | | 1 | 0.521 | 0.521 |
| B202072-BSD1 | - | LCS Dup | 0.206 | 2/14/12 11:18 | | 1 | 0.625 | 0.625 |
| B202072-MS1 | 1202022-02 | Matrix Spike | 0.155 | 2/14/12 11:18 | | 1 | 0.470 | 0.470 |
| CCV | | | 0.030 | 2/14/12 11:18 | | 1 | 0.090 | 0.090 |
| CCB | | | -0.001 | 2/14/12 11:18 | | 1 | -0.004 | -0.004 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S202031**

Instrument: Hach DR 5000

**Printed: 2/14/2012 11:15:59AM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202031-CAL1 | QC | D2A2528 |
| | S202031-CAL2 | QC | D2A2529 |
| | S202031-CAL3 | QC | D2A2530 |
| | S202031-CAL4 | QC | D2A2531 |
| | S202031-CAL5 | QC | D2A2532 |
| | S202031-CAL6 | QC | D2A2533 |
| | S202031-CAL7 | QC | D2A2534 |
| | S202031-ICV1 | QC | D2A2531 |
| | S202031-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202022-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202022-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202022-03 | Surfactants (MBAS) | |
| | S202031-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202022-04 | Surfactants (MBAS) | |
| | S202031-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202022-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202022-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202022-07 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202022-08 | Surfactants (MBAS) | |
| | B202072-BS1 | QC | |
| | B202072-BSD1 | QC | |
| | B202072-MS1 | QC | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202072
## Matrix: Aqueous

Prepared by: JH
Prepared on: 02/14/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC. ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2B0804 | Chloroform | 02/07/2017 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| [redacted] | 1202022-01 | <300 | [redacted] | [redacted] |
| | 1202022-02 | <300 | | |
| [redacted] | 1202022-03 | <300 | [redacted] | [redacted] |
| | 1202022-04 | <300 | | |
| [redacted] | 1202022-05 | <300 | [redacted] | [redacted] |
| | 1202022-06 | <300 | | |
| [redacted] | 1202022-07 | <300 | [redacted] | [redacted] |
| | 1202022-08 | <300 | | |
| [redacted] | B202072-BS1 | [redacted] | D2A2526 | [redacted] |
| | B202072-BSD1 | | D2A2526 | |
| [redacted] | B202072-MS1 | <300 | D2A2527 | 1202022-02 |

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# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202065

| Dimock Residential GW Site- 1201028<br>1202021 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | JH | 02/13/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | JH | 02/13/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | JH | 02/13/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | JH | 02/13/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | JH | 02/13/2012 |
| LCS's analyzed at the required frequency? | YES | * | JH | 02/13/2012 |
| LCS RPD less than or equal to 20? | YES | * | JH | 02/13/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | JH | 02/13/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | JH | 02/13/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | JH | 02/13/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | JH | 02/13/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | JH | 02/13/2012 |
| ICB/CCB result less than the reporting limit? | YES | JH | 02/13/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202065

| Dimock Residential GW Site- 1201028<br>1202021 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * DK 02/13/2012

* = Automated Response from Promium

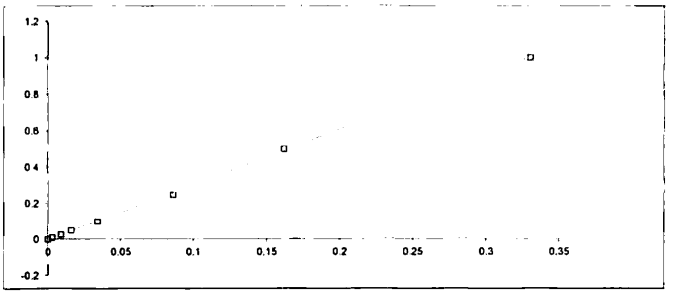
Initial Calibration Date: 1/26/2012
Analyst: JHALE
Units: mg/L
Analyte: Anionic Surfactants

Batch ID: ~~0301104~~ B202005
Analysis Date/Time: 2/11/12 14:50

| [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.031 | 2/11/12 14:50 | 100 | 1 | 0.093 | 0.0930 |
| ICB | | | 0.000 | 2/11/12 14:50 | 100 | 1 | -0.001 | -0.0013 |
| 1202021-01 | FB15 | Sample | 0.001 | 2/11/12 14:50 | 100 | 1 | 0.002 | 0.0018 |
| -02 | HW16 | Sample | 0.008 | 2/11/12 14:50 | 100 | 1 | 0.023 | 0.0231 |
| -03 | HW16-P | Sample | 0.003 | 2/11/12 14:50 | 100 | 1 | 0.008 | 0.0079 |
| -04 | HW16z | Sample | 0.008 | 2/11/12 14:50 | 100 | 1 | 0.023 | 0.0231 |
| -05 | HW36n | Sample | 0.001 | 2/11/12 14:50 | 100 | 1 | 0.002 | 0.0018 |
| -06 | HW36n-P | Sample | 0.001 | 2/11/12 14:50 | 100 | 1 | 0.002 | 0.0018 |
| ICV | | | 0.031 | 2/11/12 14:50 | 100 | 1 | 0.093 | 0.0930 |
| ICB | | | 0.000 | 2/11/12 14:50 | 100 | 1 | -0.001 | -0.0013 |
| -07 | HW54 | Sample | 0.000 | 2/11/12 14:50 | 100 | 1 | -0.001 | -0.0013 |
| -08 | HW54-P | Sample | 0.001 | 2/11/12 14:50 | 100 | 1 | 0.002 | 0.0018 |
| AQC 1 | - | LCS | 0.172 | 2/11/12 14:50 | 100 | 1 | 0.521 | 0.5215 |
| AQC 2 | - | LCS Dup | 0.170 | 2/11/12 14:50 | 100 | 1 | 0.515 | 0.5154 |
| HW16 MS | HW16 | Matrix Spike | 0.168 | 2/11/12 14:50 | 100 | 1 | 0.509 | 0.5093 |
| CCV | | | 0.031 | 2/11/12 14:50 | 100 | 1 | 0.093 | 0.0930 |
| CCB | | | 0.000 | 2/11/12 14:50 | 100 | 1 | -0.001 | -0.0013 |

DIM0044542

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE
**S202030**

Instrument: Hach DR 5000

**Printed: 2/13/2012 11:20:31AM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202030-CAL1 | QC | D2A2528 |
| | S202030-CAL2 | QC | D2A2529 |
| | S202030-CAL3 | QC | D2A2530 |
| | S202030-CAL4 | QC | D2A2531 |
| | S202030-CAL5 | QC | D2A2532 |
| | S202030-CAL6 | QC | D2A2533 |
| | S202030-CAL7 | QC | D2A2534 |
| | S202030-ICV1 | QC | D2A2531 |
| | S202030-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202021-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202021-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202021-03 | Surfactants (MBAS) | |
| | S202030-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202021-04 | Surfactants (MBAS) | |
| | S202030-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202021-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202021-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202021-07 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202021-08 | Surfactants (MBAS) | |
| | B202065-BS1 | QC | |
| | B202065-BSD1 | QC | |
| | B202065-MS1 | QC | |



DIM0044487

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region 2 Laboratory**

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202065
## Matrix: Aqueous

Prepared by: JH
Prepared on: 02/11/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2B0804 | Chloroform | 02/07/2017 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| [redacted] | [redacted] | [redacted] | | |
| | 1202021-02 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | 1202021-04 | <300 | | |
| | 1202021-05 | <300 | | |
| | 1202021-06 | <300 | | |
| | 1202021-07 | <300 | | |
| | 1202021-08 | <300 | | |
| | B202065-BS1 | | D2A2526 | |
| | B202065-BSD1 | | D2A2526 | |
| [redacted] | [redacted] | | [redacted] | [redacted] |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202058

| Dimock Residential GW Site- 1201028<br>1202019 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 02/10/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 02/10/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 02/10/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 02/10/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 02/10/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 02/10/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 02/10/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 02/10/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 02/10/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 02/10/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 02/10/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 02/10/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 02/10/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202058

| Dimock Residential GW Site- 1201028 1202019 | Analysis | Matrix |
|---|---|---|
| | Surfactants (MBAS) | Aqueous |

Was data peer reviewed? YES * FE 02/10/2012

* = Automated Response from Promium

VFF
2/10/12

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S202026**

Instrument: Hach DR 5000

**Printed: 2/10/2012**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202026-CAL1 | QC | D2A2528 |
| | S202026-CAL2 | QC | D2A2529 |
| | S202026-CAL3 | QC | D2A2530 |
| | S202026-CAL4 | QC | D2A2531 |
| | S202026-CAL5 | QC | D2A2532 |
| | S202026-CAL6 | QC | D2A2533 |
| | S202026-CAL7 | QC | D2A2534 |
| | S202026-ICV1 | QC | D2A2531 |
| | S202026-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202019-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202019-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202019-03 | Surfactants (MBAS) | |
| | S202026-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202019-04 | Surfactants (MBAS) | |
| | S202026-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202019-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202019-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202019-07 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202019-08 | Surfactants (MBAS) | |
| | B202058-BS1 | QC | |
| | B202058-BSD1 | QC | |
| | B202058-MS1 | QC | |
| | S202026-CCB2 | QC | |
| | S202026-CCV2 | QC | D2A2531 |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

UFF
2/13/12

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202058
## Matrix: Aqueous

Prepared by: DK
Prepared on: 02/10/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std.. 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2B0804 | Chloroform | 02/07/2017 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1202019-01 | <300 | | |
| | 1202019-02 | <300 | | |
| | 1202019-03 | <300 | | |
| | 1202019-04 | <300 | | |
| | 1202019-05 | <300 | | |
| | 1202019-06 | <300 | | |
| | 1202019-07 | <300 | | |
| | 1202019-08 | <300 | | |
| | B202058-BS1 | <300 | D2A2526 | |
| | B202058-BSD1 | <300 | D2A2526 | |
| | B202058-MS1 | <300 | D2A2527 | 1202019-02 |

| | | | |
|---|---|---|---|
| Initial Calibration Date: | 1/26/2012 | **Batch ID:** | B202058 |
| Analyst: | Okay | Analysis Date/Time: | 2/10/12 13:37 |
| Units: | mg/L | Wavelength: | 652 |
| Analyte: | Anionic Surfactants | | |

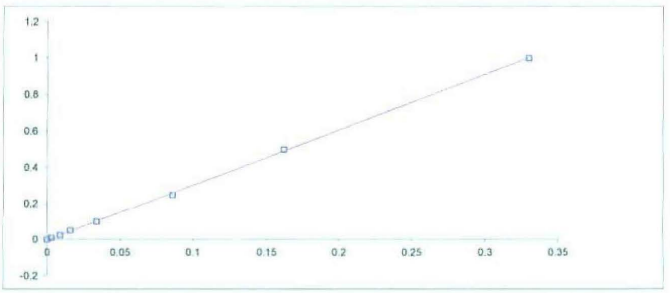
| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

√ft
2/10/12

**LINEAR EQUATION**

y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Sample Absorbance | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.031 | 13:37 | 100 | 1 | 0.093 | 0.093 |
| ICB | | | 0 | 13:37 | 100 | 1 | -0.001 | -0.001 |
| 1202019-01 | FB14 | Sample | -0.002 | 13:37 | 100 | 1 | -0.007 | -0.007 |
| 1202019-02 | HW21 | Sample | 0.002 | 13:37 | 100 | 1 | 0.005 | 0.005 |
| 1202019-03 | HW21z | Sample | 0.000 | 13:37 | 100 | 1 | -0.001 | -0.001 |
| 1202019-04 | HW22 | Sample | 0.003 | 13:37 | 100 | 1 | 0.008 | 0.008 |
| 1202019-05 | HW22-P | Sample | 0.001 | 13:37 | 100 | 1 | 0.002 | 0.002 |
| 1202019-06 | HW44 | Sample | 0.000 | 13:37 | 100 | 1 | -0.001 | -0.001 |
| 1202019-07 | HW49 | Sample | -0.002 | 13:37 | 100 | 1 | -0.007 | -0.007 |
| 1202019-08 | HW49-P | Sample | 0.001 | 13:37 | 100 | 1 | 0.002 | 0.002 |
| CCV | | | 0.031 | 13:37 | 100 | 1 | 0.093 | 0.093 |
| CCB | | | 0.000 | 13:37 | 100 | 1 | -0.001 | -0.001 |
| B202058-BS1 | - | LCS | 0.160 | 13:37 | 100 | 1 | 0.485 | 0.485 |
| B202058-BSD1 | - | LCS Dup | 0.163 | 13:37 | 100 | 1 | 0.494 | 0.494 |
| B202058-MS1 | 1202019-02 | Matrix Spike | 0.147 | 13:37 | 100 | 1 | 0.445 | 0.445 |
| CCV | | | 0.031 | 13:37 | 100 | 1 | 0.093 | 0.093 |
| CCB | | | -0.001 | 13:37 | 100 | 1 | -0.004 | -0.004 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202050

| Dimock Residential GW Site- 1201028<br>1202018 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 02/09/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 02/09/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 02/09/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 02/09/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 02/09/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 02/09/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 02/09/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 02/09/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 02/09/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 02/09/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 02/09/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 02/09/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 02/09/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202050

| Dimock Residential GW Site- 1201028<br>1202018 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * FE 02/09/2012

* = Automated Response from Promium

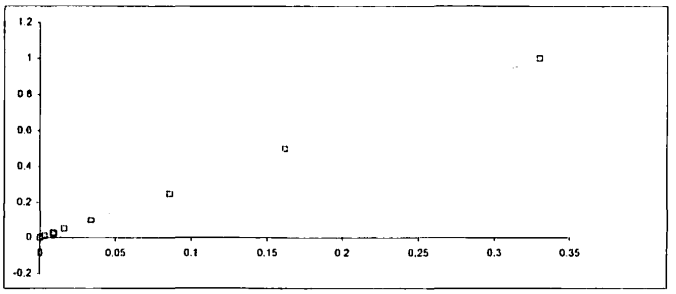
| | |
|---|---|
| Initial Calibration Date: 1/26/2012 | Batch ID: B202050 |
| Analyst: Dkay | Analysis Date/Time: 2/9/12 13:20 |
| Units: mg/L | Wavelength: 652 |
| Analyte: Anionic Surfactants | |

VFE
2/9/12

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998818 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Sample Absorbance | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.033 | 2/9/12 13:20 | 100 | 1 | 0.099 | 0.099 |
| ICB | | | 0 | 2/9/12 13:20 | 100 | 1 | -0.001 | -0.001 |
| 1202018-01 | FB13 | Sample | 0.002 | 2/9/12 13:20 | 100 | 1 | 0.005 | 0.005 |
| 1202018-02 | HW23 | Sample | 0.000 | 2/9/12 13:20 | 100 | 1 | -0.001 | -0.001 |
| 1202018-03 | HW23-P | Sample | 0.000 | 2/9/12 13:20 | 100 | 1 | -0.001 | -0.001 |
| 1202018-04 | HW38 | Sample | 0.001 | 2/9/12 13:20 | 100 | 1 | 0.002 | 0.002 |
| 1202018-05 | HW38-P | Sample | 0.002 | 2/9/12 13:20 | 100 | 1 | 0.005 | 0.005 |
| 1202018-06 | HW47 | Sample | 0.005 | 2/9/12 13:20 | 100 | 1 | 0.014 | 0.014 |
| 1202018-07 | HW47-P | Sample | 0.001 | 2/9/12 13:20 | 100 | 1 | 0.002 | 0.002 |
| 1202018-08 | HW48 | Sample | 0.002 | 2/9/12 13:20 | 100 | 1 | 0.005 | 0.005 |
| 1202018-09 | HW48z | Sample | 0.006 | 2/9/12 13:20 | 100 | 1 | 0.017 | 0.017 |
| CCV | | | 0.031 | 2/9/12 13:20 | 100 | 1 | 0.093 | 0.093 |
| CCB | | | 0.000 | 2/9/12 13:20 | 100 | 1 | -0.001 | -0.001 |
| B202050-BS1 | - | LCS | 0.177 | 2/9/12 13:20 | 100 | 1 | 0.537 | 0.537 |
| B202050-BSD1 | - | LCS Dup | 0.187 | 2/9/12 13:20 | 100 | 1 | 0.567 | 0.567 |
| B202050-MS1 | 1202018-02 | Matrix Spike | 0.151 | 2/9/12 13:20 | 100 | 1 | 0.458 | 0.458 |
| CCV | | | 0.032 | 2/9/12 13:20 | 100 | 1 | 0.096 | 0.096 |
| CCB | | | 0.000 | 2/9/12 13:20 | 100 | 1 | -0.001 | -0.001 |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

VFE
2/9

# Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202050
## Matrix: Aqueous

Prepared by: DK
Prepared on: 02/09/2012

VFE
2/9/12

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2B0804 | Chloroform | 02/07/2017 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1202018-01 | <300 | | |
| | 1202018-02 | <300 | | |
| | 1202018-03 | <300 | | |
| | 1202018-04 | <300 | | |
| | 1202018-05 | <300 | | |
| | 1202018-06 | <300 | | |
| | 1202018-07 | <300 | | |
| | 1202018-08 | <300 | | |
| | 1202018-09 | <300 | | |
| | B202050-BS1 | | D2A2526 | |
| | B202050-BSD1 | | D2A2526 | |
| | B202050-MS1 | <300 | D2A2527 | 1202018-02 |



DIM0044552

DIM0044487

DIM0044553

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE
**S202021**

Instrument: Hach DR 5000

**Printed: 2/9/2012 1:22:33PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202021-CAL1 | QC | D2A2528 |
| | S202021-CAL2 | QC | D2A2529 |
| | S202021-CAL3 | QC | D2A2530 |
| | S202021-CAL4 | QC | D2A2531 |
| | S202021-CAL5 | QC | D2A2532 |
| | S202021-CAL6 | QC | D2A2533 |
| | S202021-CAL7 | QC | D2A2534 |
| | S202021-ICV1 | QC | D2A2531 |
| | S202021-ICB1 | QC | |
| | S202021-CCV1 | QC | D2A2531 |
| | S202021-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202018-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202018-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202018-03 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202018-04 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202018-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202018-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202018-07 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202018-08 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202018-09 | Surfactants (MBAS) | |
| | B202050-BS1 | QC | |
| | B202050-BSD1 | QC | |
| | B202050-MS1 | QC | |
| | S202021-CCB2 | QC | |
| | S202021-CCV2 | QC | D2A2531 |



DIM0044487

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202043

| Dimock Residential GW Site- 1201028<br>1202014 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | JH | 02/08/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | JH | 02/08/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | JH | 02/08/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | JH | 02/08/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | JH | 02/08/2012 |
| LCS's analyzed at the required frequency? | YES | * | JH | 02/08/2012 |
| LCS RPD less than or equal to 20? | YES | * | JH | 02/08/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | JH | 02/08/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | JH | 02/08/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | JH | 02/08/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | JH | 02/08/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | JH | 02/08/2012 |
| ICB/CCB result less than the reporting limit? | YES | JH | 02/08/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202043

| Dimock Residential GW Site- 1201028 1202014 | Analysis | Matrix |
|---|---|---|
| | Surfactants (MBAS) | Aqueous |

Was data peer reviewed? YES * DK 02/08/2012

* = Automated Response from Promium

DIM00044487

Initial Calibration Date: 1/26/2012
Analyst: Jhale
Units: mg/L
Analyte: Anionic Surfactants

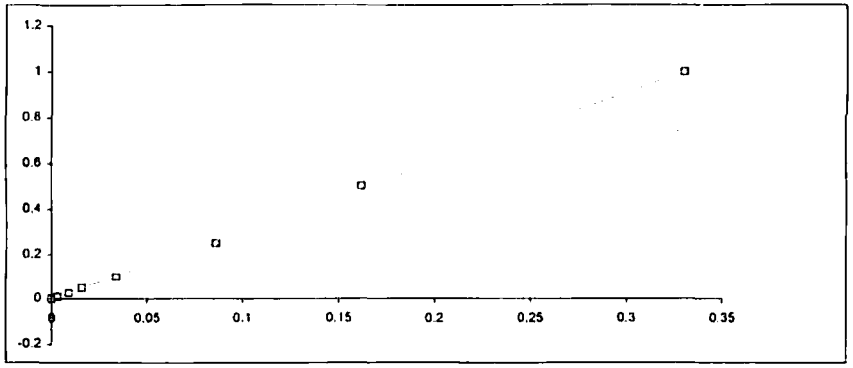
**Batch ID:** B202043
Analysis Date/Time: 2/7/12 13:36

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

**LINEAR EQUATION**

y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.032 | 2/7/12 13:36 | | 1 | 0.09599878 | 0.09600 |
| ICB | | | 0.000 | 2/7/12 13:36 | | 1 | -0.001252033 | -0.00125 |
| 1202014-01 | FB12 | Sample | -0.002 | 2/7/12 13:36 | | 1 | -0.007330209 | -0.00733 |
| 1202014-02 | HW15a | Sample | 0.002 | 2/7/12 13:36 | | 1 | 0.004826143 | 0.00483 |
| 1202014-03 | HW15a-P | Sample | -0.003 | 2/7/12 13:36 | | 1 | -0.010369297 | -0.01037 |
| 1202014-04 | HW31 | Sample | 0.010 | 2/7/12 13:36 | | 1 | 0.029138846 | 0.02914 |
| 1202014-05 | HW31-P | Sample | -0.002 | 2/7/12 13:36 | | 1 | -0.007330209 | -0.00733 |
| 1202014-06 | HW31z | Sample | 0.010 | 2/7/12 13:36 | | 1 | 0.029138846 | 0.02914 |
| 1202014-07 | HW51 | Sample | -0.003 | 2/7/12 13:36 | | 1 | -0.010369297 | -0.01037 |
| 1202014-08 | HW51-P | Sample | -0.003 | 2/7/12 13:36 | | 1 | -0.010369297 | -0.01037 |
| CCV | | | 0.032 | 2/7/12 13:36 | | 1 | 0.09599878 | 0.09600 |
| CCB | | | 0.001 | 2/7/12 13:36 | | 1 | 0.001787055 | 0.00179 |
| B202043-BS1 | - | LCS | 0.167 | 2/7/12 13:36 | | 1 | 0.506275648 | 0.50628 |
| B202043-BSD1 | - | LCS Dup | 0.167 | 2/7/12 13:36 | | 1 | 0.506275648 | 0.50628 |
| B202043-MS1 | 1202014-02 | Matrix Spike | 0.170 | 2/7/12 13:36 | | 1 | 0.515392912 | 0.51539 |
| MDL (0.05mg/L) | | | 0.009 | 2/7/12 13:36 | | 1 | 0.026099758 | 0.02610 |
| CCV | | | 0.032 | 2/7/12 13:36 | | 1 | 0.09599878 | 0.09600 |
| CCB | | | 0.001 | 2/7/12 13:36 | | 1 | 0.001787055 | 0.00179 |



DIM00044556

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### ANALYSIS SEQUENCE

**S202015**

Instrument: Hach DR 5000

**Printed: 2/8/2012 1:49:39PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202015-CAL1 | QC | D2A2528 |
| | S202015-CAL2 | QC | D2A2529 |
| | S202015-CAL3 | QC | D2A2530 |
| | S202015-CAL4 | QC | D2A2531 |
| | S202015-CAL5 | QC | D2A2532 |
| | S202015-CAL6 | QC | D2A2533 |
| | S202015-CAL7 | QC | D2A2534 |
| | S202015-ICV1 | QC | D2A2531 |
| | S202015-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202014-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202014-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202014-03 | Surfactants (MBAS) | |
| | S202015-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202014-04 | Surfactants (MBAS) | |
| | S202015-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202014-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202014-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202014-07 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202014-08 | Surfactants (MBAS) | |
| | B202043-BS1 | QC | |
| | B202043-BSD1 | QC | |
| | B202043-MS1 | QC | |

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region 2 Laboratory**

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202043
## Matrix: Aqueous

Prepared by: JH
Prepared on: 02/08/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1202014-01 | <300 | | |
| | 1202014-02 | <300 | | |
| | 1202014-03 | <300 | | |
| | 1202014-04 | <300 | | |
| | 1202014-05 | <300 | | |
| | 1202014-06 | <300 | | |
| | 1202014-07 | <300 | | |
| | 1202014-08 | <300 | | |
| | B202043-BS1 | | D2A2526 | |
| | B202043-BSD1 | | D2A2526 | |
| | B202043-MS1 | <300 | D2A2527 | 1202014-02 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202038

| Dimock Residential GW Site- 1201028<br>1202011 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | JH | 02/07/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | JH | 02/07/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | JH | 02/07/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | JH | 02/07/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | JH | 02/07/2012 |
| LCS's analyzed at the required frequency? | YES | * | JH | 02/07/2012 |
| LCS RPD less than or equal to 20? | YES | * | JH | 02/07/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | JH | 02/07/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | JH | 02/07/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | JH | 02/07/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | JH | 02/07/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | JH | 02/07/2012 |
| ICB/CCB result less than the reporting limit? | YES | JH | 02/07/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202038

| Dimock Residential GW Site- 1201028<br>1202011 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * DK 02/07/2012

* = Automated Response from Promium

DIM00044487

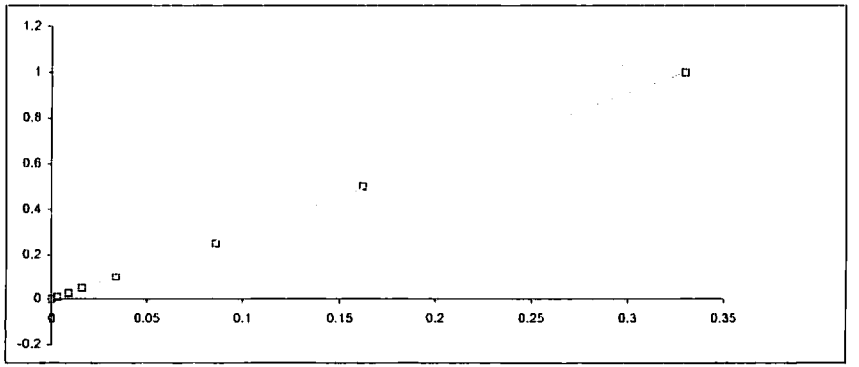
Initial Calibration Date: 1/26/2012
Analyst: Jhale
Units: mg/L
Analyte: Anionic Surfactants

**Batch ID:** B202038
Analysis Date/Time: 2/7/12 14:42

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3288682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.034 | 2/7/12 14:42 | | 1 | 0.102076956 | 0.1021 |
| ICB | | | 0.002 | 2/7/12 14:42 | | 1 | 0.004826143 | 0.0048 |
| 1202011-01 | EB02 | Sample | -0.003 | 2/7/12 14:42 | | 1 | -0.010369297 | -0.0104 |
| 1202011-02 | FB11 | Sample | -0.003 | 2/7/12 14:42 | | 1 | -0.010369297 | -0.0104 |
| 1202011-03 | HW30 | Sample | -0.002 | 2/7/12 14:42 | | 1 | -0.007330209 | -0.0073 |
| 1202011-04 | HW30-P | Sample | -0.001 | 2/7/12 14:42 | | 1 | -0.004291121 | -0.0043 |
| 1202011-05 | HW43 | Sample | -0.002 | 2/7/12 14:42 | | 1 | -0.007330209 | -0.0073 |
| 1202011-06 | HW43-P | Sample | -0.002 | 2/7/12 14:42 | | 1 | -0.007330209 | -0.0073 |
| 1202011-07 | HW45 | Sample | -0.003 | 2/7/12 14:42 | | 1 | -0.010369297 | -0.0104 |
| 1202011-08 | HW45-P | Sample | -0.002 | 2/7/12 14:42 | | 1 | -0.007330209 | -0.0073 |
| CCV | | | 0.032 | 2/7/12 14:42 | | 1 | 0.09599878 | 0.0960 |
| CCB | | | 0.002 | 2/7/12 14:42 | | 1 | 0.004826143 | 0.0048 |
| B202038-BS1 | - | LCS | 0.171 | 2/7/12 14:42 | | 1 | 0.518432 | 0.5184 |
| B202038-BSD1 | - | LCS Dup | 0.185 | 2/7/12 14:42 | | 1 | 0.560979231 | 0.5610 |
| B202038-MS1 | 1202011-03 | Matrix Spike | 0.168 | 2/7/12 14:42 | | 1 | 0.509314736 | 0.5093 |
| CCV | | | 0.032 | 2/7/12 14:42 | | 1 | 0.09599878 | 0.0960 |
| CCB | | | 0.001 | 2/7/12 14:42 | | 1 | 0.001787055 | 0.0018 |



DIM00044561

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S202009**

Instrument: Hach DR 5000

**Printed: 2/7/2012 2:38:55PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202009-CAL1 | QC | D2A2528 |
| | S202009-CAL2 | QC | D2A2529 |
| | S202009-CAL3 | QC | D2A2530 |
| | S202009-CAL4 | QC | D2A2531 |
| | S202009-CAL5 | QC | D2A2532 |
| | S202009-CAL6 | QC | D2A2533 |
| | S202009-CAL7 | QC | D2A2534 |
| | S202009-ICV1 | QC | D2A2531 |
| | S202009-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202010-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202010-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202010-03 | Surfactants (MBAS) | |
| | S202009-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202010-04 | Surfactants (MBAS) | |
| | S202009-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202010-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202010-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202010-07 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202010-08 | Surfactants (MBAS) | |
| | B202030-BS1 | QC | |
| | B202030-BSD1 | QC | |
| | B202030-MS1 | QC | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202038
## Matrix: Aqueous

Prepared by: JH
Prepared on: 02/07/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC. ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site-1201028 | 1202011-01 | <300 | | |
| | 1202011-02 | <300 | | |
| | 1202011-03 | <300 | | |
| | 1202011-04 | <300 | | |
| | 1202011-05 | <300 | | |
| | 1202011-06 | <300 | | |
| | 1202011-07 | <300 | | |
| | 1202011-08 | <300 | | |
| | B202038-BS1 | | D2A2526 | |
| | B202038-BSD1 | | D2A2526 | |
| | B202038-MS1 | <300 | D2A2527 | 1202011-03 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202030

| Dimock Residential GW Site- 1201028<br>1202010 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Per Reviewed [illegible] 2/6/12

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | JH | 02/06/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | JH | 02/06/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | JH | 02/06/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | JH | 02/06/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | JH | 02/06/2012 |
| LCS's analyzed at the required frequency? | YES | * | JH | 02/06/2012 |
| LCS RPD less than or equal to 20? | YES | * | JH | 02/06/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | JH | 02/06/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | JH | 02/06/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | JH | 02/06/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | JH | 02/06/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | JH | 02/06/2012 |
| ICB/CCB result less than the reporting limit? | YES | JH | 02/06/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202030

| Dimock Residential GW Site- 1201028<br>1202010 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * FE 02/06/2012

*Peer Reviewed By Fred Elsen 2/6/12*

Fred W. Elsen Jr. 2/6/12

* = Automated Response from Promium

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

VFE
2/6/12

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202030
## Matrix: Aqueous

Prepared by: JH
Prepared on: 02/04/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1202010-01 | <300 | | |
| | 1202010-02 | <300 | | |
| | 1202010-03 | <300 | | |
| | 1202010-04 | <300 | | |
| | 1202010-05 | <300 | | |
| | 1202010-06 | <300 | | |
| | 1202010-07 | <300 | | |
| | 1202010-08 | <300 | | |
| | B202030-BS1 | | D2A2526 | |
| | B202030-BSD1 | | D2A2526 | |
| | B202030-MS1 | | D2A2527 | 1202010-02 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

VFC
2/6/12

### ANALYSIS SEQUENCE
**S202006**

Instrument: Hach DR 5000

**Printed: 2/6/2012 9:29:22AM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202006-CAL1 | QC | D2A2528 |
| | S202006-CAL2 | QC | D2A2529 |
| | S202006-CAL3 | QC | D2A2530 |
| | S202006-CAL4 | QC | D2A2531 |
| | S202006-CAL5 | QC | D2A2532 |
| | S202006-CAL6 | QC | D2A2533 |
| | S202006-CAL7 | QC | D2A2534 |
| | S202006-ICV1 | QC | D2A2531 |
| | S202006-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202008-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202008-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202008-03 | Surfactants (MBAS) | |
| | S202006-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202008-04 | Surfactants (MBAS) | |
| | S202006-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202008-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202008-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202008-07 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202008-08 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202008-09 | Surfactants (MBAS) | |
| | B202025-MS1 | QC | |
| | B202025-BS1 | QC | |
| | B202025-BSD1 | QC | |

Initial Calibration Date: 1/26/2012
Analyst: JHALE
Units: mg/L
Analyte: Anionic Surfactants

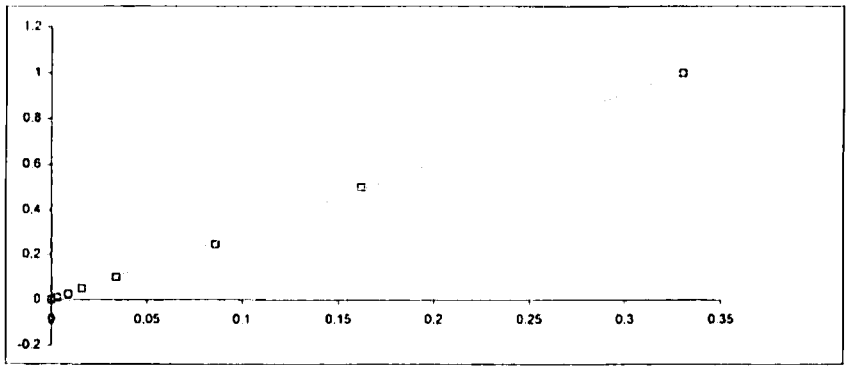
Batch ID: B201104
Analysis Date/Time: 2/4/12 13:40

JFE
2/4/12

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.033 | 2/4/12 13:40 | 100 | 1 | 0.099 | 0.0990 |
| ICB | | | 0.000 | 2/4/12 13:40 | 100 | 1 | -0.001 | -0.0013 |
| 1202010-01 | FB10 | Sample | 0.001 | 2/4/12 13:40 | 100 | 1 | 0.002 | 0.0018 |
| -02 | HW09 | Sample | 0.000 | 2/4/12 13:40 | 100 | 1 | -0.001 | -0.0013 |
| -03 | HW09-P | Sample | 0.001 | 2/4/12 13:40 | 100 | 1 | 0.002 | 0.0018 |
| -04 | HW28a | Sample | 0.001 | 2/4/12 13:40 | 100 | 1 | 0.002 | 0.0018 |
| -05 | HW28a-P | Sample | 0.002 | 2/4/12 13:40 | 100 | 1 | 0.005 | 0.0048 |
| -06 | HW28b-P | Sample | 0.001 | 2/4/12 13:40 | 100 | 1 | 0.002 | 0.0018 |
| ICV | | | 0.033 | 2/4/12 13:40 | 100 | 1 | 0.099 | 0.0990 |
| ICB | | | 0.001 | 2/4/12 13:40 | 100 | 1 | 0.002 | 0.0018 |
| -07 | HW39 | Sample | 0.002 | 2/4/12 13:40 | 100 | 1 | 0.005 | 0.0048 |
| -08 | HW39-P | Sample | 0.000 | 2/4/12 13:40 | 100 | 1 | -0.001 | -0.0013 |
| AQC 1 | - | LCS | 0.171 | 2/4/12 13:40 | 100 | 1 | 0.518 | 0.5184 |
| AQC 2 | - | LCS Dup | 0.170 | 2/4/12 13:40 | 100 | 1 | 0.515 | 0.5154 |
| HW09 MS | HW09 | Matrix Spike | 0.171 | 2/4/12 13:40 | 100 | 1 | 0.518 | 0.5184 |
| CCV | | | 0.032 | 2/4/12 13:40 | 100 | 1 | 0.096 | 0.0960 |
| CCB | | | 0.000 | 2/4/12 13:40 | 100 | 1 | -0.001 | -0.0013 |

2nd.




DIM0044568
DIM0044487

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202025

| Dimock Residential GW Site- 1201028<br>1202008 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | Analyst Initials | Date |
|---|---|---|---|
| Analysis performed within holding time? | YES * | JH | 02/03/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | JH | 02/03/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | JH | 02/03/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | JH | 02/03/2012 |

| Blank spike QC | | Analyst Initials | Date |
|---|---|---|---|
| LCS recovery within acceptance criteria? | YES * | JH | 02/03/2012 |
| LCS's analyzed at the required frequency? | YES * | JH | 02/03/2012 |
| LCS RPD less than or equal to 20? | YES * | JH | 02/03/2012 |

| Matrix spike QC | | Analyst Initials | Date |
|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES * | JH | 02/03/2012 |
| Matrix spike recovery within acceptance criteria? | YES * | JH | 02/03/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | JH | 02/03/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | JH | 02/03/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | JH | 02/03/2012 |
| ICB/CCB result less than the reporting limit? | YES | JH | 02/03/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202025

| Dimock Residential GW Site- 1201028<br>1202008 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * FE 02/03/2012

*Reviewed 2/3/12 Fred Elsen*

Fred Av. Elsen 2/3/12

* = Automated Response from Promium

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

VER
2/3/12

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202025
## Matrix: Aqueous

Prepared by: JH
Prepared on: 02/03/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1202008-01 | <300 | | |
| | 1202008-02 | <300 | | |
| | 1202008-03 | <300 | | |
| | 1202008-04 | <300 | | |
| | 1202008-05 | <300 | | |
| | 1202008-06 | <300 | | |
| | 1202008-07 | <300 | | |
| | 1202008-08 | <300 | | |
| | 1202008-09 | <300 | | |
| | B202025-BS1 | | D2A2526 | |
| | B202025-BSD1 | | D2A2526 | |
| | B202025-MS1 | <300 | D2A2527 | 1202008-02 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

VFR
2/3/12

## ANALYSIS SEQUENCE
**S202005**

Instrument: Hach DR 5000

**Printed: 2/3/2012 1:13:22PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202005-CAL1 | QC | D2A2528 |
| | S202005-CAL2 | QC | D2A2529 |
| | S202005-CAL3 | QC | D2A2530 |
| | S202005-CAL4 | QC | D2A2531 |
| | S202005-CAL5 | QC | D2A2532 |
| | S202005-CAL6 | QC | D2A2533 |
| | S202005-CAL7 | QC | D2A2534 |
| | S202005-ICV1 | QC | D2A2531 |
| | S202005-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202005-09 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-10 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-08 | Surfactants (MBAS) | |
| | S202005-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202005-07 | Surfactants (MBAS) | |
| | S202005-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202005-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-04 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-03 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-01 | Surfactants (MBAS) | |
| | B202018-MS1 | QC | |
| | B202018-BSD1 | QC | |
| | B202018-BS1 | QC | |

Initial Calibration Date: 1/26/2012
Analyst: Jhale
Units: mg/L
Analyte: Anionic Surfactants

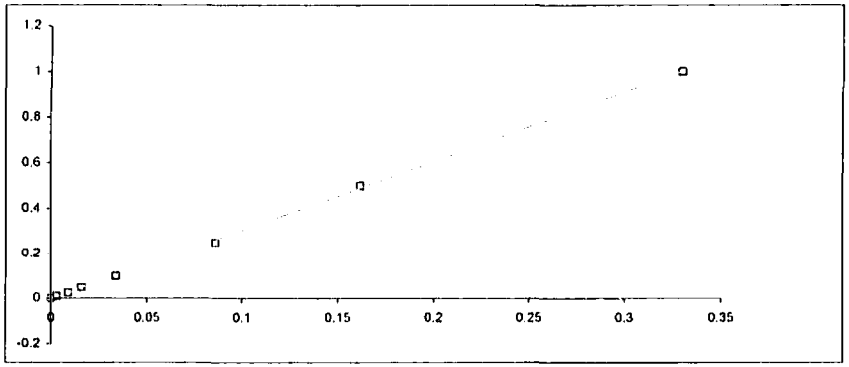
**Batch ID:** B202025
Analysis Date/Time: 2/3/12 13:10

VFE 2/3/12

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289882 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.034 | 2/3/12 13:10 | | 1 | 0.102076956 | 0.102076956 |
| ICB | | | 0.001 | 2/3/12 13:10 | | 1 | 0.001787055 | 0.001787055 |
| 1202008-01 | FB09 | Sample | -0.001 | 2/3/12 13:10 | | 1 | -0.004291121 | -0.004291121 |
| 1202008-02 | HW40 | Sample | 0.000 | 2/3/12 13:10 | | 1 | -0.001252033 | -0.001252033 |
| 1202008-03 | HW40-P | Sample | -0.002 | 2/3/12 13:10 | | 1 | -0.007330209 | -0.007330209 |
| 1202008-04 | HW41 | Sample | -0.003 | 2/3/12 13:10 | | 1 | -0.010369297 | -0.010369297 |
| 1202008-05 | HW41-P | Sample | 0.000 | 2/3/12 13:10 | | 1 | -0.001252033 | -0.001252033 |
| 1202008-06 | HW42 | Sample | -0.001 | 2/3/12 13:10 | | 1 | -0.004291121 | -0.004291121 |
| 1202008-07 | HW42z | Sample | -0.002 | 2/3/12 13:10 | | 1 | -0.007330209 | -0.007330209 |
| CCV | | | 0.033 | 2/3/12 13:10 | | 1 | 0.099037868 | 0.099037868 |
| CCB | | | 0.000 | 2/3/12 13:10 | | 1 | -0.001252033 | -0.001252033 |
| 1202008-08 | HW46 | Sample | -0.001 | 2/3/12 13:10 | | 1 | -0.004291121 | -0.004291121 |
| 1202008-09 | HW46-P | Sample | 0.000 | 2/3/12 13:10 | | 1 | -0.001252033 | -0.001252033 |
| B202025-BS1 | - | LCS | 0.166 | 2/3/12 13:10 | | 1 | 0.503236561 | 0.503236561 |
| B202025-BSD1 | - | LCS Dup | 0.171 | 2/3/12 13:10 | | 1 | 0.518432 | 0.518432 |
| B202025-MS1 | 1202008-02 | Matrix Spike | 0.167 | 2/3/12 13:10 | | 1 | 0.506275648 | 0.506275648 |
| CCV | | | 0.034 | 2/3/12 13:10 | | 1 | 0.102076956 | 0.102076956 |
| CCB | | | 0.001 | 2/3/12 13:10 | | 1 | 0.001787055 | 0.001787055 |




DIM0044573
DIM0044487

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202018

| Dimock Residential GW Site- 1201028<br>1202005 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | JH | 02/02/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | JH | 02/02/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | JH | 02/02/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | JH | 02/02/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | JH | 02/02/2012 |
| LCS's analyzed at the required frequency? | YES | * | JH | 02/02/2012 |
| LCS RPD less than or equal to 20? | YES | * | JH | 02/02/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | JH | 02/02/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | JH | 02/02/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | JH | 02/02/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | JH | 02/02/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | JH | 02/02/2012 |
| ICB/CCB result less than the reporting limit? | YES | JH | 02/02/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202018

| Dimock Residential GW Site- 1201028<br>1202005 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * DK 02/02/2012

* = Automated Response from Promium

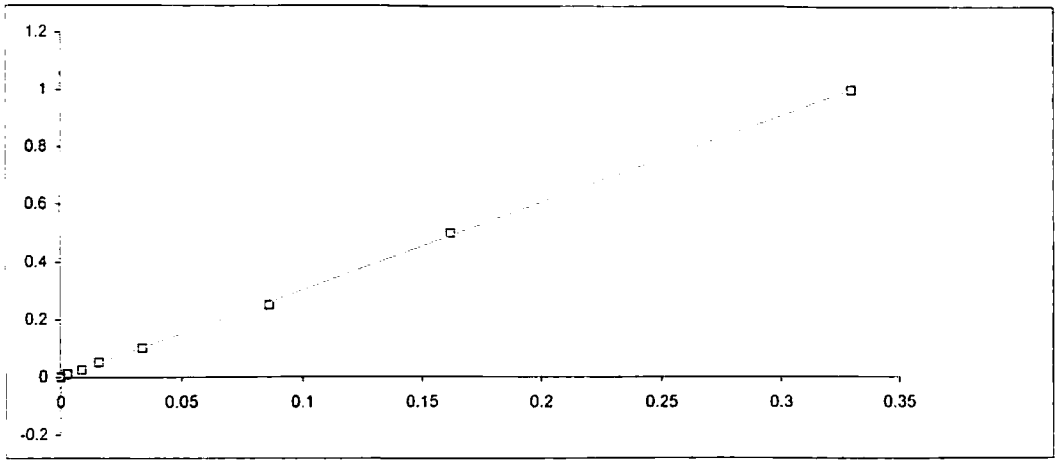
Initial Calibration Date: 1/26/2012
Analyst: Jhale
Units: mg/L
Analyte: Anionic Surfactants

**Batch ID:** B202018
Analysis Date/Time: 2/2/12 14:20

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.032 | 2/2/12 14:20 | | 1 | 0.09599878 | 0.09599878 |
| ICB | | | -0.001 | 2/2/12 14:20 | | 1 | -0.004291121 | -0.004291121 |
| 1202005-01 | HW29 | Sample | 0.011 | 2/2/12 14:20 | | 1 | 0.032177934 | 0.032177934 |
| 1202005-02 | HW29z | Sample | 0.009 | 2/2/12 14:20 | | 1 | 0.026099758 | 0.026099758 |
| 1202005-03 | FB08 | Sample | -0.001 | 2/2/12 14:20 | | 1 | -0.004291121 | -0.004291121 |
| 1202005-04 | HW32 | Sample | 0.002 | 2/2/12 14:20 | | 1 | 0.004826143 | 0.004826143 |
| 1202005-05 | HW32-P | Sample | 0.002 | 2/2/12 14:20 | | 1 | 0.004826143 | 0.004826143 |
| 1202005-06 | HW33 | Sample | 0.001 | 2/2/12 14:20 | | 1 | 0.001787055 | 0.001787055 |
| 1202005-07 | HW33a-P | Sample | 0.000 | 2/2/12 14:20 | | 1 | -0.001252033 | -0.001252033 |
| CCV | | | 0.032 | 2/2/12 14:20 | | 1 | 0.09599878 | 0.09599878 |
| CCB | | | 0.000 | 2/2/12 14:20 | | 1 | -0.001252033 | -0.001252033 |
| 1202005-08 | HW33b-P | Sample | 0.037 | 2/2/12 14:20 | | 1 | 0.11119422 | 0.11119422 |
| 1202005-09 | HW34a | Sample | 0.001 | 2/2/12 14:20 | | 1 | 0.001787055 | 0.001787055 |
| 1202005-10 | HW34a-P | Sample | 0.009 | 2/2/12 14:20 | | 1 | 0.026099758 | 0.026099758 |
| B202018-BS1 | - | LCS | 0.169 | 2/2/12 14:20 | | 1 | 0.512353824 | 0.512353824 |
| B202018-BSD1 | - | LCS Dup | 0.173 | 2/2/12 14:20 | | 1 | 0.524510176 | 0.524510176 |
| B202018-MS1 | 1202005-01 | Matrix Spike | 0.175 | 2/2/12 14:20 | | 1 | 0.530588352 | 0.530588352 |
| CCV | | | 0.033 | 2/2/12 14:20 | | 1 | 0.099037868 | 0.099037868 |
| CCB | | | -0.001 | 2/2/12 14:20 | | 1 | -0.004291121 | -0.004291121 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S202005**

Instrument: Hach DR 5000

**Printed: 2/2/2012 2:27:55PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202005-CAL1 | QC | D2A2528 |
| | S202005-CAL2 | QC | D2A2529 |
| | S202005-CAL3 | QC | D2A2530 |
| | S202005-CAL4 | QC | D2A2531 |
| | S202005-CAL5 | QC | D2A2532 |
| | S202005-CAL6 | QC | D2A2533 |
| | S202005-CAL7 | QC | D2A2534 |
| | S202005-ICV1 | QC | D2A2531 |
| | S202005-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202005-09 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-10 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-08 | Surfactants (MBAS) | |
| | S202005-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202005-07 | Surfactants (MBAS) | |
| | S202005-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202005-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-04 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-03 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202005-01 | Surfactants (MBAS) | |
| | B202018-MS1 | QC | |
| | B202018-BSD1 | QC | |
| | B202018-BS1 | QC | |

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region 2 Laboratory**

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202018
## Matrix: Aqueous

Prepared by: JH
Prepared on: 02/02/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std.. 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| [redacted] | 1202005-01 | <300 | | |
| | 1202005-02 | <300 | | |
| [redacted] | 1202005-03 | <300 | | |
| | 1202005-04 | <300 | | |
| [redacted] | 1202005-05 | <300 | | |
| | 1202005-06 | <300 | | |
| [redacted] | 1202005-07 | <300 | | |
| | 1202005-08 | <300 | | |
| [redacted] | 1202005-09 | <300 | | |
| | 1202005-10 | <300 | | |
| [redacted] | B202018-BS1 | NA | D2A2526 | |
| | B202018-BSD1 | NA | D2A2526 | |
| [redacted] | B202018-MS1 | <300 | D2A2527 | 1202005-01 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B202008

| Dimock Residential GW Site- 1201028<br>1202001 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 02/01/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 02/01/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 02/01/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 02/01/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 02/01/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 02/01/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 02/01/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 02/01/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 02/01/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 02/01/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 02/01/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 02/01/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 02/01/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B202008

| Dimock Residential GW Site- 1201028<br>1202001 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * JH 02/01/2012

* = Automated Response from Promium

DIM0044487

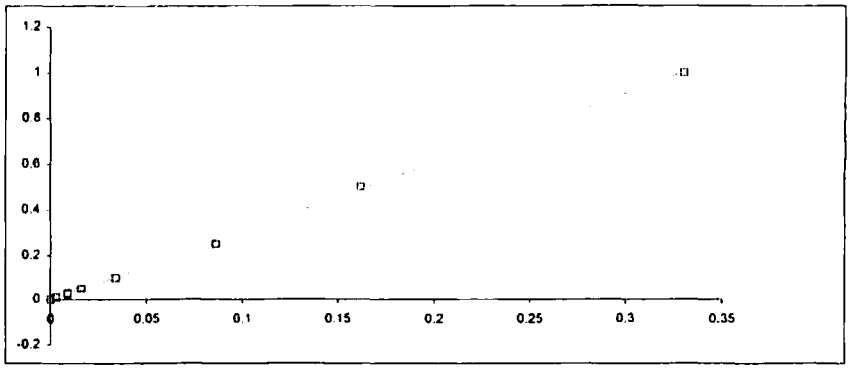
Initial Calibration Date: 1/26/2012
Analyst: Dkay
Units: mg/L
Analyte: Anionic Surfactants

Batch ID: B202008
Analysis Date/Time: 2/1/12 14:00

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (mg/L) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.031 | 2/1/12 14:00 | 100 | 1 | 0.093 | 0.093 |
| ICB | | | -0.001 | 2/1/12 14:00 | 100 | 1 | -0.004 | -0.004 |
| 1202001-01 | FB07 | Sample | 0.002 | 2/1/12 14:00 | 100 | 1 | 0.005 | 0.005 |
| 1202001-02 | HW26 | Sample | 0.004 | 2/1/12 14:00 | 100 | 1 | 0.011 | 0.011 |
| 1202001-03 | HW26-P | Sample | 0.003 | 2/1/12 14:00 | 100 | 1 | 0.008 | 0.008 |
| 1202001-04 | HW35 | Sample | 0.000 | 2/1/12 14:00 | 100 | 1 | -0.001 | -0.001 |
| 1202001-05 | HW52 | Sample | 0.000 | 2/1/12 14:00 | 100 | 1 | -0.001 | -0.001 |
| B202008-BS1 | - | LCS | 0.166 | 2/1/12 14:00 | 100 | 1 | 0.503 | 0.503 |
| B202008-BSD1 | - | LCS Dup | 0.168 | 2/1/12 14:00 | 100 | 1 | 0.509 | 0.509 |
| B202008-MS1 | 1202001-02 | Matrix Spike | 0.165 | 2/1/12 14:00 | 100 | 1 | 0.500 | 0.500 |
| CCV | | | 0.031 | 2/1/12 14:00 | 100 | 1 | 0.093 | 0.093 |
| CCB | | | 0.000 | 2/1/12 14:00 | 100 | 1 | -0.001 | -0.001 |



DIM0044581

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B202008
## Matrix: Aqueous

Prepared by: DK
Prepared on: 02/01/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std.. 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1202001-01 | <300 | | |
| | 1202001-02 | <300 | | |
| | 1202001-03 | <300 | | |
| | 1202001-04 | <300 | | |
| | 1202001-05 | <300 | | |
| | B202008-BS1 | na | D2A2526 | |
| | B202008-BSD1 | na | D2A2526 | |
| | B202008-MS1 | <300 | D2A2527 | 1202001-02 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S202002**

Instrument: Hach DR 5000

**Printed: 2/1/2012 2:01:51PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S202002-CAL1 | QC | D2A2528 |
| | S202002-CAL2 | QC | D2A2529 |
| | S202002-CAL3 | QC | D2A2530 |
| | S202002-CAL4 | QC | D2A2531 |
| | S202002-CAL5 | QC | D2A2532 |
| | S202002-CAL6 | QC | D2A2533 |
| | S202002-CAL7 | QC | D2A2534 |
| | S202002-ICV1 | QC | D2A2531 |
| | S202002-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202001-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202001-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1202001-03 | Surfactants (MBAS) | |
| | S202002-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1202001-04 | Surfactants (MBAS) | |
| | S202002-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1202001-05 | Surfactants (MBAS) | |
| | B202008-BS1 | QC | |
| | B202008-BSD1 | QC | |
| | B202008-MS1 | QC | |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B201132

| Dimock Residential GW Site- 1201028<br>1201042 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 01/31/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 01/31/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 01/31/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 01/31/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 01/31/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 01/31/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 01/31/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 01/31/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 01/31/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 01/31/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 01/31/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 01/31/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 01/31/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B201132

| Dimock Residential GW Site- 1201028<br>1201042 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * JH 01/31/2012

* = Automated Response from Promium

DIM00044487

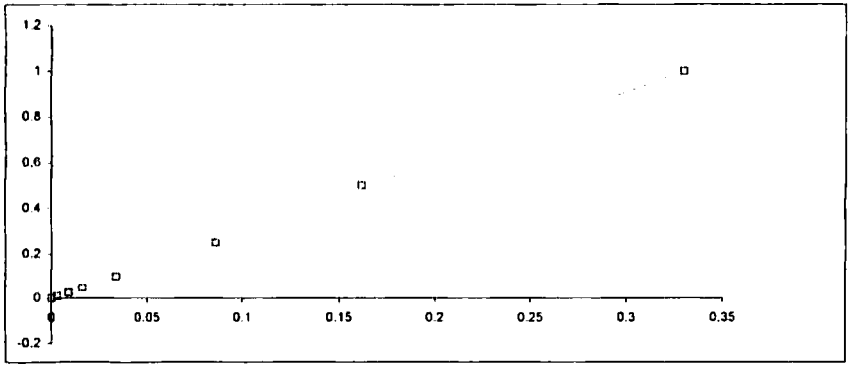
Initial Calibration Date: 1/26/2012
Analyst: Dkay
Units: mg/L
Analyte: Anionic Surfactants

Batch ID: B201132
Analysis Date/Time: 1/31/12 13:38

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.031 | 1/31/12 13:38 | 100 | 1 | 0.093 | 0.093 |
| ICB | | | 0 | 1/31/12 13:38 | 100 | 1 | -0.001 | -0.001 |
| 1201042-01 | FB06 | Sample | -0.003 | 1/31/12 13:38 | 100 | 1 | -0.010 | -0.010 |
| 1201042-02 | HW13 | Sample | 0.000 | 1/31/12 13:38 | 100 | 1 | -0.001 | -0.001 |
| 1201042-03 | HW18 | Sample | 0.002 | 1/31/12 13:38 | 100 | 1 | 0.005 | 0.005 |
| 1201042-04 | HW18-P | Sample | 0.002 | 1/31/12 13:38 | 100 | 1 | 0.005 | 0.005 |
| 1201042-05 | HW20 | Sample | 0.000 | 1/31/12 13:38 | 100 | 1 | -0.001 | -0.001 |
| 1201042-06 | HW20-P | Sample | -0.001 | 1/31/12 13:38 | 100 | 1 | -0.004 | -0.004 |
| 1201042-07 | HW25-P | Sample | 0.008 | 1/31/12 13:38 | 100 | 1 | 0.023 | 0.023 |
| B201132-BS1 | - | LCS | 0.172 | 1/31/12 13:38 | 100 | 1 | 0.521 | 0.521 |
| B201132-BSD1 | - | LCS Dup | 0.175 | 1/31/12 13:38 | 100 | 1 | 0.531 | 0.531 |
| B201132-MS1 | 1201042-02 | Matrix Spike | 0.166 | 1/31/12 13:38 | 100 | 1 | 0.503 | 0.503 |
| CCV | | | 0.031 | 1/31/12 13:38 | 100 | 1 | 0.093 | 0.093 |
| CCB | | | 0.000 | 1/31/12 13:38 | 100 | 1 | -0.001 | -0.001 |



DIM00044586

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S201059**

Instrument: Hach DR 5000

**Printed: 1/31/2012 1:48:13PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S201059-CAL1 | QC | D2A2528 |
| | S201059-CAL2 | QC | D2A2529 |
| | S201059-CAL3 | QC | D2A2530 |
| | S201059-CAL4 | QC | D2A2531 |
| | S201059-CAL5 | QC | D2A2532 |
| | S201059-CAL6 | QC | D2A2533 |
| | S201059-CAL7 | QC | D2A2534 |
| | S201059-ICV1 | QC | D2A2531 |
| | S201059-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1201042-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201042-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201042-03 | Surfactants (MBAS) | |
| | S201059-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1201042-04 | Surfactants (MBAS) | |
| | S201059-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1201042-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201042-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201042-07 | Surfactants (MBAS) | |
| | B201132-BS1 | QC | |
| | B201132-BSD1 | QC | |
| | B201132-MS1 | QC | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B201132
## Matrix: Aqueous

Prepared by: DK
Prepared on: 01/31/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1201042-01 | <300 | | |
| | 1201042-02 | <300 | | |
| | 1201042-03 | <300 | | |
| | 1201042-04 | <300 | | |
| | 1201042-05 | <300 | | |
| | 1201042-06 | <300 | | |
| | 1201042-07 | <300 | | |
| | B201132-BS1 | na | D2A2526 | |
| | B201132-BSD1 | na | D2A2526 | |
| | B201132-MS1 | <300 | D2A2527 | 1201042-02 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B201109

| Dimock Residential GW Site- 1201028<br>1201040 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 01/30/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 01/30/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 01/30/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 01/30/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 01/30/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 01/30/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 01/30/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 01/30/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 01/30/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 01/30/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 01/30/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 01/30/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 01/30/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B201109

| Dimock Residential GW Site- 1201028<br>1201040 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * JH 01/30/2012

* = Automated Response from Promium

Initial Calibration Date: 1/26/2012
Analyst: Dkay
Units: mg/L
Analyte: Anionic Surfactants

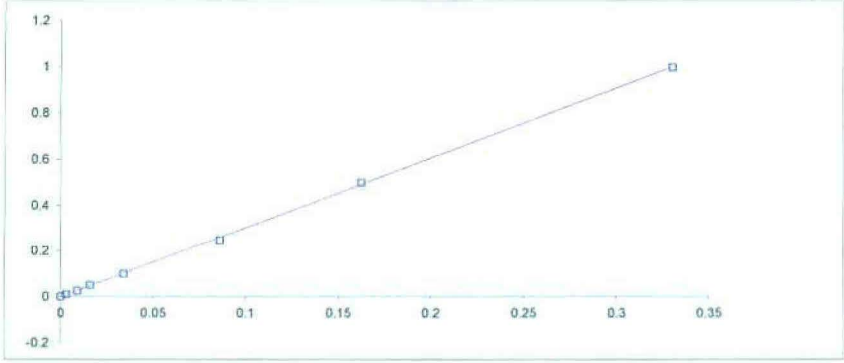
**Batch ID:** B201109
Analysis Date/Time: 1/28/12 10:38

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

**LINEAR EQUATION**

$y=a+bx$

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.031 | 1/28/12 10:38 | 100 | 1 | 0.093 | 0.093 |
| ICB | | | 0.000 | 1/28/12 10:38 | 100 | 1 | -0.001 | -0.001 |
| 1201040-01 | FB05 | Sample | 0.000 | 1/28/12 10:38 | 100 | 1 | -0.001 | -0.001 |
| 1201040-02 | HW17 | Sample | 0.000 | 1/28/12 10:38 | 100 | 1 | -0.001 | -0.001 |
| 1201040-03 | HW24 | Sample | -0.001 | 1/28/12 10:38 | 100 | 1 | -0.004 | -0.004 |
| 1201040-04 | HW24-P | Sample | 0.000 | 1/28/12 10:38 | 100 | 1 | -0.001 | -0.001 |
| B201109-BS1 | - | LCS | 0.174 | 1/28/12 10:38 | 100 | 1 | 0.528 | 0.528 |
| B201109-BSD1 | - | LCS Dup | 0.173 | 1/28/12 10:38 | 100 | 1 | 0.525 | 0.525 |
| B201109-MS1 | 1201040-02 | Matrix Spike | 0.159 | 1/28/12 10:38 | 100 | 1 | 0.482 | 0.482 |
| CCV | | | 0.031 | 1/28/12 10:38 | 100 | 1 | 0.093 | 0.093 |
| CCB | | | 0.010 | 1/28/12 10:38 | 100 | 1 | 0.029 | 0.029 |



DIM0044591
DIM0044487

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region 2 Laboratory**

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B201109
## Matrix: Aqueous

Prepared by: DK
Prepared on: 01/28/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| Dimock Residential GW Site- 1201028 | 1201040-01 | <300 | | |
| | 1201040-02 | <300 | | |
| | 1201040-03 | <300 | | |
| | 1201040-04 | <300 | | |
| | B201109-BS1 | na | D2A2526 | |
| | B201109-BSD1 | na | D2A2526 | |
| | B201109-MS1 | <300 | D2A2527 | 1201040-02 |

## ANALYSIS SEQUENCE

**S201054**

Instrument: Hach DR 5000

Calibnration ID: UNASSIGNED

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client |
|---|---|---|---|---|---|---|---|
| S201054-CAL1 | QC | | 1 | | D2A2528 | | |
| S201054-CAL2 | QC | | 2 | | D2A2529 | | |
| S201054-CAL3 | QC | | 3 | | D2A2530 | | |
| S201054-CAL4 | QC | | 4 | | D2A2531 | | |
| S201054-CAL5 | QC | | 5 | | D2A2532 | | |
| S201054-CAL6 | QC | | 6 | | D2A2533 | | |
| S201054-CAL7 | QC | | 7 | | D2A2534 | | |
| S201054-ICV1 | QC | | 8 | | D2A2531 | | |
| S201054-ICB1 | QC | | 9 | | | | |
| S201054-CCV1 | QC | | 10 | | D2A2531 | | |
| S201054-CCB1 | QC | | 11 | | | | |
| 1201040-01 | Surfactants (MBAS) | A | 12 | | | | US EPA Region 3 Envir |
| 1201040-02 | Surfactants (MBAS) | A | 13 | | | | US EPA Region 3 Envir |
| 1201040-03 | Surfactants (MBAS) | A | 14 | | | | US EPA Region 3 Envir |
| 1201040-04 | Surfactants (MBAS) | A | 15 | | | | US EPA Region 3 Envir |
| B201109-MS1 | QC | | 16 | | | | |
| B201109-BSD1 | QC | | 17 | | | | |
| B201109-BS1 | QC | | 18 | | | | |

Samples Loaded By Date Data Processed By Date

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B201104

| Dimock Residential GW Site- 1201028<br>1201037 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 01/27/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 01/27/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 01/27/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 01/27/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 01/27/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 01/27/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 01/27/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 01/27/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 01/27/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 01/27/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 01/27/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 01/27/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 01/27/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B201104

| Dimock Residential GW Site- 1201028<br>1201037 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * JH 01/30/2012

* = Automated Response from Promium

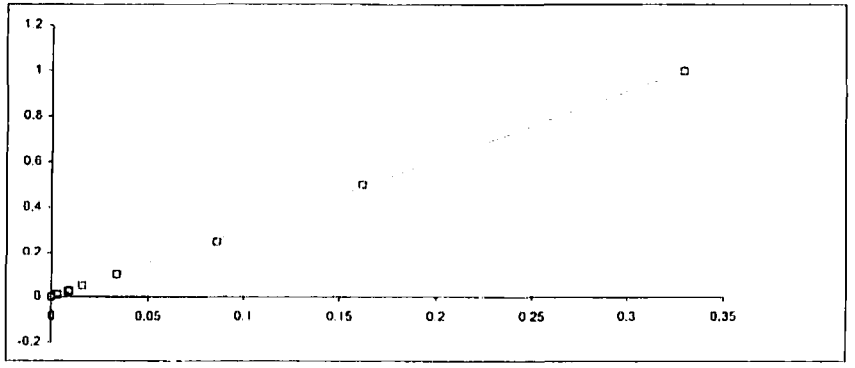
Initial Calibration Date: 1/26/2012
Analyst: Dkay
Units: mg/L
Analyte: Anionic Surfactants

Batch ID: B201104
Analysis Date/Time: 1/27/20 14:15

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.034 | 1/27/20 14:15 | 100 | 1 | 0.102 | 0.102 |
| ICB | | | 0.002 | 1/27/20 14:15 | 100 | 1 | 0.005 | 0.005 |
| 1201037-01 | FB04 | Sample | 0.003 | 1/27/20 14:15 | 100 | 1 | 0.008 | 0.008 |
| 1201037-02 | HW05 | Sample | 0.003 | 1/27/20 14:15 | 100 | 1 | 0.008 | 0.008 |
| 1201037-03 | HW06 | Sample | 0.002 | 1/27/20 14:15 | 100 | 1 | 0.005 | 0.005 |
| 1201037-04 | HW012 | Sample | 0.005 | 1/27/20 14:15 | 100 | 1 | 0.014 | 0.014 |
| 1201037-05 | HW014 | Sample | 0.011 | 1/27/20 14:15 | 100 | 1 | 0.032 | 0.032 |
| 1201037-06 | HW014-P | Sample | 0.005 | 1/27/20 14:15 | 100 | 1 | 0.014 | 0.014 |
| B201104-BS1 | - | LCS | 0.162 | 1/27/20 14:15 | 100 | 1 | 0.491 | 0.491 |
| B201104-BSD1 | - | LCS Dup | 0.164 | 1/27/20 14:15 | 100 | 1 | 0.497 | 0.497 |
| B201104-MS1 | 1201037-02 | Matrix Spike | 0.157 | 1/27/20 14:15 | 100 | 1 | 0.476 | 0.476 |
| CCV | | | 0.034 | 1/28/20 14:15 | 100 | 1 | 0.102 | 0.102 |
| CCB | | | 0.001 | 1/29/20 14:15 | 100 | 1 | 0.002 | 0.002 |



DIM0044596
DIM0044487

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S201052**

Instrument: Hach DR 5000

Printed: 1/27/2012 2:33:20PM

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S201052-CAL1 | QC | D2A2528 |
| | S201052-CAL2 | QC | D2A2529 |
| | S201052-CAL3 | QC | D2A2530 |
| | S201052-CAL4 | QC | D2A2531 |
| | S201052-CAL5 | QC | D2A2532 |
| | S201052-CAL6 | QC | D2A2533 |
| | S201052-CAL7 | QC | D2A2534 |
| | S201052-ICV1 | QC | D2A2531 |
| | S201052-ICB1 | QC | |
| Dimock Residential GW Site- 120102 | 1201037-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201037-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201037-03 | Surfactants (MBAS) | |
| | S201052-CCV1 | QC | D2A2531 |
| Dimock Residential GW Site- 120102 | 1201037-04 | Surfactants (MBAS) | |
| | S201052-CCB1 | QC | |
| Dimock Residential GW Site- 120102 | 1201037-05 | Surfactants (MBAS) | |
| | S201052-CAL8 | QC | |
| Dimock Residential GW Site- 120102 | 1201037-06 | Surfactants (MBAS) | |
| | B201104-BS1 | QC | |
| | B201104-BSD1 | QC | |
| | B201104-MS1 | QC | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B201104
## Matrix: Aqueous

Prepared by: DK
Prepared on: 01/27/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2603 | Methylene Blue Reagent | 01/25/2014 |
| D2A2604 | Wash Solution, MBAS | 01/25/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| [redacted] | [redacted] | [redacted] | | |
| | 1201037-02 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | 1201037-04 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | 1201037-06 | <300 | | |
| [redacted] | [redacted] | [redacted] | [redacted] | |
| | B201104-BSD1 | na | D2A2526 | |
| [redacted] | [redacted] | [redacted] | [redacted] | [redacted] |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B201099

| Dimock Residential GW Site- 1201028<br>1201033 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 01/26/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 01/26/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 01/26/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 01/26/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 01/26/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 01/26/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 01/26/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 01/26/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 01/26/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 01/26/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 01/26/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 01/26/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 01/26/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B201099

| Dimock Residential GW Site- 1201028 1201033 | Analysis | Matrix |
|---|---|---|
| | Surfactants (MBAS) | Aqueous |

Was data peer reviewed? YES * JH 01/26/2012

* = Automated Response from Promium

DIM00044487

Initial Calibration Date: 1/26/2012
Analyst: Dkay
Units: mg/L
Analyte: Anionic Surfactants

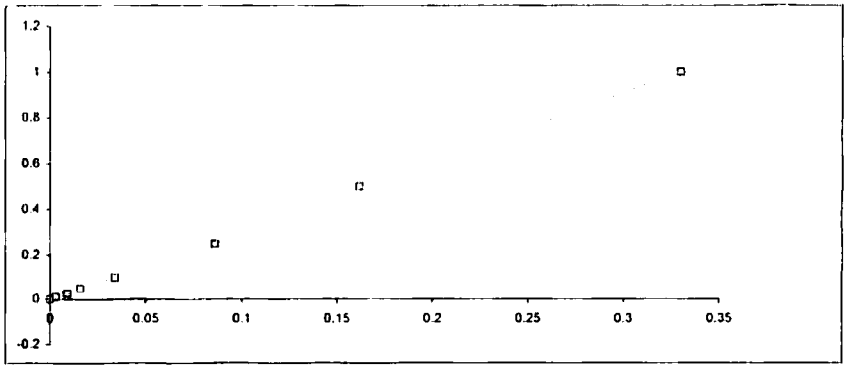
Batch ID: B201099
Analysis Date/Time: 1/26/20 13 21

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0 001 |
| 0 003 | D2A2528 | 0 01 | 0 008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0 016 | D2A2530 | 0.05 | 0 047 |
| 0 034 | D2A2531 | 0 1 | 0 102 |
| 0 086 | D2A2532 | 0 25 | 0 260 |
| 0 162 | D2A2533 | 0.5 | 0 491 |
| 0.33 | D2A2534 | 1.0 | 1 002 |

LINEAR EQUATION

y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0 031 | 1/26/20 11:21 | 100 | 1 | 0 093 | 0.093 |
| ICB | | | -0 001 | 1/27/20 11:21 | 100 | 1 | -0 004 | -0 004 |
| B201099-BS1 | - | LCS | 0 161 | 1/28/20 11:21 | 100 | 1 | 0 488 | 0 488 |
| B201099-BSD1 | - | LCS Dup | 0 154 | 1/29/20 11:21 | 100 | 1 | 0.467 | 0.467 |
| 1201033-03 | HW01 | Sample | -0 003 | 1/30/20 11:21 | 100 | 1 | -0 010 | -0 010 |
| B201099-MS1 | 1201033-03 | Matrix Spike | 0 154 | 1/31/20 11:21 | 100 | 1 | 0.467 | 0.467 |
| 1201033-04 | HW02 | Sample | -0 005 | 2/1/20 11:21 | 100 | 1 | -0 016 | -0.016 |
| 1201033-05 | HW02Z | Sample | -0 004 | 2/2/20 11:21 | 100 | 1 | -0.013 | -0.013 |
| 1201033-06 | HW04 | | -0 002 | 2/3/20 11:21 | 100 | 1 | -0.007 | -0.007 |
| 1201033-07 | HW08A | | -0 002 | 2/4/20 11 21 | 100 | 1 | -0 007 | -0 007 |
| 1201033-01 | FB02 | | -0 006 | 2/5/20 11.21 | 100 | 1 | -0 019 | -0.019 |
| 1201033-02 | FB03 | | -0.004 | 2/6/20 11:21 | 100 | 1 | -0 013 | -0.013 |
| CCV | | | 0 031 | 2/7/20 11:21 | 100 | 1 | 0 093 | 0 093 |
| CCB | | | -0 001 | 2/8/20 11:21 | 100 | 1 | -0 004 | -0 004 |
| 0 05 mg/L (MDL) | | | 0 008 | 2/9/20 11:21 | 100 | 1 | 0 023 | 0 023 |
| 0 05 mg/L (MDL) | | | 0 01 | 2/10/20 11:21 | 100 | 1 | 0 029 | 0.029 |
| CCV | | | 0.03 | 2/11/20 11:21 | 100 | 1 | 0.090 | 0.090 |
| CCB | | | 0 | 2/12/20 11:21 | 100 | 1 | -0 001 | -0 001 |



DIM00044601

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## ANALYSIS SEQUENCE

**S201043**

Instrument: Hach DR 5000

**Printed: 1/26/2012 1:29:25PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S201043-ICV1 | QC | D2A2531 |
| | S201043-ICB1 | QC | |
| | S201043-CCV1 | QC | D2A2531 |
| | S201043-CCB1 | QC | |
| | S201043-CAL1 | QC | D2A2528 |
| | S201043-CAL2 | QC | D2A2529 |
| | S201043-CAL3 | QC | D2A2530 |
| | S201043-CAL4 | QC | D2A2531 |
| | S201043-CAL5 | QC | D2A2532 |
| | S201043-CAL7 | QC | D2A2533 |
| | S201043-CAL6 | QC | D2A2534 |
| Dimock Residential GW Site- 120102 | 1201033-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201033-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201033-03 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201033-04 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201033-05 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201033-06 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201033-07 | Surfactants (MBAS) | |
| | B201099-BS1 | QC | |
| | B201099-BSD1 | QC | |
| | B201099-MS1 | QC | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B201099
## Matrix: Aqueous

Prepared by: DK
Prepared on: 01/26/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1811 | Methylene Blue Reagent | 01/17/2014 |
| D2A1814 | Wash Solution, MBAS | 01/17/2014 |
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| [redacted] | [redacted] | [redacted] | | |
| | 1201033-02 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | 1201033-04 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | 1201033-06 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | B201099-BS1 | na | D2A2526 | |
| [redacted] | [redacted] | [redacted] | [redacted] | |
| | B201099-MS1 | <300 | D2A2527 | 1201033-03 |

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

## Spectrophotometer Checklist for BATCH B201089

| Dimock Residential GW Site- 1201028<br>1201028 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

| Method criteria | | | Analyst Initials | Date |
|---|---|---|---|---|
| Analysis performed within holding time? | YES | * | DK | 01/25/2012 |
| Samples for COD and sulfide analysis preserved accordingly? Narrative written if necessary? | NA | | DK | 01/25/2012 |

| Calibration criteria | | Analyst Initials | Date |
|---|---|---|---|
| Initial calibration includes a minimum of 5 standards and a blank? | YES | DK | 01/25/2012 |
| Correlation coefficient greater than or equal to 0.995? | YES | DK | 01/25/2012 |

| Blank spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| LCS recovery within acceptance criteria? | YES | * | DK | 01/25/2012 |
| LCS's analyzed at the required frequency? | YES | * | DK | 01/25/2012 |
| LCS RPD less than or equal to 20? | YES | * | DK | 01/25/2012 |

| Matrix spike QC | | | Analyst Initials | Date |
|---|---|---|---|---|
| Matrix spikes performed at the required frequency? | YES | * | DK | 01/25/2012 |
| Matrix spike recovery within acceptance criteria? | YES | * | DK | 01/25/2012 |
| If no, is analyte concentration > 1.0 X the spike concentration? | NA | | DK | 01/25/2012 |

| Continuing calibration | | Analyst Initials | Date |
|---|---|---|---|
| ICV/CCV and ICB/CCB analyzed every 10 samples and at the end of the run? | YES | DK | 01/25/2012 |
| ICV/CCV recoveries within 10% of the true value? | YES | DK | 01/25/2012 |
| ICB/CCB result less than the reporting limit? | YES | DK | 01/25/2012 |

| Data review | Analyst Initials | Date |
|---|---|---|

* = Automated Response from Promium

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### Spectrophotometer Checklist for BATCH B201089

| Dimock Residential GW Site- 1201028<br>1201028 | Analysis<br>Surfactants (MBAS) | Matrix<br>Aqueous |
|---|---|---|

Was data peer reviewed? YES * JH 01/25/2012

* = Automated Response from Promium

DIM00044487

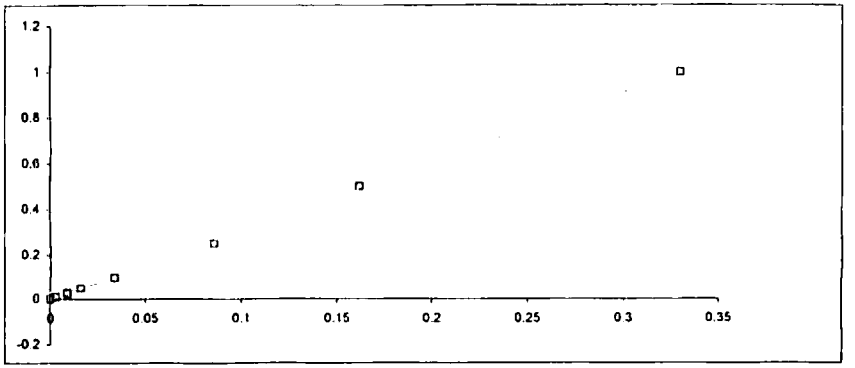
Initial Calibration Date: 1/24/2012
Analyst: Dkay
Units: mg/L
Analyte: Anionic Surfactants

Batch ID: B201089
Analysis Date/Time: 1/25/20 13:21

| Measured Response | Standards I.D. | Actual Concentration | Calculated Value (linear) |
|---|---|---|---|
| 0 | | 0 | -0.001 |
| 0.003 | D2A2528 | 0.01 | 0.008 |
| 0.009 | D2A2529 | 0.025 | 0.026 |
| 0.016 | D2A2530 | 0.05 | 0.047 |
| 0.034 | D2A2531 | 0.1 | 0.102 |
| 0.086 | D2A2532 | 0.25 | 0.260 |
| 0.162 | D2A2533 | 0.5 | 0.491 |
| 0.33 | D2A2534 | 1.0 | 1.002 |

LINEAR EQUATION
y=a+bx

| | |
|---|---|
| a= | 0.0004308 |
| b= | 0.3289682 |
| r= | 0.9998816 |




Calculation: mg/L = (Raw value from curve) * DF
Calculation: mg/kg = (Raw value from curve) * (Extract Vol./Sample Wt.) * DF

| B | C | D | E | F | H | J | M | N |
|---|---|---|---|---|---|---|---|---|
| Sample ID | Client ID | SampType | Response (abs) | Analytical Time | Sample Vol (mls) | Dilution Factor | RawVal | Final Conc. mg/L |
| ICV | | | 0.034 | 1/25/20 13:21 | 100 | 1 | 0.102 | 0.102 |
| ICB | | | 0.001 | 1/25/20 13:21 | 100 | 1 | 0.002 | 0.002 |
| 1201028-01 | FB01 | Sample | -0.002 | 1/25/20 13:21 | 100 | 1 | -0.007 | -0.007 |
| 1201028-02 | HW19 | Sample | 0.005 | 1/25/20 13:21 | 100 | 1 | 0.014 | 0.014 |
| 1201028-03 | HW19-P | Sample | -0.003 | 1/25/20 13:21 | 100 | 1 | -0.010 | -0.010 |
| B201089-BS1 | - | LCS | 0.174 | 1/25/20 13:21 | 100 | 1 | 0.528 | 0.528 |
| B201089-BSD1 | - | LCS Dup | 0.16 | 1/25/20 13:21 | 100 | 1 | 0.485 | 0.485 |
| B201089-MS1 | 1201028-02 | Matrix Spike | 0.162 | 1/25/20 13:21 | 100 | 1 | 0.491 | 0.491 |
| 0.05 mg/L (MDL) | | | 0.021 | 1/25/20 13:21 | 100 | 1 | 0.063 | 0.063 |
| CCV | | | 0.033 | 1/25/20 13:21 | 100 | 1 | 0.099 | 0.099 |
| CCB | | | 0.001 | 1/25/20 13:21 | 100 | 1 | 0.002 | 0.002 |



DIM00044606

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
## Region 2 Laboratory

### ANALYSIS SEQUENCE
**S201043**

Instrument: Hach DR 5000

**Printed: 1/25/2012 1:44:11PM**

| Project Name | Lab Number | Analysis | STD ID |
|---|---|---|---|
| | S201043-ICV1 | QC | D2A2531 |
| | S201043-ICB1 | QC | |
| | S201043-CCV1 | QC | D2A2531 |
| | S201043-CCB1 | QC | |
| | S201043-CAL1 | QC | D2A2528 |
| | S201043-CAL2 | QC | D2A2529 |
| | S201043-CAL3 | QC | D2A2530 |
| | S201043-CAL4 | QC | D2A2531 |
| | S201043-CAL5 | QC | D2A2532 |
| | S201043-CAL7 | QC | D2A2533 |
| | S201043-CAL6 | QC | D2A2534 |
| Dimock Residential GW Site- 120102 | 1201028-01 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201028-02 | Surfactants (MBAS) | |
| Dimock Residential GW Site- 120102 | 1201028-03 | Surfactants (MBAS) | |
| | B201089-BS1 | QC | |
| | B201089-BSD1 | QC | |
| | B201089-MS1 | QC | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

## Analysis: Surfactants (MBAS)
## Preparation Method: MBAS Extraction
## Batch ID: B201089
## Matrix: Aqueous

Prepared by: DK
Prepared on: 01/25/2012

**Standards and Reagents**

| Standard | Description | Exp Date |
|---|---|---|
| D2A1811 | Methylene Blue Reagent | 01/17/2014 |
| D2A1814 | Wash Solution, MBAS | 01/17/2014 |
| D2A1817 | Phenolthalein Indicator solution | 01/17/2014 |
| D2A2526 | MBAS AQC, ERA P180-776 Dil. | 01/24/2014 |
| D2A2527 | MBAS Intermediate Std., 10.0 mg/L | 01/24/2014 |
| D2A2705 | Chloroform | 01/26/2014 |

| Project Name | Sample ID | Chloride value | Spike ID | Source ID |
|---|---|---|---|---|
| [redacted] | [redacted] | [redacted] | | |
| | 1201028-02 | <300 | | |
| [redacted] | [redacted] | [redacted] | | |
| | B201089-BS1 | na | D2A2526 | |
| [redacted] | [redacted] | [redacted] | [redacted] | |
| | B201089-MS1 | <279 | D2A2527 | 1201028-02 |