**A. General**

This standard applies only to the Indiana Department of Environmental Management, Office of Water Quality, Watershed Assessment and Planning Branch. This standard applies only to the transfer of analytical and QA/QC results. Raw data, chromatograms, spectrograms, calibration curves, bench sheets and internal chain-of-custody must be transmitted in paper report form. IDEM/OWQ may request the Contractor to submit a report in an electronic format such as Adobe® portable document format (pdf), in addition to the written report submission and the EDI.

**B. Software Format**

Data must be presented as ASCII delimited text (quotes for field delimiter, pipe characters: (|xxx|yyyy|). Filename protocols will be provided at the time of implementation. The file MUST BE SAVED in MS-DOS Text format.

**C. Data Format Standards**

This section identifies the Laboratory Results electronic reporting format required by the Indiana Department of Environmental Management - Office of Water Quality, Watershed Assessment and Planning Branch.

### The general layout is "pipe-delimited". There are several different record types, which are defined in separate sections in this document. Record type is specified in the first field of every record (Record ID). Details are as listed below:

### Naming Conventions:

### n = place holder for a Decimal Number (0-9)

### X = place holder for text/other

### M = place holder for a "Month" or "Minute" number

### D = place holder for a "Date" number

### Y = place holder for a "Year" number

### H = place holder for an "Hour" number

### S = place holder for a "Second" number

**The file MUST BE SAVED in MS-DOS Text format.**

### Use the following Table for selection of Units:

### UnitValue Comments

CFU/100mL Colony Forming Units / 100 mL

MPN/100mL Most Probable Number / 100mL

g/cm3 Density

mg/Kg dw Dry Weight

mg/L milligrams/Liter (Water)

NTU Turbidity units

SU pH units

ug/Kg dw Dry Weight

ug/L micrograms/Liter (Water)

umho/cm Conductivity

% Percent

umoles/g Molar Ratio for SEM

pg/L picograms/Liter (Water)

%Recov % Recovery

°C Degrees Celsius

AMU Atomic Mass Units

ug/Kg ww Wet Weight

mg/Kg ww Wet Weight

ng/L nanograms/Liter (Water)

Ratio to be used for Ratios without Units

**DO NOT USE ANY OTHER UNITS WITHOUT PRIOR APPROVAL FROM IDEM/OWQ.**

**Use dry weight (dw) units for ALL sediment parameters unless specifically told otherwise by IDEM/OWQ.**

**Use wet weight (ww) units for ALL fish tissues parameters unless specifically told otherwise by IDEM/OWQ.**

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# EDI Submission Set Header/Footer Records:

The EDI Submission Set Header Record is placed prior to the first line of an EDI Transmission file. An EDI Submission Set Footer Record is placed after the last line of the file, forming a matched pair.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies EDI Submission Set Header Record (“HE”)  Or – EDI Submission Set Footer Record (“FE”) | "HE" or “FE” | HE |
| Lab\_ID | Name of Lab Submitting Lab Analysis Data Results | XXXXXXXX | ISDH |
| Date | Date of file/batch creation | MMDDYYYY | 11191999 |
| Time | 24-Hour Time of file/batch creation | HHMMSS | 220156 |
| Count | Number of Records in this file, excluding EDI Submission Set Header and Footer Lines | nnnnn | 43 |

Record\_ID|Lab\_ID|Date|Time|Count|

Description Example:

HE|XXXXXXXX|MMDDYYYY|HHMMSS|NNNNN|

Real World Example:

HE|ISDH|11191999|220156|43| (EDI Submission Set Header Record)

----Analysis Set1 Header Record---

----Sample Number1 Header Record---

----Sample Number1 Records---

----Sample Number1 Footer Record---

----Sample Number2 Header Record---

----Sample Number2 Records---

----Sample Number2 Footer Record---

----Narrative1 Header Record---

----Narrative1 Records---

----Narrative1 Footer Record---

----Narrative2 Header Record---

----Narrative2 Records---

----Narrative2 Footer Record---

----QC Header Record---

----QC Records---

----QC Footer Record---

----Analysis Set1 Footer Record---

----Analysis Set2 Header Record---

----Sample Number Header Record---

----Sample Number Records---

----Sample Number Footer Record---

----Narrative Header Record---

----Narrative Records---

----Narrative Footer Record---

----QC Header Record---

----QC Records---

----QC Footer Record---

----Analysis Set2 Footer Record---

FE|ISDH|11191999|220156|43| (EDI Submission Set Footer Record)

# Analysis Set Header/Footer Records:

Analysis Set Header Records are placed prior to the first line of an Analysis Set Batch. An Analysis Set Footer Record is placed after the last line of the Analysis Set Batch, forming a matched pair.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies Analysis Set Header Record (“HA”)  Or – Analysis Set Footer Record (“FA”) | "HA" or “FA” | HA |
| Lab\_ID | Name of Lab Submitting Lab Analysis Data Results | XXXXXXXX | ISDH |
| Lab\_Job\_Num | Number used internally by Lab to identify the entire group of samples being analyzed for IDEM | XXXXXXXX | BB345678 |
| OWQ\_Analysis\_Set | IDEM Assigned Analysis Set Number | XXXXXXXX | 00TSW190 |
| Analysis\_Set\_SubmitCount | On first submission of analysis set test results, =1;   if samples are re-analyzed & re-submitted, =2  (or 3 for a 2nd re-analysis/submittal, etc.) | NN | 1 |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Date\_Rec | Date Analysis Set Received by Lab | MMDDYYYY | 11191999 |
| Time\_Rec | 24-Hour Time Analysis Set Received by Lab | HHMMSS | 220156 |
| Count | Number of Data Records in this batch (related to this specific Analysis Set Header Record) | nnnnnn | 43 |

Record\_ID|Lab\_ID|Lab\_Job\_Num|OWQ\_Analysis\_Set|Analysis\_Set\_SubmitCount| Sample\_Medium\_ID | Date\_Rec|Time\_Rec|Count|

Description Example:

HA|XXXXXXXX| |XXXXXXXX|XXXXXXXX|NN|X|MMDDYYYY|HHMMSS|NNNN|

Real World Example:

HA|ISDH| |BB345678|00TSW190|1|W|11191999|220156|43| (Analysis Set Header Record)

----Sample Number1 Header Record---

----Sample Number1 Records---

----Sample Number1 Footer Record---

----Sample Number2 Header Record---

----Sample Number2 Records---

----Sample Number2 Footer Record---

----Narrative1 Header Record---

----Narrative1 Records---

----Narrative1 Footer Record---

----Narrative2 Header Record---

----Narrative2 Records---

----Narrative2 Footer Record---

----QC Header Record---

----QC Records---

----QC Footer Record---

FA|ISDH| |BB345678|00TSW190|1|11191999|220156|43| (Analysis Set Footer Record)

# Sample Number Header/Footer Records:

Sample Number Header Records are placed prior to the first line of a Sample Number’s lab analysis result set. A Sample Number Footer Record is placed after the last line of the Sample Number record, forming a matched pair.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies Sample Number Header Record (“HS”)  Or – Sample Number Footer Record (“FS”) | "HS" or “FS” | HS |
| Lab\_ID | Name of Lab Submitting Lab Analysis Data Results | XXXXXXXX | ISDH |
| Sample\_ID | IDEM assigned Sample ID | XXnnnnn | DA12345 |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Lab\_Sample\_Num | Number used internally by Lab to identify IDEM Sample being analyzed | XXXXXXXX | AA345678 |
| Lab\_Job\_Num | Number used internally by Lab to identify the entire group of samples being analyzed for IDEM | XXXXXXXX | BB345678 |
| OWQ\_Analysis\_Set | IDEM Assigned Analysis Set Number | XXXXXXXX | 00TSW190 |
| Analysis\_Set\_SubmitCount | On first submission of analysis set test results, =1;   if samples are re-analyzed & re-submitted, =2  (or 3 for a 2nd re-analysis/submittal, etc.) | NN | 1 |
| Date\_Rec | Date Analysis Set Received by Lab | MMDDYYYY | 11191999 |
| Time\_Rec | 24-Hour Time Analysis Set Received by Lab | HHMMSS | 220156 |
| Count | Number of Data Records in this batch (related to this specific Header Record) | nnnn | 43 |
| Sample\_Depth | Depth the sample was taken in meters  (Use 0 for surface water samples) | NN.NN | 6.00 |
| Sample\_Depth\_Units | Units for Sample\_Depth (leave blank if Sample\_depth is not used) | XXX | m |

Record\_ID|Lab\_ID|Sample\_ID|Sample\_Medium\_ID|Lab\_Sample\_Num|Lab\_Job\_Num|OWQ\_Analysis\_Set| Analysis\_Set\_SubmitCount|Date\_Rec|Time\_Rec|Count|Sample\_Depth|Sample\_Depth\_Units|

Description Example:

HS|XXXXXXXX|XXNNNNN|X|XXXXXXXX|XXXXXXXX|XXXXXXXX|NN|MMDDYYYY|HHMMSS|NNNN|NNNN|XXX|

Real World Examples:

HS|ISDH|DA12345|W|AA345678|BB345678|00TSW190|1|11191999|220156|3| (Sample Number1 Header Record)

----Sample Number Record1---

----Sample Number RecorD5---

----Sample Number Record3---

FS|ISDH|DA12345|W|AA345678|BB345678|00TSW190|1|11191999|220156|3| (Sample Number1 Footer Record)

HS|ISDH|DA54321|S|345678|363783|00TSW190|1|11191999|142112|2| (Sample Number2 Footer Record)

----Sample Number2 Record1---

----Sample Number2 RecorD5---

FS|ISDH|DA54321|S|345678|363783|00TSW190|1|11191999|142112|2| (Sample Number2 Footer Record)

## Sample Number Record:

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Description | Format | Example |
| Record\_ID | Identifies Field Data Record | "DS" | DS |
| Lab\_Sample\_Num | Number used internally by Lab to identify IDEM Sample being analyzed | XXXXXXXX | AA345678 |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Potential Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Result | Parameter test resultUse the following if the results are between the Method Detection Limit (MDL) and the Min. Reporting Limit (MRL):  Case 1 (Actual Values Requested) then use the Actual value measuredCase 2 (Actual Values Not Requested) then use “-1” In Case 1 and Case 2, include ‘<’ in the **Result\_Flags field.** if the Result exceeds the Max. Reporting Limit, then use ‘-2’ in the Result field and include ‘>’ in Result\_Flags field. | nnnnnnnn.nnnn | 5.0 |
| Result\_Units | Result Units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Result\_Flags | Lab Flags for this record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) Use “<” symbol if Result is less than Reporting Limit and use “>” if Result exceeds the Maximum Reporting Limit. | XXXXX | <gx |
| Prep\_Batch\_Num | Lab-Internal Alphanumeric identifier indicating batch within which sample was prepped | XXXXXXXX | 768 |
| Prep\_Date | Date sample prepped (if applicable) | MMDDYYYY | 12251999 |
| Prep\_Time | 24-Hour Time sample prepped for analysis (if applicable) | HHMMSS | 163403 |
| Prep\_Method | Prep Method Used (if applicable) | XXXXXXXXXX | 3050 |
| Run\_Batch\_Num | Lab-Internal Alphanumeric identifier indicating batch within which sample was analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date Field Measurements Taken | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time Field Measurements Taken | HHMMSS | 163403 |
| Dilution\_Mult | Number indicating dilution magnitude required for analysis | nnnn | 10 |
| Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |

## Record Format (in actual data records, all on one line):

## Record\_ID|Lab\_Sample\_Num|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Report\_Limit| Report\_Limit\_Units|Result|Result\_Units|Result\_Flags|Prep\_Batch\_Num|Prep\_Date|Prep\_Time|Prep\_Method| Run\_Batch\_Num|Run\_Date|Run\_Time|Dilution\_Mult|Lab\_MDL|Lab\_MDL\_Units|

## Description Example:

## DS|XXXXXXXX|XXXXXXXXXX|X|XXXXXXXXXX|XXXX|X|NNNNNNNN.NNNN|XXXXX|NNNNNNNN.NNNN|XXXXX|XXXXX| XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX|MMDDYYYY|HHMMSS|NNNN|NNNNNNNN.NNNN|XXXXX|

## Real World Examples:

## DS|AA345678|257301-77-2|T|200.7|N/A|W|1.0|ug/l|8.1|ug/l|<gx|768|12251999|163403|3050|8043|12251999|163403|10|0.3|ug/l|

## DS|AA345678|257301-77-2|T|200.7|N/A|W|1.0|ug/l|8.1|ug/l|<gx| | | ||8043|12251999|163403|10|0.3|ug/l|

## Field Data Record:

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Description | Format | Example |
| Record\_ID | Identifies Field Data Record | "DS" | DS |
| Lab\_Sample\_Num | Number used internally by Lab to identify IDEM Sample being analyzed | XXXXXXXX | AA345678 |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | E-14539 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | D |
| Test\_Method | Test method used by Field Sampler | XXXXXXXXXX | SM4500-OG |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Potential Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | N/A |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 0.01 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | mg/L |
| Result | Parameter test result  (If the results are between the Method Detection Limit and the Min. Reporting Limit. Include “<” symbol in Result\_Flags field and use the actual value measured, if actual values have been requested, or ‘-1’ in the result field.  Include ‘>’ in Result\_Flags field and use ‘-2’ in the Result field if the Result exceeds the Max. Reporting Limit. | nnnnnnnn.nnnn | 7.68 |
| Result\_Units | Result Units (see page i for selection of units.) | XXXXX | mg/L |
| Result\_Flags | Lab Flags for this record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) Use “<” symbol if Result is less than Reporting Limit and use “>” if Result exceeds the Maximum Reporting Limit. | XXXXX | <gx |
| Prep\_Batch\_Num | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Prep\_Date | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Prep\_Time | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Prep\_Method | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Run\_Batch\_Num | Lab-Internal Alphanumeric identifier indicating batch within which sample was analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run | HHMMSS | 163403 |
| Dilution\_Mult | Number indicating dilution magnitude required for analysis | nnnn | 1.0 |
| SampleDepth | Water depth at which sample collected. | nnnnn.n | 0.0 |
| Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |

## Record Format (in actual data records, all on one line):

## Record\_ID|Lab\_Sample\_Num|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Report\_Limit| Report\_Limit\_Units|Result|Result\_Units|Result\_Flags|Prep\_Batch\_Num|Prep\_Date|Prep\_Time|Prep\_Method| Run\_Batch\_Num|Run\_Date|Run\_Time|Dilution\_Mult| SampleDepth|Lab\_MDL|Lab\_MDL\_Units|

## Description Example:

## DS|XXXXXXXX|XXXXXXXXXX|X|XXXXXXXXXX|XXXX|X|NNNNNNNN.NNNN|XXXXX|NNNNNNNN.NNNN|XXXXX|XXXXX| XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX|MMDDYYYY|HHMMSS|NNNN|NNN.NNNN|NNNNNNNN.NNNN|XXXXX|

## Real World Examples:

## DS|AA345678|257301-77-2|T|200.7|N/A|W|1.0|ug/l|8.1|ug/l|<gx|768|12251999|163403|3050|8043|12251999|163403|10| 0.3|ug/l|

## DS|AA345678|257301-77-2|T|200.7|N/A|W|1.0|ug/l|8.1|ug/l|<gx| | | ||8043|12251999|163403|10|0| 0.3|ug/l|

# Project Narrative Header/Footer Records

Project Narrative Header Records are placed prior to the first line of a Project Narrative. Project Narrative Footer Record is placed after last line of the Project Narrative, forming a matched pair.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies Project Narrative Header Record (“HN”) Or – Project Narrative Footer Record (“FN”) | "HN" | HN |
| Lab\_ID | Name of Lab Submitting Lab Analysis Data Results | XXXXXXXX | ISDH |
| Lab\_Job\_Num | Number used internally by Lab to identify the entire group of samples being analyzed for IDEM | XXXXXXXX | BB345678 |
| OWQ\_Analysis\_Set | IDEM Assigned Analysis Set Number | XXXXXXXX | 00TSW190 |
| Analysis\_Set\_SubmitCount | On first submission of analysis set test results, =1;  if samples are re-analyzed & re-submitted, =2 (or 3 for a 2nd re-analysis/submittal, etc.) | NN | 1 |
| Lab\_Sample\_Num ➀ | Number used internally by Lab to identify IDEM Sample being analyzed | XXXXXXXX | AA345678 |
| Prep\_Batch\_Num ② | Lab-Internal Alphanumeric identifier indicating batch within which sample was prepped | XXXXXXXX | 768 |
| Run\_Batch\_Num ② | Lab-Internal Alphanumeric identifier indicating batch within which sample was analyzed | XXXXXXXX | 8043 |
| Refer\_Record\_ID | Record\_ID describing type of record being referred to (“DS”, “CC”, “BL”, “LC”, “CS”, “SS”, “IS”, “MS”, or “DU”) – for definitions, see the Record\_ID field in the Sample Number Record and Lab QC Records: General Format Description sections of this document. | XX | DS |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Prep\_Method | Prep Method Used (if applicable) | XXXXXXXXXX | 3050 |
| Date | Date of file/batch creation | MMDDYYYY | 11191999 |
| Time | 24-Hour Time of file/batch creation | HHMMSS | 220156 |
| Count | Number of Narrative records in batch (for this Header Record) | nnnn | 7 |

**Record Format**(in actual data records, all on one line):

Record\_ID|Lab\_ID|Lab\_Job\_Num|OWQ\_Analysis\_Set|Analysis\_Set\_SubmitCount|Lab\_Sample\_Num|Prep\_Batch\_Num| Run\_Batch\_Num|Refer\_Record\_ID|CAS\_Number|CAS\_Num\_Qualifier|Sample\_Medium\_ID|Test\_Method|Test\_SubMethod| Prep\_Method|Date|Time|Count|

Project Narrative Header Description Example:

HN|XXXXXXXX|XXXXXXXX|XXXXXXXX|NN|XXXXXXXX|XXXXXXXX|XXXXXXXX|XX|XXXXXXXXXXX|X|X|XXXXXXXXXX|XXXX| XXXXXXXXXX| HHMMSS|NNNN|MMDDYYYY|

* IF VALID FOR BATCH, PROVIDE BATCH AND NOT INTERNAL SAMPLE NUMBER

② IF VALID FOR CERTAIN SAMPLES, PROVIDE INTERNAL SAMPLE NUMBER, BUT NOT BATCH NUMBER

# Project Narrative Data Record:

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies Project Narrative Data Record | "DN" | DN |
| Narrative | Projective Narrative Text in a continuous line | XXXXXXXXXX | Analysis Resul… |

Record Format:

Record\_ID|Narrative|

Description Example:

PN|XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX|

Real World Example of Project Narrative Header, Data, and Footer Records:

HN|ISDH|BB345678|00TSW190|1|AA345678|768|8043|DR|257301-77-2|T|S|200.7|N/A|3050|11191999|220156|2|

DN|Analysis resulted in an unusually high analyte concentration. Sample tested positive for presence of sulfuric acid preservative. It is possible that nitric acid is also present in sample.| (This is ONE Line of Text)

FN|ISDH|BB345678|00TSW190|1|AA345678|768|8043|DR|257301-77-2|T|S|200.7|N/A|3050|11191999|220156|2|

HN|ISDH|BB345678|00TSW190|1|AA345679|768|8043|DR|257301-77-2|T|S|200.7|N/A|3050|11191999|220156|3|

---Project Narrative Record---

---Project Narrative Record---

---Project Narrative Record---

FN|ISDH|BB345678|00TSW190|1|AA345679|768|8043|DR|257301-77-2|T|S|200.7|N/A|3050|11191999|220156|3|

HN|ISDH|BB345678|00TSW190|1|AA345680|768|8043|DR|257301-77-2|T|S|200.7|N/A|3050|11191999|220156|6|

---Project Narrative Record---

---Project Narrative Record---

---Project Narrative Record---

---Project Narrative Record---

---Project Narrative Record---

---Project Narrative Record---

FN|ISDH|BB345678|00TSW190|1|AA345680|768|8043|DR|257301-77-2|T|S|200.7|N/A|3050|11191999|220156|6|

# QC Header/Footer Records:

QC Header Records are placed prior to the first line of an Analysis Set’s QC Section. QC Footer Record is placed after last line of the QC Section, forming a matched pair.

There is one QC Header/Footer Pair per Analysis Set. QC Detail Records include several types of QC performed by the labs.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies QC Header Record (“HQ”)  Or – QC Footer Record (“FQ”) | "HQ" or “FQ” | HQ |
| Lab\_ID | Name of Lab Submitting Lab Analysis Data Results | XXXXXXXX | ISDH |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Lab\_Job\_Num | Number used internally by Lab to identify the entire group of samples being analyzed for IDEM | XXXXXXXX | BB345678 |
| OWQ\_Analysis\_Set | IDEM Assigned Analysis Set Number | XXXXXXXX | 00TSW190 |
| Analysis\_Set\_SubmitCount | On first submission of analysis set test results, =1;  if samples are re-analyzed & re-submitted, =2  (or 3 for a 2nd re-analysis/submittal, etc.) | NN | 1 |
| Date | Date of file/batch creation | MMDDYYYY | 11191999 |
| Time | 24-Hour Time of file/batch creation | HHMMSS | 220156 |
| Count | Number of records in this batch (for all QC Records) | nnnn | 43 |

Record ID|Lab\_ID|Sample\_Medium\_ID|Lab\_Job\_Num|OWQ\_Analysis\_Set|Analysis\_Set\_SubmitCount|Date|Time|Count|

Description Example:

HQ|XXXXXXXX|X|XXXXXXXX|XXXXXXXX|NN|MMDDYYYY|HHMMSS|NNNN|

Real World Examples:

HQ|ISDH|W|BB345678|00TSW190|1|11191999|220156|3| (QC Header Record)

----QC Record1---

----QC RecorD5---

----QC Record3---

FQ|ISDH|W|BB345678|00TSW190|1|11191999|220156|3| (QC Footer Record)

# Lab QC Records: General Format Description

| **Field Name** | **Description** | **Format** | **Example** |
| --- | --- | --- | --- |
| Record\_ID | Identifies type of QC record:  Blank Record = “BL”  Laboratory Control Standard Record = “LC”  Laboratory Duplicate Record = “DU”  Matrix Spike/Matrix Spike Dup. Record = “MS”  Post Digestion Spike/Spike Dup Record = “PS”  Serial Dilution Duplicate=”SD”  Initial Calibration Blank=”IB” Initial Calibration Standard=”IC” Continuing Calibration Blank=”CB”  Spectral Interference Check Standard=”SI”  Continuing Calibration Verification Record = “CC”  Control Spike=“CS”  Internal Standard=”IS” Surrogate Standard=“SS”  Linear Upper Range Standard=”LR”  Mass Spectrometry Tuning or Performance Standard=”TS” Neg. E. Coli, Pos Coliform = “KP” Negative Coliform =”PA” Positive E. Coli =”EC” | XX | LC |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Prep\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample prepped | XXXXXXXX | 768 |
| Prep\_Date | Date sample prepped for analysis (if applicable) | MMDDYYYY | 12251999 |
| Prep\_Time | 24-Hour Time sample prepped for analysis (if applicable) | HHMMSS | 163403 |
| Prep\_Method | Prep Method Used (if applicable) | XXXXXXXX | 3050 |
| Run\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run | HHMMSS | 163403 |
| Dup\_Run\_Date | Date analysis run for the DUP, MSD, or PSD | MMDDYYYY | 12251999 |
| Dup\_Run\_Time | 24-Hour Time analysis run for the DUP, MSD, or PSD | HHMMSS | 163403 |
| True\_Value | True Value of substance added to sample (See Note for Result in Sample Number Records) | Nnnnnnnn.nnnn | 5.0 |
| True\_Value\_Units | Units for True\_Value (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Measured\_Value | Value Measured (See Note for Result in Sample Number Records) | Nnnnnnnn.nnnn | 4.4 |
| Measured\_Units | Units for Measured\_Value (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Pcnt\_Recovered | Percentage Recovered | nnn.nn | 88.00 |
| Dup\_Measure\_Value | Value Measured in Duplicate, MSD, or PSD (See Note for Result in Sample Number Records) | Nnnnnnnn.nnnn | 4.0 |
| Dup\_Measure\_Units | Units for Dup\_Measure\_Value, MSD, or PSD | XXXXX | ug/l, mg/kg |
| Dup\_Pcnt\_Recover | Percentage Recovered for Duplicate, MSD, or PSD | nnn.nn | 80.0 |
| Dup\_RPD | % Difference Between Measured\_Value and Dup\_Measure\_Value | nnn.nn | 9.50 |
| M\_Z\_Ratio | Mass to Charge Ratio of Ion Fragment (use for Mass Spectrometry Tuning Standard) | nnn | 177 |
| M\_Z\_Ref | Reference Mass to Charge Ratio of Parent Peak or Secondary Ion (use for Mass Spectrometry Tuning/Performance Ion Abundance Criteria) | nnn | 176 |
| MS\_Spike\_Added | Matrix or Post Digestion Spike Added | Nnnnnnnn.nnnn | 4.0 |
| MS\_Spike\_Units | Units for Matrix Spike Added (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Measure\_Flags | Lab Flags for this QC record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Dup\_Measure\_Flags | Lab Flags for this QC Dup record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Lower\_Limit | Lower Percent Recovered Limit (in percent) | nnn.n | 80.0 |
| Upper\_Limit | Upper Percent Recovered Limit (in percent) | nnn.n | 120.0 |
| Lab\_Sample\_Num | Number used internally by Lab to identify Sample analyzed | XXXXXXXX | AA345678 |
| Dup\_Lab\_Sample\_Num | Number used internally by Lab to identify Sample Dup analyzed | XXXXXXXX | AA345679 |
| Dilution\_Mult | Number indicating dilution magnitude required for analysis | nnnn | 10 |
| Dup\_Dilution\_Mult | Number indicating dilution magnitude of Duplicate required for analysis | nnnn | 10 |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Report\_Limit | Lab's Reporting Limit for Duplicate test (Method Reporting Limit X Dilution Multiplier)or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Dup\_Report\_Limit\_Units | Lab Reporting Limit units for Duplicate test (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Dup\_Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |

Record Format (in actual QC data records, all on one line):

Record\_ID|CAS\_Number|CAS\_Num\_Qualifier| Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Prep\_Batch\_Num|Prep\_Date| Prep\_Time|Prep\_Method|Run\_Batch\_Num|Run\_Date|Run\_Time|Dup\_Run\_Date|Dup\_Run\_Time|True\_Value|True\_Value\_Units| Measured\_Value|Measured\_Units|Pcnt\_Recovered|Dup\_Measure\_Value|Dup\_Measure\_Units|Dup\_Pcnt\_Recover|Dup\_RPD| M\_Z\_Ratio|M\_Z\_Ref|MS\_Spike\_Added|MS\_Spike\_Units|Measure\_Flags|Dup\_Measure\_Flags|Lower\_Limit|Upper\_Limit|Lab\_Sample\_Num| Dup\_Lab\_Sample\_Num|Dilution\_Mult|Dup\_Dilution\_Mult| Report\_Limit| Report\_Limit\_Units| Dup\_Report\_Limit | Dup\_Report\_Limit\_Units|Lab\_MDL|Lab\_MDL\_Units|

Description Example:

LC|XXXXXXXXXX|X|XXXXXXXXXX|XXXX|X|XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX|MMDDYYYY|HHMMSS|MMDDYYYY|HHMMSS| NNNNNNNN.NNNNNN|XXXXX|NNNNNNNN.NNNNNN|XXXXX|NNN.N|NNNNNNNN.NNNNNN|XXXXX|NNN.N| NNN.N| XXXXXXXXXX|XXXXXXXXXX|NNNNNNNN.NNNNNN|XXXXX|XXXXX|XXXXX|NNN.N|NNN.N|XXXXXXXX|XXXXXXXX|NNNN|NNNN| NNNNNNNN.NNNN|XXXXX|NNNNNNNN.NNNN|XXXXX|NNNNNNNN.NNNN|XXXXX|

EACH QC RECORD MUST HAVE A UNIQUE COMBINATION OF:   
CAS\_Number + CAS\_Num\_Qualifier + Test\_Method + Test\_SubMethod + Sample\_Medium\_ID + RECORD\_ID + RUN\_BATCH\_NUM + LAB\_SAMPLE\_NUM

It may be necessary to create an arbitrary Lab\_Sample\_Num (i.e. CCV1, CCV2, Blank1, Blank2, etc.) in order to achieve this unique combination. A unique Lab\_Sample\_Num could be generated by concatenating the Lab\_Sample\_Num & Run\_Time fields. Only 4 characters would be need from the Run\_Time field. Note that Run\_Time does not contain any colons or slashes.

Example: CCV1 run at 080000 would be CCV1-0800  
 CCV1 run at 083000 would be CCV1-0830, Etc.

# Lab QC Records: Format for QC Records of following types: ‘Blank’, ‘Initial Calibration Blank’, or ‘Continuing Calibration Blank’

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies type of QC record: Blank Record = “BL”  Initial Calibration Blank=”IB” Continuing Calibration Blank=”CB” | XX | BL |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Prep\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample prepped | XXXXXXXX | 768 |
| Prep\_Date | Date sample prepped for analysis (if applicable) | MMDDYYYY | 12251999 |
| Prep\_Time | 24-Hour Time sample prepped for analysis (if applicable) | HHMMSS | 163403 |
| Prep\_Method | Prep Method used (if applicable) | XXXXXXXX | 3050 |
| Run\_Batch\_Num | Lab’s Alphanumeric identifyier of batch within which Sample analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run | HHMMSS | 163403 |
| Dup\_Run\_Date | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Run\_Time | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| True\_Value | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| True\_Value\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measured\_Value | Value Measured (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 4.4 |
| Measured\_Units | Units for Measured\_Value (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Pcnt\_Recovered | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Measure\_Value | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Measure\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Pcnt\_Recover | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_RPD | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ratio | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ref | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Added | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measure\_Flags | Lab Flags for this Blank QC record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Dup\_Measure\_Flags | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lower\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Upper\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_Sample\_Num | Number used internally by Lab to identify Sample analyzed | XXXXXXXX | AA345678 |
| Dup\_Lab\_Sample\_Num | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dilution\_Mult | Number indicating dilution magnitude required for analysis | nnnn | 10 |
| Dup\_Dilution\_Mult | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier)  or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Report\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Report\_Limit\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Lab\_MDL | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Lab\_MDL\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |

Record Format (in actual data records, all on one line):

Record\_ID|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Prep\_Batch\_Num|Prep\_Date| Prep\_Time|Prep\_Method|Run\_Batch\_Num|Run\_Date|Run\_Time| | | | |Measured\_Value|Measured\_Units| | | | | | | | | |Measure\_Flags| | | | Lab\_Sample\_Num| |Dilution\_Mult| | Report\_Limit| Report\_Limit\_Units| | |Lab\_MDL|Lab\_MDL\_Units|

Description Example:

BL|XXXXXXXXXX|T|XXXXXXXXXX|XXXX|X|XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX|MMDDYYYY|HHMMSS| | | | | NNNNNNNN.NNNNNN|XXXXX| | | | | | | | | |XXXXX| | | |XXXXXXXX| |NNNN| | NNNNNNNN.NNNN|XXXXX| | |NNNNNNNN.NNNN|XXXXX|

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# Lab QC Records: Format for QC Records of following types: Continuing Calibration Verification, Initial Calibration Standard, Linear Upper Range Standard, or Spectral Interference Check Standard

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Continuing Calibration Verification Record = “CC”  Initial Calibration Standard=”IC”  Linear Upper Range Standard=”LR”  Spectral Interference Check Standard=”SI” | XX | CC |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Prep\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample prepped | XXXXXXXX | 768 |
| Prep\_Date | Date sample prepped for analysis (if applicable) | MMDDYYYY | 12251999 |
| Prep\_Time | 24-Hour Time sample prepped for analysis (if applicable) | HHMMSS | 163403 |
| Prep\_Method | Prep Method Used (if applicable) | XXXXXXXX | 3050 |
| Run\_Batch\_Num | Lab’s Alphanumeric identifyier of batch within which Sample analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run | HHMMSS | 163403 |
| Dup\_Run\_Date | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Run\_Time | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| True\_Value | True Value of substance added to sample (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 5.0 |
| True\_Value\_Units | Units for True\_Value (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Measured\_Value | Value Measured (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 4.4 |
| Measured\_Units | Units for Measured\_Value (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Pcnt\_Recovered | Percentage Recovered | nnn.n | 88.0 |
| Dup\_Measure\_Value | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Measure\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Pcnt\_Recover | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_RPD | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ratio | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ref | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Added | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measure\_Flags | Lab Flags for this QC record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Dup\_Measure\_Flags | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lower\_Limit | Lower Percent Recovered Limit (in percent) | nnn.n | 80.0 |
| Upper\_Limit | Upper Percent Recovered Limit (in percent) | nnn.n | 120.0 |
| Lab\_Sample\_Num | Number used internally by Lab to identify Sample analyzed | XXXXXXXX | AA345678 |
| Dup\_Lab\_Sample\_Num | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dilution\_Mult | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Dilution\_Mult | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Report\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Report\_Limit\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Lab\_MDL | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Lab\_MDL\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |

Record Format (in actual data records, all on one line):

Record\_ID|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Prep\_Batch\_Num|Prep\_Date| Prep\_Time|Prep\_Method|Run\_Batch\_Num|Run\_Date|Run\_Time| | |True\_Value|True\_Value\_Units|Measured\_Value|Measured\_Units| Pcnt\_Recovered| | | | | | | | |Measure\_Flags| |Lower\_Limit|Upper\_Limit| Lab\_Sample\_Num| | | | Report\_Limit| Report\_Limit\_Units| | |Lab\_MDL|Lab\_MDL\_Units|

Description Example:

CC|XXXXXXXXXX|T|XXXXXXXXXX|XXXX|X|XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX|MMDDYYYY|HHMMSS| | | NNNNNNNN.NNNNNN|XXXXX|NNNNNNNN.NNNNNN|XXXXX|NNN.N| | | | | | | | |XXXXX| |NNN.N|NNN.N|XXXXXXXX| | | | NNNNNNNN.NNNN|XXXXX| | |NNNNNNNN.NNNN|XXXXX|

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# Lab QC Records: Format for ‘Duplicate’ or ‘Serial Dilution’ QC Records

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies type of QC record: Duplicate Record = “DU”; Serial Dilution = “SD” | XX | DU |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Prep\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample prepped | XXXXXXXX | 768 |
| Prep\_Date | Date sample prepped for analysis (if applicable) | MMDDYYYY | 12251999 |
| Prep\_Time | 24-Hour Time sample prepped for analysis (if applicable) | HHMMSS (military time) | 163403 (4:34:03 PM) |
| Prep\_Method | Prep Method Used (if applicable) | XXXXXXXX | 3050 |
| Run\_Batch\_Num | Lab’s Alphanumeric identifyier of batch within which Sample analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run | HHMMSS | 163403 |
| Dup\_Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Dup\_Run\_Time | 24-Hour Time analysis run | HHMMSS | 163403 |
| True\_Value | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| True\_Value\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measured\_Value | Value Measured (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 4.4 |
| Measured\_Units | Units for Measured\_Value (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Pcnt\_Recovered | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Measure\_Value | Value Measured in Duplicate (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 4.0 |
| Dup\_Measure\_Units | Units for Dup\_Measure\_Value | XXXXX | ug/l, mg/kg |
| Dup\_Pcnt\_Recover | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_RPD | % Difference Between Measured\_Value and Dup\_Measure\_Value | nnn.n | 9.5 |
| M\_Z\_Ratio | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ref | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Added | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measure\_Flags | Lab Flags for this record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Dup\_Measure\_Flags | Lab Flags for record duplicate (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Lower\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Upper\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_Sample\_Num | Number used internally by Lab to identify Sample analyzed | XXXXXXXX | AA345678 |
| Dup\_Lab\_Sample\_Num | Number used internally by Lab to identify Sample Dup analyzed | XXXXXXXX | AA345679 |
| Dilution\_Mult | Number indicating dilution magnitude required for analysis | nnnn | 10 |
| Dup\_Dilution\_Mult | Number indicating dilution magnitude of Duplicate required for analysis | nnnn | 10 |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Report\_Limit | Lab's Reporting Limit for Duplicate test (Method Reporting Limit X Dilution Multiplier)or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Dup\_Report\_Limit\_Units | Lab Reporting Limit units for Duplicate test (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Dup\_Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |

Record Format (in actual data records, all on one line):

Record\_ID|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Prep\_Batch\_Num|Prep\_Date| Prep\_Time|Prep\_Method|Run\_Batch\_Num|Run\_Date|Run\_Time|Dup\_Run\_Date|Dup\_Run\_Time| | |Measured\_Value|Measured\_Units| | Dup\_Measure\_Value|Dup\_Measure\_Units| |Dup\_RPD| | | | |Measure\_Flags|Dup\_Measure\_Flags| | |Lab\_Sample\_Num| Dup\_Lab\_Sample\_Num|Dilution\_Mult|Dup\_Dilution\_Mult| Report\_Limit| Report\_Limit\_Units| Dup\_Report\_Limit | Dup\_Report\_Limit\_Units|Lab\_MDL|Lab\_MDL\_Units|

Description Example:

DU|XXXXXXXXXX|T|XXXXXXXXXX|XXXX|X|XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX|MMDDYYYY|HHMMSS| MMDDYYYY|HHMMSS| | |NNNNNNNN.NNNNNN|XXXXX| |NNNNNNNN.NNNNNN|XXXXX| |NNN.N| | | | |XXXXX|XXXXX| | |XXXXXXXX| XXXXXXXX|NNNN|NNNN| NNNNNNNN.NNNN|XXXXX| NNNNNNNN.NNNN|XXXXX|NNNNNNNN.NNNN|XXXXX|

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# Lab QC Records: Format for ‘Matrix Spike’, ‘Matrix Spike Duplicate’ Records

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies type of QC record: Matrix Spike/Matrix Spike Dup. Record = “MS” Post Digestion Spike/Spike Dup Record = “PS” | XX | MD |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Prep\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample prepped | XXXXXXXX | 768 |
| Prep\_Date | Date sample prepped for analysis (if applicable) | MMDDYYYY | 12251999 |
| Prep\_Time | 24-Hour Time sample prepped for analysis (if applicable) | HHMMSS | 163403 |
| Prep\_Method | Prep Method Used (if applicable) | XXXXXXXX | 3050 |
| Run\_Batch\_Num | Lab’s Alphanumeric identifyier of batch within which Sample analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run for the MS or PS | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run for the MS or PS | HHMMSS | 163403 |
| Dup\_Run\_Date | Date analysis run for the MSD or PSD | MMDDYYYY | 12251999 |
| Dup\_Run\_Time | 24-Hour Time analysis run for the MSD or PSD | HHMMSS | 163403 |
| Unspiked\_Value | Measured Value of substance in unspiked sample Use measured value if known or ‘-1’ if below the detection limit. (See Note for Result in Sample Number Records) If the value is ‘0’ then use ‘-1’ | nnnnnnnn.nnnn | 5.0 |
| Unspiked\_Units | Units for Unspiked\_Value | XXXXX | ug/l, mg/kg |
| Measured\_Value | Value Measured in Matrix Spike Sample (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 8.5 |
| Measured\_Units | Units for Measured\_Value (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Pcnt\_Recovered | Percentage Recovered | nnn.n | 88.0 |
| Dup\_Measure\_Value | Value Measured in Matrix Spike Duplicate (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 8.2 |
| Dup\_Measure\_Units | Units for Dup\_Measure\_Value | XXXXX | ug/l, mg/kg |
| Dup\_Pcnt\_Recover | Percentage Recovered for Duplicate | nnn.n | 80.0 |
| Dup\_RPD | % Difference Between Measured\_Value and Dup\_Measure\_Value | nnn.n | 3.6 |
| M\_Z\_Ratio | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ref | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Added | Matrix Spike Added | nnnnnnnn.nnnn | 4.0 |
| MS\_Spike\_Units | Units for Matrix Spike Added | XXXXX | ug/l, mg/kg |
| Measure\_Flags | Lab Flags for the **MS** record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) DO NOT USE THE LAB FLAG FOR THE UNSPIKED\_VALUE | XXXXX | <gx |
| Dup\_Measure\_Flags | Lab Flags for **MSD or PSD** record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Lower\_Limit | Lower Percent Recovered Limit (in percent) | nnn.n | 80.0 |
| Upper\_Limit | Upper Percent Recovered Limit (in percent) | nnn.n | 120.0 |
| Lab\_Sample\_Num | Number used internally by Lab to identify Sample analyzed (unspiked sample) | XXXXXXXX | AA345678 |
| Dup\_Lab\_Sample\_Num | Number used internally by Lab to identify MSD or PSD analyzed | XXXXXXXX | AA345679 |
| Dilution\_Mult | Number indicating dilution magnitude required for analysis | nnnn | 10 |
| Dup\_Dilution\_Mult | Number indicating dilution magnitude of MSD required for analysis | nnnn | 10 |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Report\_Limit | Lab's Reporting Limit for Duplicate test (Method Reporting Limit X Dilution Multiplier)or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Dup\_Report\_Limit\_Units | Lab Reporting Limit units for Duplicate test (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Dup\_Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |

Record Format (in actual data records, all on one line):

Record\_ID|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Prep\_Batch\_Num|Prep\_Date| Prep\_Time|Prep\_Method|Run\_Batch\_Num|Run\_Date|Run\_Time|Dup\_Run\_Date|Dup\_Run\_Time|Unspiked\_Value|Unspiked\_Units| Measured\_Value|Measured\_Units|Pcnt\_Recovered|Dup\_Measure\_Value|Dup\_Measure\_Units|Dup\_Pcnt\_Recover|Dup\_RPD| | | MS\_Spike\_Added|MS\_Spike\_Units|Measure\_Flags|Dup\_Measure\_Flags|Lower\_Limit|Upper\_Limit|Lab\_Sample\_Num| Dup\_Lab\_Sample\_Num|Dilution\_Mult|Dup\_Dilution\_Mult| Report\_Limit| Report\_Limit\_Units| Dup\_Report\_Limit| Dup\_Report\_Limit\_Units|Lab\_MDL|Lab\_MDL\_Units|

Description Example:

MS|XXXXXXXXXX|T|XXXXXXXXXX|XXXX|X|XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX|MMDDYYYY|HHMMSS| MMDDYYYY|HHMMSS|NNNNNNNN.NNNNNN|XXXXX|NNNNNNNN.NNNNNN|XXXXX|NNN.N|NNNNNNNN.NNNNNN|XXXXX|NNN.N| NNN.N| | |NNNNNNNN.NNNNNN|XXXXX|XXXXX|XXXXX|NNN.N|NNN.N|XXXXXXXX|XXXXXXXXX|NNNN.NN|NNNN.NN|NNNNNNNN.NNNN| XXXXX| NNNNNNNN.NNNN|XXXXX|NNNNNNNN.NNNN|XXXXX|

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# Lab QC Records: Format for Records of following types: ‘Control Spike’, ‘Internal Standard’, ‘Laboratory Control Standard’, ‘Surrogate Standard’

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies QC record type: Control Spike=“CS”; Internal Standard=”IS”; Laboratory Control Standard = “LC”; Surrogate Standard=“SS” | XX | LC |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Prep\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample prepped | XXXXXXXX | 768 |
| Prep\_Date | Date sample prepped for analysis (if applicable) | MMDDYYYY | 12251999 |
| Prep\_Time | 24-Hour Time sample prepped for analysis, in 24-hour time (if applicable) | HHMMSS | 163403 |
| Prep\_Method | Prep Method Used (if applicable) | XXXXXXXX | 3050 |
| Run\_Batch\_Num | Lab’s Alphanumeric identifyier of batch within which Sample analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run, in 24-hour time | HHMMSS | 163403 |
| Dup\_Run\_Date | Date analysis run for the duplicate, if applicable |  |  |
| Dup\_Run\_Time | 24-Hour Time analysis run for the duplicate, if applicable |  |  |
| True\_Value | True Value of substance added to sample (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 5.0 |
| True\_Value\_Units | Units for True\_Value | XXXXX | ug/l, mg/kg |
| Measured\_Value | Value Measured (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 4.4 |
| Measured\_Units | Units for Measured\_Value (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Pcnt\_Recovered | Percentage Recovered | nnn.n | 88.0 |
| Dup\_Measure\_Value | Value Measured in Duplicate (See Note for Result in Sample Number Records) | nnnnnnnn.nnnn | 4.0 |
| Dup\_Measure\_Units | Units for Dup\_Measure\_Value | XXXXX | ug/l, mg/kg |
| Dup\_Pcnt\_Recover | Percentage Recovered for Duplicate | nnn.n | 80.0 |
| Dup\_RPD | % Difference Between Measured\_Value and Dup\_Measure\_Value | nnn.n | 9.5 |
| M\_Z\_Ratio | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ref | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Added | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measure\_Flags | Lab Flags for this QC record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Dup\_Measure\_Flags | Lab Flags for dup record, if applicable (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Lower\_Limit | Lower Percent Recovered Limit (in percent) | nnn.n | 80.0 |
| Upper\_Limit | Upper Percent Recovered Limit (in percent) | nnn.n | 120.0 |
| Lab\_Sample\_Num | Number used internally by Lab to identify Sample analyzed | XXXXXXXX | AA345678 |
| Dup\_Lab\_Sample\_Num | Number used internally by Lab to identify Sample Dup analyzed (if applicable) | XXXXXXXX | AA345678 |
| Dilution\_Mult | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Dilution\_Mult | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Report\_Limit | Lab's Reporting Limit for Duplicate test (Method Reporting Limit X Dilution Multiplier)or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Dup\_Report\_Limit\_Units | Lab Reporting Limit units for Duplicate test (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Lab\_MDL | Lab’s Detection limit for test (Method Detection Limit X Dilution Multiplier | nnnnnnnn.nnnn | 5.0 |
| Dup\_Lab\_MDL\_Units | Lab Detection limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |

Record Format (in actual data records, all on one line):

Record\_ID|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Prep\_Batch\_Num|Prep\_Date| Prep\_Time|Prep\_Method|Run\_Batch\_Num|Run\_Date|Run\_Time| | |True\_Value|True\_Value\_Units|Measured\_Value|Measured\_Units| Pcnt\_Recovered|Dup\_Measure\_Value|Dup\_Measure\_Units|Dup\_Pcnt\_Recover|Dup\_RPD| | | | |Measure\_Flags| |Lower\_Limit|Upper\_Limit| Lab\_Sample\_Num| | | | Report\_Limit| Report\_Limit\_Units| Dup\_Report\_Limit | Dup\_Report\_Limit\_Units |Lab\_MDL|Lab\_MDL\_Units|

Description Example:

LC|XXXXXXXXXX|T|XXXXXXXXXX|XXXX|X|XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX|MMDDYYYY|HHMMSS| | | NNNNNNNN.NNNNNN|XXXXX|NNNNNNNN.NNNNNN|XXXXX|NNN.N|NNNNNNNN.NNNNNN|XXXXX|NNN.N|NNN.N| | | | |XXXXX| | NNN.N|NNN.N|XXXXXXXX| | | | NNNNNNNN.NNNN|XXXXX| NNNNNNNN.NNNN | XXXXX |NNNNNNNN.NNNN|XXXXX|

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# Lab QC Records: Format for Records of following types: ‘Tuning Standard’

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies type of QC record:  Mass Spectrometry Tuning or Performance Standard=”TS” | XX | TS |
| CAS\_Number | CAS # of substance being tested for (Tuning Standard) | XXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Prep\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample prepped | XXXXXXXX | 768 |
| Prep\_Date | Date sample prepped for analysis (if applicable) | MMDDYYYY | 12251999 |
| Prep\_Time | 24-Hour Time sample prepped for analysis (if applicable) | HHMMSS | 163403 |
| Prep\_Method | Prep Method Used (if applicable) | XXXXXXXX | 3050 |
| Run\_Batch\_Num | Lab’s Alphanumeric identifier of batch within which Sample analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run | HHMMSS | 163403 |
| Dup\_Run\_Date | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Run\_Time | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| True\_Value | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| True\_Value\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measured\_Value | Ion Abundance (Percent of Parent Peak) | Nnnnnnnn.nnnn | 4.4 |
| Measured\_Units | Units for Ion Abundance | XXXXX | % |
| Pcnt\_Recovered | Percent Ion Abundance to Reference Peak m/z | nnn.nn | 88.00 |
| Dup\_Measure\_Value | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Measure\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Pcnt\_Recover | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_RPD | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ratio | Mass to Charge Ratio of Ion Fragment (use for Mass Spectrometry Tuning Standard) | nnn | 177 |
| M\_Z\_Ref | Reference Mass to Charge of Parent or Secondary (use for Mass Spectrometry Tuning/Performance Ion Abundance Criteria) | nnn | 176 |
| MS\_Spike\_Added | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measure\_Flags | Lab Flags for this QC record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Dup\_Measure\_Flags | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lower\_Limit | Lower Percent Recovered Limit (in percent) | nnn.n | 80.0 |
| Upper\_Limit | Upper Percent Recovered Limit (in percent) | nnn.n | 120.0 |
| Lab\_Sample\_Num | Number used internally by Lab to identify Sample analyzed | XXXXXXXX | AA345678 |
| Dup\_Lab\_Sample\_Num | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dilution\_Mult | Number indicating dilution magnitude required for analysis | nnnn | 10 |
| Dup\_Dilution\_Mult | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Report\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Report\_Limit\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_MDL | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_MDL\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Lab\_MDL | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Lab\_MDL\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |

Record Format (in actual QC data records, all on one line):

Record\_ID|CAS\_Number|CAS\_Num\_Qualifier| Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Prep\_Batch\_Num| Prep\_Date|Prep\_Time|Prep\_Method|Run\_Batch\_Num|Run\_Date|Run\_Time| | | | |Measured\_Value|Measured\_Units|Pcnt\_Recovered| | | | | | M\_Z\_Ratio|M\_Z\_Ref| | Measure\_Flags| |Lower\_Limit|Upper\_Limit|Lab\_Sample\_Num| |Dilution\_Mult| | Report\_Limit| Report\_Limit\_Units| | | | |

Description Example:

TS|XXXXXXXXXX|X| XXXXXXXXXX|XXXX|X|XXXXXXXX|MMDDYYYY|HHMMSS|XXXXXXXX|XXXXXXXX| MMDDYYYY|HHMMSS| | | | |NNNNNNNN.NNNNNN|XXXXX|NNN.N| | | | | XXXXXXXXXX|XXXXXXXXXX| | |XXXXX| |NNN.N|NNN.N|XXXXXXXX| |NNNN| | NNNNNNNN.NNNN|XXXXX| | | | |

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# Lab QC Records: Format for Records of following types: ‘Neg. E. Coli, Pos Coliform (KP)’, ‘Negative Coliform (PA)’, ‘Positive E. Coli (EC)’

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Record\_ID | Identifies QC record type: Neg. E. Coli, Pos Coliform=“KP”; Negative Coliform=”PA”; Positive E. Coli = “EC | XX | KP |
| CAS\_Number | CAS # of substance being tested for (ECOLI for E. coli, or TCOLI for Total Coliforms, or FCOLI for Fecal Coliform) | XXXXXXXXXX | ECOLI |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | “T”, “D”, “F”, or ”S” | T |
| Test\_Method | Test method used by lab | XXXXXXXXXX | SM 9223B |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | "N/A”, “SCAN", or "SIM" | N/A |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Biological Tissues such as Fish) | X | W |
| Prep\_Batch\_Num | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Prep\_Date | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Prep\_Time | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Prep\_Method | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Run\_Batch\_Num | Lab’s Alphanumeric identifyier of batch within which Sample analyzed | XXXXXXXX | 8043 |
| Run\_Date | Date analysis run | MMDDYYYY | 12251999 |
| Run\_Time | 24-Hour Time analysis run, in 24-hour time | HHMMSS | 163403 |
| Dup\_Run\_Date | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Run\_Time | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| True\_Value | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| True\_Value\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measured\_Value | Value Measured  (If the results are between the Method Detection Limit and the Min. Reporting Limit. Include “<” symbol in Result\_Flags field and use the actual value measured, if actual values have been requested, or ‘-1’ in the result field.  Include ‘>’ in Result\_Flags field and use ‘-2’ in the Result field if the Result exceeds the Max. Reporting Limit. | nnnnnnnn.nnnn | 4.4 |
| Measured\_Units | Units for Measured\_Value (see page i for selection of units.) | XXXXX | MPN/100mL |
| Pcnt\_Recovered | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Measure\_Value | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Measure\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Pcnt\_Recover | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_RPD | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ratio | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| M\_Z\_Ref | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Added | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| MS\_Spike\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Measure\_Flags | Lab Flags for this QC record (Labs must provide cross-reference of flag codes and interpretations; IDEM will incorporate into translation table) | XXXXX | <gx |
| Dup\_Measure\_Flags | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lower\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Upper\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_Sample\_Num | Number used internally by Lab to identify Sample analyzed | XXXXXXXX | AA345678 |
| Dup\_Lab\_Sample\_Num | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dilution\_Mult | Number indicating dilution magnitude required for analysis | nnnn | 1 |
| Dup\_Dilution\_Mult | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Report\_Limit | Lab’s Reporting limit for test (Method Reporting Limit X Dilution Multiplier) or if Result exceeds the Maximum Reporting Limit enter Maximum Reporting Limit X Dilution Multiplier) | nnnnnnnn.nnnn | 5.0 |
| Report\_Limit\_Units | Lab Reporting limit units (see page i for selection of units.) | XXXXX | ug/l, mg/kg |
| Dup\_Report\_Limit | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Report\_Limit\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_MDL | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Lab\_MDL\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Lab\_MDL | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |
| Dup\_Lab\_MDL\_Units | UNUSED (but please add Pipe Delimiter for placeholder) |  |  |

Record Format (in actual data records, all on one line):

Record\_ID|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID| | | | |Run\_Batch\_Num|Run\_Date| Run\_Time| | | | |Measured\_Value|Measured\_Units| | | | | | | | | |Measure\_Flags| |Lower\_Limit|Upper\_Limit| Lab\_Sample\_Num| | | | Report\_Limit| Report\_Limit\_Units| | | | |

Description Example:

LC|XXXXXXXXXX|T|XXXXXXXXXX|XXXX|X| | | | |XXXXXXXX|MMDDYYYY|HHMMSS| | | | |NNNNNNNN.NNNNNN|XXXXX| | | | | | | | | |XXXXX| |NNN.N|NNN.N|XXXXXXXX| |NN| | NNNNNNNN.NNNN|XXXXX| | | | |

Note:

These QC samples require separate records for Total Coliform and e. Coli.

Real World Example:

|KP|TCOLI|T|SM 9223B|N/A|W| | | | |252|09252000|205000| | | | |8.4|MPN/100mL| | | | | | | | | | | |1|2400|26835| |1| | | | | |

|KP|ECOLI|T|SM 9223B|N/A|W| | | | |252|09252000|205000| | | | |1|MPN/100mL| | | | | | | | | |<| |1|1|26835| |1| | | | | |

|PA|TCOLI|T|SM 9223B|N/A|W| | | | |252|09252000|205000| | | | |1|MPN/100mL| | | | | | | | | |<| |1|1|26836| |1| | | | | |

|PA|ECOLI|T|SM 9223B|N/A|W| | | | |252|09252000|205000| | | | |1|MPN/100mL| | | | | | | | | |<| |1|1|26836| |1| | | | | |

|EC|TCOLI|T|SM 9223B|N/A|W| | | | |252|09252000|205000| | | | |21.1|MPN/100mL| | | | | | | | | | | |1|2400|26837| |1| | | | | |

|EC|ECOLI|T|SM 9223B|N/A|W| | | | |252|09252000|205000| | | | |21.1|MPN/100mL| | | | | | | | | | | |1|2400|26837| |1| | | | | |

# Example for a complete batch transmission file:

HE|ISDH|11191999|220156|50| (EDI Submission Set Header Record)

HA|ISDH| |BB345678|00TSW190|1|11191999|220156|31| (Analysis Set1 Header Record)

HS|ISDH|DA12345|W|AA345678|BB345678|00TSW190|1|11191999|220156|10| (Sample Number1 Header Record)

DS|AA345678|7429-90-5|T|200.7|N/A|W|1.0|ug/l|8.1|ug/l|<gx| | | ||8042|12251999|163403|10|

DS|AA345678|7440-43-9|T|200.7|N/A|W|2.0|ug/l|8.1|ug/l|<gx| | | ||8042|12251999|163403| |

DS|AA345678|7440-47-3|T|200.7|N/A|W|3.0|ug/l|8.1|ug/l|<gx| | | ||8042|12251999|163403| |

DS|AA345678| 309-00-2|T|608|N/A|W|0.03|ug/l|8.1|ug/l|<gx| | | ||843|12251999|163303| |

DS|AA345678|57-74-9|T|608|N/A|W|0.14|ug/l|1.7|ug/l|<gx| | | ||843|12251999|163303| |

DS|AA345678|50-29-3|T|608|N/A|W|0.125|ug/l|14|ug/l|<gx| | | ||843|12251999|163303| |

DS|AA345678|76-44-8|T|608|N/A|W|0.03|ug/l|1.1|ug/l|<gx| | | ||843|12251999|163303| |

DS|AA345678|1134-23-2|T|525.2|N/A|W|0.01|ug/l|88.1|ug/l|<gx| | | ||71|12251999|163303| |

DS|AA345678|5836-10-2|T|525.2|N/A|W|0.1|ug/l| |l|<gx| | | ||71|12251999|163303| |

DS|AA345678|14797-65-0|T|354.1|N/A|W|0.01|mg/l|250|mg/l|<gx| | | ||71|12251999|163303| |

FS|ISDH|DA12345|W|AA345678|BB345678|00TSW190|1|11191999|220156|10| (Sample Number1 Footer Record)

HS|ISDH|DA54321|S|345678|BB345678|00TSW190|1|11191999|142112|5| (Sample Number2 Header Record)

DS|345678|7429-90-5|T|200.7|N/A|S|5.0|mg/Kg|8.1|mg/Kg|<gx|768|12251999|163403|3050|8043|12251999|163403|10|

DS|345678|7440-43-9|T|200.7|N/A|S|1.0|mg/Kg|18.1|mg/Kg|<gx|768|12251999|163403|3050|8043|12251999|163403|10|

DS|345678|7440-47-3|T|200.7|N/A|S|5.0|mg/Kg|9|mg/Kg|<gx|768|12251999|163403|3050|8043|12251999|163403|10|

DS|345678|7440-50-8|T|200.7|N/A|S|2.0|mg/Kg|4|mg/Kg|<gx|768|12251999|163403|3050|8043|12251999|163403|10|

DS|345678|7439-92-1|T|200.7|N/A|S|15.0|mg/Kg|80|mg/Kg|<gx|768|12251999|163403|3050|8043|12251999|163403|10|

FS|ISDH|DA54321|S|345678|BB345678|00TSW190|1|11191999|142112|5| (Sample Number2 Footer Record)

HN|ISDH|BB345678|00TSW190|1|AA345678| |71|DR|14797-65-0|T|W|354.1|N/A| |11191999|142112|1|

DN|Analysis resulted in an unusually high analyte concentration. Sample tested positive for presen|ce of sulfuric acid preservative. It is possible that nitric acid is also present in sample, which would account for high concentration. Nitric Acid presence in sample cannot be positively determined.|

FN|ISDH|BB345678|00TSW190|1|AA345678| |71|DR|14797-65-0|T|W|354.1|N/A| |11191999|142112|1| (Narrative1 Footer)

HN|ISDH|BB345678|00TSW190|1|345678|768|8043|DR|7439-92-1|T|S|200.7|N/A|3050|11191999|142112|1| (Narrative2 Header)

DN|Analysis resulted in an unusually high analyte concentration. Do Not Eat the Sediments!|

FN|ISDH|BB345678|00TSW190|1|345678|768|8043|DR|7439-92-1|T|S|200.7|N/A|3050|11191999|142112|1| (Narrative2 Footer)

HQ|ISDH|W|BB345678|00TSW190|1|11191999|220156|3| (QC Header Record)

CC|7429-90-5 |T|200.7|N/A|S|768|12251999|163403|3050|8043|12251999|163403| | |25.0|mg/kg|24.0|mg/kg|96.0|| | | | | | | | | |90|110|345678| | | |1.0|ug/l| | |

CC|7440-43-9 |T|200.7|N/A|S| | | | |8042|12251999|163403| | |50.0|mg/kg|42.0|mg/kg|96.0| | | | | | | | | | |80|120|AA345678| | | |2.0|ug/l| | |

CC|14797-65-0|T|354.1|N/A|S| | | | |71|12251999|163403| | |10.0|mg/kg|9.0|mg/kg|90.0| | | | | | | | | | |90|110|SS345678| | | |0.01|mg/L| | |

FQ|ISDH|W|BB345678|00TSW190|1|11191999|220156|3| (QC Footer Record)

FA|ISDH| |BB345678|00TSW190|1|11191999|220156|31| (Analysis Set1 Footer Record)

HA|ISDH| |BB345679|00TSW191|1|11201999|140156|16| (Analysis Set2 Header Record)

HS|ISDH|DA12346|W|DD345678|BB345679|00TSW191|1|11201999|140156|1| (Sample Number1 Header Record)

DS|DD345678|14797-65-0|T|354.1|N/A|W|0.01|mg/l|250|mg/l|<gx| | | ||71|12251999|163303| |

FS|ISDH|DA12346|W|DD345678|BB345679|00TSW191|1|11201999|140156|1| (Sample Number1 Footer Record)

HS|ISDH|DA54320|S|DD34567|BB345679|00TSW191|1|11201999|140156|2| (Sample Number2 Header Record)

DS|DD34567|7429-90-5|T|200.7|N/A|S|5.0|mg/Kg|8.1|mg/Kg|<gx|768|12251999|163403|3050|8043|12251999|163403|10|

DS|DD34567|7439-92-1|T|200.7|N/A|S|15.0|mg/Kg|80|mg/Kg|<gx|768|12251999|163403|3050|8043|12251999|163403|10|

FS|ISDH|DA54320|S|DD34567|BB345679|00TSW191|1|11201999|140156|2| (Sample Number2 Footer Record)

HN| ISDH|BB345679|00TSW191|1|DD345678| |71|DR|14797-65-0|T|W|354.1|N/A | |11191999|142112|1| (Narrative1 Header)

DN|Analysis resulted in an unusually high analyte concentration. Sample tested positive for presence of sulfuric acid preservative. It is possible that nitric acid is also present in sample.|

FN|ISDH|BB345679|00TSW191|1|DD345678| |71|DR|14797-65-0|T|W|354.1|N/A| |11191999|142112|1| (Narrative1 Footer)

HN|ISDH|BB345679|00TSW191|1|DD34567|768|8043|DR|7439-92-1|T|N/A|S|200.7|3050|11191999|142112|1| (Narrative2 Header)

DN|Analysis resulted in an unusually high analyte concentration. Do Not Eat the Sediments!|

FN|ISDH|BB345679|00TSW191|1|DD34567|768|8043|DR|7439-92-1|T|S|200.7|N/A|3050|11191999|142112|1| (Narrative2 Footer)

HQ|ISDH|W|BB345679|00TSW191|1|11201999|140156|1| (QC Header Record)

CC|14797-65-0|T|354.1|N/A|S| | | | |71|12251999|163403| | |10.0|mg/kg|9.0|mg/kg|90.0| | | | | | | | | | |90|110|SS345678| | | |0.01|mg/L| | |

FQ|ISDH|W|BB345679|00TSW191|1|11201999|140156|1| (QC Footer Record)

FA|ISDH| |BB345679|00TSW191|1|11201999|140156|16| (Analysis Set2 Footer Record)

FE|ISDH|11191999|220156|50| (EDI Submission Set Footer Record)

# Another Example for a complete batch transmission file:

HE|MYLAB|01262001|082259|55| (EDI Submission Set Header Record)

HA|MYLAB|00.05223|99WQW399|1|W|09282000|110000|53| (Analysis Set Header Record)

HS|MYLAB|DX50410|W|382573|00.05223|99WQW399|1|09282000|110000|1| (Sample Number1 Header Record)

DS|382573|E-10195|T|415.1|N/A|W|1.0|mg/L|4.2|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50410|W|382573|00.05223|99WQW399|1|09282000|110000|1| (Sample Number1 Footer Record)

HS|MYLAB|DX50411|W|382574|00.05223|99WQW399|1|09282000|110000|1| (Sample Number2 Header Record)

DS|382574|E-10195|T|415.1|N/A|W|1.0|mg/L|4.6|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50411|W|382574|00.05223|99WQW399|1|09282000|110000|1| (Sample Number2 Footer Record)

HS|MYLAB|DX50412|W|382575|00.05223|99WQW399|1|09282000|110000|1| (Sample Number3 Header Record)

DS|382575|E-10195|T|415.1|N/A|W|1.0|mg/L|4.0|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50412|W|382575|00.05223|99WQW399|1|09282000|110000|1| (Sample Number3 Footer Record)

HS|MYLAB|DX50413|W|382576|00.05223|99WQW399|1|09282000|110000|1| (Sample Number4 Header Record)

DS|382576|E-10195|T|415.1|N/A|W|1.0|mg/L|3.8|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50413|W|382576|00.05223|99WQW399|1|09282000|110000|1| (Sample Number4 Footer Record)

HS|MYLAB|DX50414|W|382577|00.05223|99WQW399|1|09282000|110000|1| (Sample Number5 Header Record)

DS|382577|E-10195|T|415.1|N/A|W|1.0|mg/L|3.1|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50414|W|382577|00.05223|99WQW399|1|09282000|110000|1| (Sample Number5 Footer Record)

HS|MYLAB|DX50415|W|382578|00.05223|99WQW399|1|09282000|110000|1| (Sample Number6 Header Record)

DS|382578|E-10195|T|415.1|N/A|W|1.0|mg/L|5.4|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50415|W|382578|00.05223|99WQW399|1|09282000|110000|1| (Sample Number6 Footer Record)

HS|MYLAB|DX50416|W|382579|00.05223|99WQW399|1|09282000|110000|1| (Sample Number7 Header Record)

DS|382579|E-10195|T|415.1|N/A|W|1.0|mg/L|4.9|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50416|W|382579|00.05223|99WQW399|1|09282000|110000|1| (Sample Number7 Footer Record)

HS|MYLAB|DX50417|W|382580|00.05223|99WQW399|1|09282000|110000|1| (Sample Number8 Header Record)

DS|382580|E-10195|T|415.1|N/A|W|1.0|mg/L|7.2|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50417|W|382580|00.05223|99WQW399|1|09282000|110000|1| (Sample Number8 Footer Record)

HS|MYLAB|DX50418|W|382581|00.05223|99WQW399|1|09282000|110000|1| (Sample Number9 Header Record)

DS|382581|E-10195|T|415.1|N/A|W|1.0|mg/L|4.4|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50418|W|382581|00.05223|99WQW399|1|09282000|110000|1| (Sample Number9 Footer Record)

HS|MYLAB|DX50419|W|382582|00.05223|99WQW399|1|09282000|110000|1| (Sample Number10 Header Record)

DS|382582|E-10195|T|415.1|N/A|W|1.0|mg/L|1.9|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50419|W|382582|00.05223|99WQW399|1|09282000|110000|1| (Sample Number10 Footer Record)

HS|MYLAB|DX50420|W|382583|00.05223|99WQW399|1|09282000|110000|1| (Sample Number11 Header Record)

DS|382583|E-10195|T|415.1|N/A|W|1.0|mg/L|2.6|mg/L| | | | | |265|09282000|235900|1|

FS|MYLAB|DX50420|W|382583|00.05223|99WQW399|1|09282000|110000|1| (Sample Number11 Footer Record)

HS|MYLAB|DX50421|W|382584|00.05223|99WQW399|1|09282000|110000|1| (Sample Number12 Header Record)

DS|382584|E-10195|T|415.1|N/A|W|100000|mg/L|-2|mg/L| >| | | | |265|09282000|235900|1| (Sample Number13 Result Above the Upper Reporting Limit)

FS|MYLAB|DX50421|W|382584|00.05223|99WQW399|1|09282000|110000|1| (Sample Number12 Footer Record)

HS|MYLAB|DX50422|W|382585|00.05223|99WQW399|1|09282000|110000|1| (Sample Number13 Header Record)

DS|382585|E-10195|T|415.1|N/A|W|1.0|mg/L|-1|mg/L|<| | | | |265|09282000|235900|1| (Sample Number13 Result below the Reporting Limit)

FS|MYLAB|DX50422|W|382585|00.05223|99WQW399|1|09282000|110000|1| (Sample Number13 Footer Record

HN|MYLAB|00.05223|99WQW399|1|382580| |E-10195|T|415.1|N/A| |09282000|110000|1| (Sample Number8 Project Narrative Header Record)

DN|Sample was received improperly preserved. Sulfuric acid was added to sample by the laboratory upon receipt| (Project Narrative Record)

FN|MYLAB|00.05223|99WQW399|1|382580| |E-10195|T|415.1|N/A| |09282000|110000|1| (Sample Number8 Project Narrative Footer Record)

HQ|MYLAB|W|00.05223|99WQW399|1|01262001|082259|9| (QC Header Record)

BL|E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900| | | | |1.0|mg/L| | |mg/L| | | | | | |<| | | | BLANK1| |1| |1.0|mg/L| (Blank QC Record)

BL|E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900| | | | |1.0|mg/L| | |mg/L| | | | | | |<| | | | BLANK2| |1| |1.0|mg/L|

BL|E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900| | | | |1.0|mg/L| | |mg/L| | | | | | |<| | | | BLANK3| |1| |1.0|mg/L|

CC|E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900| | |5.0|mg/L|4.90|mg/L|98.0| | | | | | | | | | |90|110|CCV1 | | | |1.0|mg/L| | | (CCV QC Record)

CC|E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900| | |5.0|mg/L|4.93|mg/L|98.6| | | | | | | | | | |90|110|CCV2 | | | |1.0|mg/L| | |

CC|E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900| | |5.0|mg/L|4.92|mg/L|98.4| | | | | | | | | | |90|110| CCV3| | | |1.0|mg/L| | | (MS/MSD Record Follows: )

MS|E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900|09282000|235900|3.8|mg/L|8.61|mg/L|96.2|8.84|mg/L|100.8|2.6| | |5.0|mg/L| | |80|120|382576|382576|1|1|1.0|mg/L|1.0|mg/L|1.0|mg/L|

LC|E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900| | |10.|mg/L|10.4|mg/L|104.0|10.2|mg/L|102.0|1.4 | | | | | | |90|110| LCS1| LCSD| | |1.0|mg/L|1.0|mg/L| (LC with LC Duplicate Record)

DU| E-10195|T|415.1|N/A|W|0| | | |265|09282000|235900| | | |5.80|mg/L| |5.50|mg/L| |5.3| | | | | | | | |382576|382576|1|1|1.0|mg/L|1.0|mg/L| (Duplicate Record)

FQ|MYLAB|W|00.05223|99WQW399|1|01262001|082259|9| (QC Footer Record)

FA|MYLAB|00.05223|99WQW399|1|W|09282000|110000|53| (Analysis Set Footer Record)

FE|MYLAB|01262001|082259|55| (EDI Submission Set Footer Record)

# 

# EDI EXPORT FORMAT DESCRIPTION

## Introduction

Previously IDEM OWQ defined an EDI Format has proven extremely useful for guaranteeing accurate Lab Test Result Information would be provided by the Laboratories to IDEM OWQ. There has been a tremendous savings in time that previously was spent keying in data and reviewing it for errors. More information is now being stored per sample, and a higher degree of data accuracy is being achieved with less effort.

IDEM OWQ would like to reciprocate by providing the labs with EDI files describing Analysis Sets, Sample Numbers, and Lab Test Parameters for those Analysis Sets and Sample Numbers. In adopting this format, the laboratories can read sample numbers, analysis sets, and laboratory test parameters into their system error-free, with a savings in labor spent on keystroking and QC of the data entry to ensure accuracy. IDEM will benefit from this likewise by achieving a complete correspondence between our sample numbers provided to and received from the labs, along with electronic submission of lab test parameter information to the labs.

The following document describes formats for EDI files to be submitted to labs (when possible) that will provide EDI information to the labs describing Analysis Sets, Sample Numbers, and Test Parameters to be performed by the laboratory. Each of the three files will contain the field names as the first line.

# Analysis Set Sample Number List EDI File

**Purpose:**

The Analysis Set Sample Number List will provide the Laboratory with an accurate list of Sample Numbers being sent as part of an analysis set. The Analysis Set Sample Number List will correspond to the Sample Numbers provided to the Lab in the Chain of Custody, and could serve as a useful verification tool against hand-prepared Chain of Custody documents, as well as against the actual samples. Perhaps the most beneficial aspect of the Analysis Set Sample Number List would be to eliminate keystroke errors (which occasionally occur), and the associated QA of data entry. Sample Numbers and analysis sets would be guaranteed to exactly correspond with data stored in the submitting organization (in this case, IDEM).

**File Naming Convention:** The file will be recognizable as the Analysis Set Sample Number List by using the following naming convention:

File Name: [Submit\_Org] & “\_” [OWQ\_Analysis\_Set] & “\_SampleEDI.txt”

Ex: for Analysis Set 02WQW397, the Analysis Set Sample Number EDI file would be named “IDEM\_02WQW397\_SampleEDI.txt”

EDI Format: After the last line of data, an extra line will be appended that has one field indicating the line count of data records in this EDI file (i.e., excluding the extra line). Here is the Analysis Set Sample Number Data Record Format

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Submit\_Org | Name of Organization Submitting Data (In our case, always ‘IDEM’) | XXXXXXXXXXX | IDEM |
| OWQ\_Analysis\_Set | IDEM Assigned Analysis Set Number | nnXXXnnnn | 02WQW397 |
| Sample\_ID | IDEM assigned Sample ID | XXnnnnnnnnn | AA12345 |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Fish Tissue) | X | W |
| Date\_Collected | Date Sample was collected by IDEM | MM/DD/YYYY | 1/12/2002 |
| Time\_Collected | 24-Hr Time Sample collected by IDEM (if time not important, can be blank) | HH:MM | 12:35 |
| Container\_Count | Total Count of Containers used to deliver Sample to Lab | nn | 1 |
| Record\_Count | Total number of Sample (records) in this file (excluding the descriptive header line). | nn | 4 |

Submit\_Org|OWQ\_Analysis\_Set|Sample\_ID|Sample\_Medium\_ID|Date\_Collected|Time\_Collected|Container\_Count|Record\_Count|CloseDelim

Description Example:

IDEM|nnXXXnnnn|XXnnnnnnnnn|X|MM/DD/YYYY|HH:MM|nn|

Real World Example (File Name: IDEM\_02WQW397\_SampleEDI.txt):

Submit\_Org|OWQ\_Analysis\_Set|Sample\_ID|Sample\_Medium\_ID|Date\_Collected|Time\_Collected|Container\_Count|Record\_Count|CloseDelim

IDEM|02WQW397|AA12345|W|1/12/2002|12:35|1|

IDEM|02WQW397|AA12346|W|1/12/2002|13:45|1|

IDEM|02WQW397|AA12347|W|1/13/2002|08:35|1|

IDEM|02WQW397|AA12349|W|1/13/2002|10:35|1|

**Analysis Set Parameter List EDI File**

**Purpose:** The Analysis Set Parameter List will provide the Laboratory with an accurate list of Parameter Tests to be performed on the entire analysis set (where Sample\_ID=’\*’), and specific Sample Numbers being sent as part of an analysis set. The Analysis Set Parameter List will correspond to the test regimes provided in many cases through the Lab in the Chain of Custody, and could serve as a useful verification tool against hand-prepared Chain of Custody documents, as well as against the actual samples. Perhaps the most beneficial aspect of the Analysis Set Parameter List would be to eliminate keystroke errors (which occasionally occur), and the associated QA of data entry. Parameter Tests for Sample Numbers and analysis sets would be guaranteed to exactly correspond with data stored by the submitting organization (in this case, IDEM).

Each line of the file will be valid for either an individual sample number, or for the entire group (sample\_ID=’\*’). Each line will describe tests either for a Parameter Group (ex: Nutrients) as defined in the Parameter Group Definitions EDI file (see next page), or for a specific parameter (ex: Mercury).

**File Naming Convention:** The file will be recognizable as the Analysis Set Parameter List by using the following naming convention:

File Name: [Submit\_Org] & “\_” & [OWQ\_Analysis\_Set] & “\_ParameterEDI.txt”

Ex: for Analysis Set 02WQW397, the Analysis Set Parameter EDI file would be named “IDEM\_02WQW397\_ParameterEDI.txt”

**EDI Format Description:** After the last line of data, an extra line will be appended that has one field indicating the line count of data records in this EDI file (i.e., excluding the extra line). Here is the Analysis Set Parameter Data Record Format

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Submit\_Org | Name of Organization Submitting Data (In our case, always ‘IDEM’) | XXXXXXXXXXX | IDEM |
| OWQ\_Analysis\_Set | IDEM Assigned Analysis Set Number | nnXXXnnnn | 02WQW397 |
| Sample\_ID | IDEM assigned Sample ID (if tests for entire analysis set, = ‘\*’) | XXnnnnnnnnn | AA12345 |
| Parameter\_Group | Name of Group of substances being tested for | XXXXXXXXXXX | Metals |
| Parameter\_Name | Name of substance being tested for | XXXXXXXXXXX | Mercury |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXXX | 7439-97-6 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | X | T |
| Test\_Method | Test method used by lab | XXXXXXXXXXX | 1631 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Potential Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | XXXX | N/A |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Fish Tissue) | X | W |
| Record\_Count | Total number of Sample (records) in this file (excluding the descriptive header line). | nn | 4 |

Submit\_Org|OWQ\_Analysis\_Set|Sample\_ID|ParameterGroup|ParameterName|CAS\_Number|CAS\_Num\_Qualifier| Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|

Description Example:

IDEM|nnXXXnnnn|XXnnnnnnnnn|XXXXXXXXXXX|XXXXXXXXXXX|XXXXXXXXXXX|X|XXXXXXXXXXX|XXXX|X|

Real World Example (File Name: IDEM\_02WQW397\_ParameterEDI.txt):

Submit\_Org|OWQ\_Analysis\_Set|Sample\_ID|Parameter\_Group|Parameter\_Name|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method|Test\_SubMethod|Sample\_Medium\_ID|Record\_Count|CloseDelim

IDEM|02WQW397|\*|Nutrients| | | | | | |

IDEM|02WQW397|\*| |Mercury|7439-97-6|T|1631|N/A|W|

IDEM|02WQW397|AA12345|Pesticides| | | | | | |

IDEM|02WQW397|AA12346| |2,4'-DDT|789-02-6|T|608|N/A|W|

**Parameter Group Definition List EDI File**

**Purpose:** The Parameter Group Definition List will provide the Laboratory with definitions of each Parameter Group referenced in the Analysis Set Parameter List EDI file. Perhaps the most beneficial aspect of the Parameter Group Definition List would be to eliminate keystroke errors (which occasionally occur), and the associated QA of data entry. Parameter Tests for Sample Numbers and analysis sets would be guaranteed to exactly correspond with data stored by the submitting organization (in this case, IDEM).

**File Naming Convention:** The file will be recognizable as the Parameter Group Definition List by using the following naming convention:

File Name: [Submit\_Org] & “\_” & [OWQ\_Analysis\_Set] & “\_GroupDefEDI.txt”

Ex: for Analysis Set 02WQW397, the Parameter Group Definitions EDI file would be named “IDEM\_02WQW397\_GroupDefEDI.txt”

**EDI Format Description:** After the last line of data, an extra line will be appended that has one field indicating the line count of data records in this EDI file (i.e., excluding the extra line). Here is the Parameter Group Definition Data Record Format:

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Description** | **Format** | **Example** |
| Submit\_Org | Name of Organization Submitting Data (In our case, always ‘IDEM’) | XXXXXXXXXXX | IDEM |
| OWQ\_Analysis\_Set | IDEM Assigned Analysis Set Number | nnXXXnnnn | 02WQW397 |
| Parameter\_Group | Name of Group of substances being tested for | XXXXXXXXXXX | Metals |
| Parameter\_Name | Name of substance being tested for | XXXXXXXXXXX | Mercury |
| CAS\_Number | CAS # of substance being tested for | XXXXXXXXXXX | 257301-77-2 |
| CAS\_Num\_Qualifier | Does this record show the substance’s value as ‘Total’ (=T), ‘Dissolved’ (=D), ‘Free’ (=F), or ‘Simultaneously Extracted Metals’ (SEM) (=S)? | X | T |
| Test\_Method | Test method used by lab | XXXXXXXXXXX | 200.7 |
| Test\_SubMethod | Identifies Method's elective process when it produces different MDL (as in 200.8; others possible). Potential Values: 'N/A'=No Sub-Method; ‘SCAN’=Scanning Mode; ‘SIM’=Selection Ion Monitoring Mode | XXXX | SCAN |
| Sample\_Medium\_ID | What is the medium of the sample being tested? (W=Water, S=Sediment, or F=Fish Tissue) | X | W |
| Record\_Count | Total number of Sample (records) in this file (excluding the descriptive header line). | nn | 4 |

Submit\_Org|OWQ\_Analysis\_Set|Parameter\_Group|Parameter\_Name|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method| Test\_SubMethod|Sample\_Medium\_ID|Record\_Count|CloseDelim

Description Example:

IDEM|nnXXXnnnn|XXXXXXXXXXX|XXXXXXXXXXX|XXXXXXXXXXX|X|XXXXXXXXXXX |XXXX|X|

Real World Examples (File Name: IDEM\_02WQW397\_GroupDefEDI.txt):

Submit\_Org|OWQ\_Analysis\_Set|Parameter\_Group|Parameter\_Name|CAS\_Number|CAS\_Num\_Qualifier|Test\_Method| Test\_SubMethod|Sample\_Medium\_ID|Record\_Count|CloseDelim

IDEM|02WQW397|Nutrients|TDS|E-10173|D|160.1|N/A|W|

IDEM|02WQW397|Nutrients|TOC|E-10195|T|SM5310|N/A|W|

IDEM|02WQW397|Nutrients|COD|E-10117|T|410|N/A|W|

IDEM|02WQW397|Pesticides|4,4'-DDD|72-54-8|T|525.2|N/A|W|

IDEM|02WQW397|Pesticides|4,4'-DDE|72-55-9|T|525.2|N/A|W|

IDEM|02WQW397|Pesticides|4,4'-DDT|50-29-3|T|525.2|N/A|W|

IDEM|02WQW397|Pesticides|83-32-9|XXXXXXXXXXX|T|525.2|N/A|W|

IDEM|02WQW397|Pesticides|Acenaphthylene|208-96-8|T|525.2|N/A|W|

IDEM|02WQW397|Pesticides|Benzo[a]anthracene|56-55-3|T|525.2|N/A|W|

IDEM|02WQW397|Pesticides|Benzo[a]pyrene|50-32-8|T|525.2|N/A|W|

IDEM|02WQW397|Pesticides|Benzo[b]fluoranthene|205-99-2|T|525.2|N/A|W|