# Can. Tech. Rep. Fish. Aquat. Sci. 3073; Annex VI. BioChem load tables

Below are descriptions of the BioChem station and data tables used to load discrete and plankton datasets. The shaded entries are auto-generated. Note that there is intentional redundancy between the two load tables: these fields must be identical and are used to make the link between the two tables. It is important to respect the rules of the “Column data type” and “Null” columns to avoid generating errors during data loading.

1. BCDISCRETESTATNEDITS (BCS): station information for discrete data

| **Column name** | **Column data type** | **Null** | **Column comment** | **Best practices: examples (if applicable)** | **COMMENTS, SUGGESTED CHANGES, ETC.** |
| --- | --- | --- | --- | --- | --- |
| dis\_sample\_key\_value | VARCHAR2(50) | N | Generated sequence number providing unique numeric values for the BCDISCRETESTATNEDITS primary key column |  |  |
| mission\_descriptor | VARCHAR2(50) | N | Cruise number (or similar) | Code assigned by OSD, ensures national coordination; e.g., 18HU12044 (see Annex II) |  |
| event\_collector\_event\_id | VARCHAR2(50) | N | Number assigned to station during data collection | Unique identifier for the sampling event, may be mission#+consecutive#; e.g., IML201204411 (mission IML-2012-44, first station, first cast) |  |
| event\_collector\_stn\_name | VARCHAR2(50) | Y | Descriptive name of station | Can be descriptive station or location name, or consec#, e.g., 11 (first station, first cast at that station) |  |
| mission\_name | VARCHAR2(50) | Y | Mission name | Originator’s mission number and/or common name(s) for the mission; e.g., IML-2012-44 Ice/PMZA 2012 |  |
| mission\_leader | VARCHAR2(50) | Y | Mission leader | Chief scientist / principal investigator; LASTNAME,FIRSTNAME |  |
| mission\_sdate | DATE | Y | Mission start date (DD/MM/YYYY; UTC) |  |  |
| mission\_edate | DATE | Y | Mission end date (DD/MM/YYYY; UTC) |  |  |
| mission\_institute | VARCHAR2(50) | Y | Sponsoring institute | The institute responsible at the time of data collection. Current DFO examples: NAFC, BIO, SABS, MONC, IML, IOS. “Unknown” is acceptable for historical data |  |
| mission\_platform | VARCHAR2(50) | Y | Specific platform or vessel | May be vessel name, fishing boat, wharf, various small vessels, multiple ships. Check that name is spelled correctly. “Unknown” is acceptable for historical data |  |
| mission\_protocol | VARCHAR2(50) | Y | Identify a standard sampling protocol if applicable, e.g., JGOFS, AZMP | A citation should be given if standard protocols were used during the mission. The use of non-standard protocols should be noted and further details provided in the BCCOLLECTOR\_COMMENT field |  |
| mission\_geographic\_region | VARCHAR2(100) | Y | General geographic region | Examples: Scotian Shelf, lower St. Lawrence Estuary |  |
| mission\_collector\_comment1 | VARCHAR2(200) | Y | Comments on affiliations, collaborations, or other information from collector | Comments from the collector that are pertinent to the entire mission. Generally referring to data collection, analysis, publications, joint missions (more than one institute involved) |  |
| mission\_collector\_comment2 | VARCHAR2(200) | Y | Continuation of the mission\_collectors\_comment1 for long comments |  |  |
| mission\_data\_manager\_comment | VARCHAR2(200) | Y | Comments from the data centre/data manager | Comments from the data manager that are pertinent to the entire mission. Generally referring to data management history (processing steps, edits, special warnings) |  |
| event\_sdate | DATE | N | Start date for event (DD/MM/YYYY; UTC) |  |  |
| event\_edate | DATE | Y | End date for event (DD/MM/YYYY; UTC) | Leave blank if unknown |  |
| event\_stime | NUMBER(4) | Y | Start time for event (HHMM; UTC) | Leave blank if unknown (e.g., historical data) |  |
| event\_etime | NUMBER(4) | Y | End time for event (HHMM; UTC) | Leave blank if unknown; do not use stime as default |  |
| event\_min\_lat | NUMBER(8,5) | N | Min latitude for event (decimal degrees; +ve north) | Need to calculate from start-end positions of all sampling done at this event (if only one set of coordinates, min = start) |  |
| event\_max\_lat | NUMBER(8,5) | Y | Max latitude for event (decimal degrees; +ve north) | Need to calculate from start-end positions of all sampling done at this event (if the only set of coordinates is the start position then, max = null) |  |
| event\_min\_lon | NUMBER(9,5) | N | Min longitude for event (decimal degrees; +ve east) | Need to calculate from start-end positions of all sampling done at this event (if only one set of coordinates, min = start) |  |
| event\_max\_lon | NUMBER(9,5) | Y | Max longitude for event (decimal degrees; +ve east) | Need to calculate from start-end positions of all sampling done at this event (if the only set of coordinates is the start position then, max = null) |  |
| event\_UTC\_offset | NUMBER(4,1) | Y | Time zone offset of work region (decimal hours) | All time/dates are in UTC; this field gives the difference between UTC and local time, e.g., EST= +5, AST=+4, NST=+3.5. If unknown, leave blank (NOT ZERO) |  |
| event\_collector\_comment1 | VARCHAR2(200) | Y | Collector comments on event | Any pertinent comments about event |  |
| event\_collector\_comment2 | VARCHAR2(200) | Y | Collector comments on event; continued from the event\_collectors\_comment1 column |  |  |
| event\_data\_manager\_comment | VARCHAR2(200) | Y | Comments from the data centre/data manager | Generally comments related to data management history, e.g., QC |  |
| dis\_headr\_gear\_seq | NUMBER(8) | N | Foreign key to a gear\_seq value from the BCGEARS table | See code table |  |
| dis\_headr\_sdate | DATE | N | Specific start date of collection (DD/MM/YYYY; UTC) |  |  |
| dis\_headr\_edate | DATE | Y | Specific end date of collection (DD/MM/YYYY; UTC) | Leave blank if unknown; do not use sdate as default |  |
| dis\_headr\_stime | NUMBER(4) | Y | Specific start time of collection (HHMM; UTC) | Leave blank if unknown (e.g., historical data) |  |
| dis\_headr\_etime | NUMBER(4) | Y | Specific end time of collection (HHMM; UTC) | Leave blank if unknown; do not use stime as default |  |
| dis\_headr\_time\_qc\_code | VARCHAR2(2) | N | Foreign key to the BCQUALCODES table qualifying the time record | Should be between 0 and 9. Generally 1=correct. Set flag to 5 if time was corrected; 3 if doubtful, 4 if incorrect. QC=3 and 4 should be avoided! But may be necessary for historical data |  |
| dis\_headr\_slat | NUMBER(8,5) | N | Specific start latitude of collection (decimal degrees; +ve north) |  |  |
| dis\_headr\_elat | NUMBER(8,5) | Y | Specific end latitude of collection (decimal degrees; +ve north) | Leave blank if unknown; do not use slat as default |  |
| dis\_headr\_slon | NUMBER(9,5) | N | Specific start longitude of collection (decimal degrees; +ve east) |  |  |
| dis\_headr\_elon | NUMBER(9,5) | Y | Specific end longitude of collection (decimal degrees; +ve east) | Leave blank if unknown; do not use slong as default |  |
| dis\_headr\_position\_qc\_code | VARCHAR2(2) | N | Foreign key to the BCQUALCODES table qualifying the position record | Should be between 0 and 9. Generally 1=correct. Set flag to 5 if time was corrected; 3 if doubtful, 4 if incorrect. QC=3 and 4 should be avoided! But may be necessary for historical data |  |
| dis\_headr\_start\_depth | NUMBER(7,2) | N | Minimum collection depth in metres |  |  |
| dis\_headr\_end\_depth | NUMBER(7,2) | N | Maximum collection depth in metres | Min and max sample depths are generally the same for discrete samples, but may be different if sample is e.g., integrated water column |  |
| dis\_headr\_sounding | NUMBER(5) | Y | Water depth in metres |  |  |
| dis\_headr\_collector\_deplmt\_id | VARCHAR2(50) | Y | Original deployment ID as provided by the data provider/collector | Often institute mission number+station sequence number. May be the same as EVENT\_COLLECTOR\_EVENT\_ID |  |
| dis\_headr\_collector\_sample\_id | VARCHAR2(50) | N | Individual sample ID, i.e., common identifier label | Unique sample number; sometimes mission#+stn#+depth |  |
| dis\_headr\_collector | VARCHAR2(50) | Y | Name of the individual who collected the data | Person responsible for the data; the prefix (if present) may indicate the program under which data was collected |  |
| dis\_headr\_collector\_comment1 | VARCHAR2(200) | Y | Collector comments | May contain information on sample gear, e.g., Rosette: SBE911 + Niskin bottles |  |
| dis\_headr\_data\_manager\_comment | VARCHAR2(200) | Y | Comments from the data centre/data manager |  |  |
| dis\_headr\_responsible\_group | VARCHAR2(50) | Y | The department/division/group responsible for the data record (as opposed to an individual's name) | Collector’s institute/organization/university/department |  |
| dis\_headr\_shared\_data | VARCHAR2(50) | Y | Organization that was sent a copy of the data (i.e., Data may be sent to OSD) |  |  |
| created\_by | VARCHAR2(30) | N | User ID of the person who uploaded the data | Usually data manager’s name |  |
| created\_date | DATE | N | Date that data were uploaded to the edit table |  |  |
| data\_center\_code | NUMBER(2) | N | Code representing the data centre (that uploaded data). FK reference to the BCDATACENTERS table | See code table |  |

(b) [BCDISCRETED](#bcdisdata)[AT](#bcdisdata)[AEDITS](#bcdisdata) (BCD): discrete data

| **Column name** | **Column data type** | **Null** | **Column comment** | **Best practices: examples (if applicable)**  NOTE: the first few fields must match those in the BCS table | **COMMENTS, SUGGESTED CHANGES, ETC.** |
| --- | --- | --- | --- | --- | --- |
| dis\_data\_num | NUMBER(12) | N | Generated sequence number providing unique numeric values for the BCDISCRETEDATAEDITS primary key column |  |  |
| mission\_descriptor | VARCHAR2(50) | N | Cruise number (or similar) | must match entry in BCS table |  |
| event\_collector\_event\_id | VARCHAR2(50) | N | Number assigned to station during data collection | must match entry in BCS table |  |
| event\_collector\_stn\_name | VARCHAR2(50) | Y | Descriptive name of station (e.g., stn27) | must match entry in BCS table |  |
| dis\_header\_start\_depth | NUMBER(7,2) | N | Minimum collection depth in metres | must match entry in BCS table |  |
| dis\_header\_end\_depth | NUMBER(7,2) | N | Maximum sample depth in metres | must match entry in BCS table |  |
| dis\_header\_slat | NUMBER(8,5) | N | Specific latitude of collection (decimal degrees; +ve north) | must match entry in BCS table |  |
| dis\_header\_slon | NUMBER(9,5) | N | Specific longitude of collection (decimal degrees; +ve east) | must match entry in BCS table |  |
| dis\_header\_sdate | DATE | N | Specific date of collection (DD/MM/YYYY; UTC) | must match entry in BCS table |  |
| dis\_header\_stime | NUMBER(4) | Y | Specific time of collection (HHMM; UTC) | must match entry in BCS table |  |
| dis\_detail\_data\_type\_seq | NUMBER(8) | N | Foreign key to the BCDATATYPES table to identify the variable | See code table |  |
| data\_type\_method | VARCHAR2(20) | Y | Short name identifying the variable (typically will include the analysis method) | See code table |  |
| dis\_detail\_data\_value | NUMBER(10,5) | N | Data value |  |  |
| dis\_detail\_data\_qc\_code | VARCHAR2(2) | N | Foreign key to the BCQUALCODES table qualifying the data value | See code table |  |
| dis\_detail\_detection\_limit | NUMBER(11,5) | Y | Detection limit of the observed variable | Include detection limit if available |  |
| dis\_detail\_detail\_collector | VARCHAR2(50) | Y | Name of the individual who collected the data | Contact person if there are questions about data collection |  |
| dis\_detail\_collector\_samp\_id | VARCHAR2(50) | N | Collector’s sample ID | must match entry in BCS table |  |
| created\_by | VARCHAR2(30) | N | User ID of the person who uploaded the data | must match entry in BCS table |  |
| created\_date | DATE | N | Date that data were uploaded to the edit table | must match entry in BCS table |  |
| data\_center\_code | NUMBER(2) | N | Code representing the data centre (that uploaded data). FK reference to the BCDATACENTERS table | See code table |  |
| dis\_sample\_key\_value | VARCHAR2(50) | N | FK to the BCDISCRETESTATNEDITS table |  |  |

(c) [BCPLANKTONSTATNEDITS](#bcplstatn) (BCS): station information for plankton data

| **Column name** | **Column data type** | **Null** | **Column comment** | **Best practices: examples (if applicable)** | **COMMENTS, SUGGESTED CHANGES, ETC.** |
| --- | --- | --- | --- | --- | --- |
| PLANK\_SAMPLE\_KEY\_VALUE | VARCHAR2(50) | N | Generated sequence number providing unique numeric values for the BCPLANKTONSTATNEDITS primary key column |  |  |
| MISSION\_NAME | VARCHAR2(50) | Y | Mission name | Originator’s mission number and/or common name(s) for the mission; e.g., IML-2012-44 Ice/PMZA 2012 |  |
| MISSION\_DESCRIPTOR | VARCHAR2(50) | N | Cruise number (or similar) | Code assigned by OSD, ensures national coordination; e.g., 18HU12044 (see Annex II) |  |
| MISSION\_LEADER | VARCHAR2(50) | Y | Mission leader | Chief scientist / principal investigator; LASTNAME,FIRSTNAME |  |
| MISSION\_SDATE | DATE | Y | Mission start date (DD/MM/YYYY; UTC) |  |  |
| MISSION\_EDATE | DATE | Y | Mission end date (DD/MM/YYYY; UTC) |  |  |
| MISSION\_INSTITUTE | VARCHAR2(50) | Y | Sponsoring institute | The institute responsible at the time of data collection. Current DFO examples: NAFC, BIO, SABS, MONC, IML, IOS. “Unknown” is acceptable for historical data |  |
| MISSION\_PLATFORM | VARCHAR2(50) | Y | Specific platform or vessel | May be vessel name, fishing boat, wharf, various small vessels, multiple ships. Check that name is spelled correctly. “Unknown” is acceptable for historical data |  |
| MISSION\_PROTOCOL | VARCHAR2(50) | Y | Identify a standard sampling protocol if applicable, e.g., JGOFS, AZMP | A citation should be given if standard protocols were used during the mission. The use of non-standard protocols should be noted and further details provided in the BCCOLLECTOR\_COMMENT field |  |
| MISSION\_GEOGRAPHIC\_REGION | VARCHAR2(100) | Y | General geographic region | Examples: Scotian Shelf, lower St. Lawrence Estuary |  |
| MISSION\_COLLECTOR\_COMMENT | VARCHAR2(200) | Y | Comments on affiliations, collaborations, or other information from collector | Comments from the collector that are pertinent to the entire mission. Generally referring to data collection, analysis, publications, joint missions (more than one institute involved) |  |
| MISSION\_MORE\_COMMENT | VARCHAR2(200) | Y | Continuation of the mission\_collectors\_comment column for long comments |  |  |
| MISSION\_DATA\_MANAGER\_COMMENT | VARCHAR2(200) | Y | Comments from the data centre/data manager | Comments from the data manager that are pertinent to the entire mission. Generally referring to data management history (processing steps, edits, special warnings) |  |
| EVENT\_SDATE | DATE | N | Start date for event (DD/MM/YYYY; UTC) |  |  |
| EVENT\_EDATE | DATE | Y | End date for event (DD/MM/YYYY; UTC) | Leave blank if unknown |  |
| EVENT\_STIME | NUMBER(4) | Y | Start time for event (HHMM; UTC) | Leave blank if unknown (e.g., historical data) |  |
| EVENT\_ETIME | NUMBER(4) | Y | End time for event (HHMM; UTC) | Leave blank if unknown; do not use stime as default |  |
| EVENT\_MIN\_LAT | NUMBER(8,5) | N | Min latitude for event (decimal degrees; +ve north) | Need to calculate from start-end positions of all sampling done at this event (if only one set of coordinates, min = start) |  |
| EVENT\_MAX\_LAT | NUMBER(8,5) | Y | Max latitude for event (decimal degrees; +ve north) | Need to calculate from start-end positions of all sampling done at this event (if the only set of coordinates is the start position then, max = null) |  |
| EVENT\_MIN\_LON | NUMBER(9,5) | N | Min longitude for event (decimal degrees; +ve east) | Need to calculate from start-end positions of all sampling done at this event (if only one set of coordinates, min = start) |  |
| EVENT\_MAX\_LON | NUMBER(9,5) | Y | Max longitude for event (decimal degrees; +ve east) | Need to calculate from start-end positions of all sampling done at this event (if the only set of coordinates is the start position then, max = null) |  |
| EVENT\_COLLECTOR\_STN\_NAME | VARCHAR2(50) | Y | Descriptive name of station | Can be descriptive station name, or consec#, e.g., TASO1 |  |
| EVENT\_COLLECTOR\_EVENT\_ID | VARCHAR2(50) | N | Number assigned to station during data collection (may not be applicable) | Unique identifier for the station, may be mission#+stn name+consecutive#; e.g., IML2012044TASO1\_66 (mission IML-2012-44, station TASO1, consecutive 66) |  |
| EVENT\_UTC\_OFFSET | NUMBER(4,1) | Y | Time zone offset of work region (decimal hours) | All time/dates are in UTC; this field gives the difference between UTC and local time, e.g., EST= +5, AST=+4, NST=+3.5. If unknown, leave blank (NOT ZERO) |  |
| EVENT\_COLLECTOR\_COMMENT | VARCHAR2(200) | Y | Collector comments on event | Any pertinent comments about event |  |
| EVENT\_MORE\_COMMENT | VARCHAR2(200) | Y | Collector comments on event; continued from the event\_collectors\_comment1 column |  |  |
| EVENT\_DATA\_MANAGER\_COMMENT | VARCHAR2(200) | Y | Comments from the data centre/data manager | Generally comments related to data management history, e.g., QC |  |
| PL\_HEADR\_GEAR\_SEQ | NUMBER(8) | N | Reference to a gear\_seq value from the BCGEARS table | See code table |  |
| PL\_HEADR\_SDATE | DATE | N | Specific start date of collection (DD/MM/YYYY; UTC) |  |  |
| PL\_HEADR\_EDATE | DATE | Y | Specific end date of collection (DD/MM/YYYY; UTC) | Leave blank if unknown; do not use sdate as default |  |
| PL\_HEADR\_STIME | NUMBER(4) | Y | Specific start time of collection (HHMM; UTC) | Leave blank if unknown (e.g., historical data) |  |
| PL\_HEADR\_ETIME | NUMBER(4) | Y | Specific end time of collection (HHMM; UTC) | Leave blank if unknown; do not use stime as default |  |
| PL\_HEADR\_PHASE\_OF\_DAYLIGHT | VARCHAR2(15) | Y | Used to identify the time of day (i.e., day, night, twilight) | Leave blank if unknown |  |
| PL\_HEADR\_SLAT | NUMBER(8,5) | N | Specific start latitude of collection (decimal degrees; +ve north) |  |  |
| PL\_HEADR\_ELAT | NUMBER(8,5) | Y | Specific end latitude of collection (decimal degrees; +ve north) | Leave blank if unknown; do not use slat as default |  |
| PL\_HEADR\_SLON | NUMBER(9,5) | N | Specific start longitude of collection (decimal degrees; +ve east) |  |  |
| PL\_HEADR\_ELON | NUMBER(9,5) | Y | Specific end longitude of collection (decimal degrees; +ve east) | Leave blank if unknown; do not use slong as default |  |
| PL\_HEADR\_TIME\_QC\_CODE | VARCHAR2(2) | N | Foreign key to the BCQUALCODES table qualifying the time record | Should be between 0 and 9. Generally 1=correct. Set flag to 5 if time was corrected; 3 if doubtful, 4 if incorrect. QC=3 and 4 should be avoided! But may be necessary for historical data |  |
| PL\_HEADR\_POSITION\_QC\_CODE | VARCHAR2(2) | N | Foreign key to the BCQUALCODES table qualifying the position record | Should be between 0 and 9. Generally 1=correct. Set flag to 5 if position was corrected; 3 if doubtful, 4 if incorrect. QC=3 and 4 should be avoided! But may be necessary for historical data |  |
| PL\_HEADR\_START\_DEPTH | NUMBER(7,2) | N | Minimum collection depth in metres | Min and max depths may be the same (e.g., sample from water bottle, stationary submersible pump) |  |
| PL\_HEADR\_END\_DEPTH | NUMBER(7,2) | N | Maximum collection depth in metres | Min and max depths may be the same (e.g., sample from water bottle, stationary submersible pump) |  |
| PL\_HEADR\_SOUNDING | NUMBER(5) | Y | Water depth in metres |  |  |
| PL\_HEADR\_VOLUME | NUMBER(7,3) | Y | Volume of water used to calculate abundance per unit volume (cubic metres); e.g., vol. of water filtered through net or sample volume (phytoplankton or other microorganisms) |  |  |
| PL\_HEADR\_VOLUME\_METHOD\_SEQ | NUMBER(8) | N | Volume method code from the BCVOLUMEMETHOD table | See code table |  |
| PL\_HEADR\_LRG\_PLANKTON\_REMOVED | CHAR(1) | Y | Flag indicating that the procedure included removal of large plankton (Y / N) | Yes/No entry to indicate if procedure included removal of large plankton e.g., jellyfish, from the sample prior to preservation |  |
| PL\_HEADR\_MESH\_SIZE | NUMBER(6) | Y | Mesh size in microns |  |  |
| PL\_HEADR\_COLLECTION\_METHOD\_SEQ | NUMBER(8) | N | Collection method code from the BCCOLLECTIONMETODS table | See code table |  |
| PL\_HEADR\_COLLECTOR\_DEPLMT\_ID | VARCHAR2(50) | Y | Original label as provided by the data provider/collector | UniqueID |  |
| PL\_HEADR\_COLLECTOR\_SAMPLE\_ID | VARCHAR2(50) | Y | Individual sample ID, e.g., common identifier label | Unique sample number; sometimes mission#+stn# |  |
| PL\_HEADR\_PROCEDURE\_SEQ | NUMBER(8) | N | Procedure code from the BCPROCEDURES table | See code table |  |
| PL\_HEADR\_PRESERVATION\_SEQ | NUMBER(8) | N | Preservation code from the BCPRESERVATIONS table | See code table |  |
| PL\_HEADR\_STORAGE\_SEQ | NUMBER(8) | N | Storage code from the BCSTORAGES table | See code table |  |
| PL\_HEADR\_COLLECTOR | VARCHAR2(50) | Y | Name of the individual who collected the data | Contact person if there are questions about data collection |  |
| PL\_HEADR\_COLLECTOR\_COMMENT | VARCHAR2(200) | Y | Collector comments |  |  |
| PL\_HEADR\_METERS\_SQD\_FLAG | CHAR(1) | Y | Meters squared flag [Y or N] indicates whether the value can be used for standing stock calculation |  |  |
| PL\_HEADR\_DATA\_MANAGER\_COMMENT | VARCHAR2(200) | Y | Comments from the data centre/data manager |  |  |
| PL\_HEADR\_RESPONSIBLE\_GROUP | VARCHAR2(50) | Y | The department/division/group responsible for the data record (as opposed to an individual's name) | Collector’s institute/organization/university/department |  |
| PL\_HEADR\_SHARED\_DATA | VARCHAR2(50) | Y | Organization that may receive a copy of the data (i.e., Data may be sent to OSD |  |  |
| CREATED\_BY | VARCHAR2(30) | N | User ID of the person who uploaded the data | Usually data manager’s name |  |
| CREATED\_DATE | DATE | N | Date that data were uploaded to the edit table |  |  |
| DATA\_CENTER\_CODE | NUMBER(2) | N | Code representing the data centre (that uploaded data / from which data may be obtained). FK reference to the BCDATACENTERS table | See code table |  |
| BATCH\_SEQ | NUMBER(10) | Y | Stores the user specified batch number or job number in order to group/categorize a dataset that is in the process of being validated. This will enable a user to process more than one dataset at one time | For example: AAAAMMMSSS. AAAA for the year the mission was done; MMM mission number; SSS sequence. For zooplankton data of the IML-12-44 mission, it could be: 2012044001 and for the phytoplankton dataset it could be 2012044002 |  |

(d) [BCPLANKTONDATAEDITS](#bcpldata) (BCD): plankton data

| **Column name** | **Column data type** | **Null** | **Column comment** | **Best practices: examples (if applicable)** | **COMMENTS, SUGGESTED CHANGES, ETC.** |
| --- | --- | --- | --- | --- | --- |
| PLANK\_DATA\_NUM | NUMBER(14) | N | Generated sequence number providing a unique numeric values for the BCPLANKTONDATAEDITS primary key column |  |  |
| **PLANK\_SAMPLE\_KEY\_VALUE1** | VARCHAR2(50) | N | Unique values from the BCPLANKTONSTATNEDITS primary key column | must match entry in BCS table |  |
| MISSION\_DESCRIPTOR | VARCHAR2(50) | N | Cruise number (or simliar) | must match entry in BCS table |  |
| EVENT\_COLLECTOR\_EVENT\_ID | VARCHAR2(50) | N | Number assigned to station during data collection (may not be applicable) | must match entry in BCS table |  |
| EVENT\_COLLECTOR\_STN\_NAME | VARCHAR2(50) | Y | Descriptive name of station (e.g., stn27)(may not be applicable) | must match entry in BCS table |  |
| **PL\_GEN\_NATIONAL\_TAXONOMIC\_SEQ1** | NUMBER(14) | N | Species code from the BCNATNLTAXONCODES table | See code table |  |
| PL\_GEN\_COLLECTOR\_TAXONOMIC\_ID | VARCHAR2(20) | Y | Originator's or collector’s code |  |  |
| **PL\_GEN\_LIFE\_HISTORY\_SEQ1** | NUMBER(8) | N | Life stage code from the BCLIFEHISTORIES table | See code table |  |
| PL\_GEN\_TROPHIC\_SEQ | NUMBER(8) | N | Trophic stage code from the BCTROPHICDESCRIPTORS table | See code table |  |
| **PL\_GEN\_MIN\_SIEVE1** | NUMBER(8,4) | Y | Retention filter size (mm) | If sample size fractionated, minimum sieve size (this had been used in the past to indicate minimum size, e.g., copepoda egg (0.**135**-0.165 mm)) |  |
| **PL\_GEN\_MAX\_SIEVE1** | NUMBER(8,4) | Y | Largest sieve used (mm) | If sample size fractionated, maximum sieve size (this had been used in the past to indicate the maximum size, e.g., copepoda egg (0.135-0.**165** mm)) |  |
| **PL\_GEN\_MODIFIER1** | VARCHAR2(50) | Y | Information that complements the description or qualifies the organism in addition to its name | Organism size, colour, other details from ID sheet. This is also the field to populate with name qualifiers such as sp, spp, ?, unidentified, sp. A, fragments, damaged, aff, cf . |  |
| PL\_GEN\_SPLIT\_FRACTION | NUMBER(5,4) | Y | Fraction of sample (0.0–1.0) | Proportion of the sample analyzed |  |
| **PL\_GEN\_SEX\_SEQ1** | NUMBER(8) | N | Sex code from the BCSEXES lookup table | See code table |  |
| PL\_GEN\_COUNTS | NUMBER(15,3) | Y | Number of organisms counted |  |  |
| PL\_GEN\_COUNT\_PCT | NUMBER(6,3) | Y | Percentage of the specified plankton |  |  |
| PL\_GEN\_WET\_WEIGHT | NUMBER(9,4) | Y | Wet weight of organisms (grams) |  |  |
| PL\_GEN\_DRY\_WEIGHT | NUMBER(9,4) | Y | Dry weight of organisms (grams) |  |  |
| PL\_GEN\_BIO\_VOLUME | NUMBER(8,3) | Y | Settled volume of organisms (mL) |  |  |
| PL\_GEN\_PRESENCE | CHAR(1) | Y | Indicates presence or absence of organism(s) if not counted (Y / N) |  |  |
| PL\_GEN\_COLLECTOR\_COMMENT | VARCHAR2(200) | Y | Collector comments |  |  |
| PL\_GEN\_DATA\_MANAGER\_COMMENT | VARCHAR2(200) | Y | Comments from the data centre/data manager |  |  |
| PL\_GEN\_SOURCE | VARCHAR2(30) | N | Tracks the name of the individual or source of the sampled data (subsampled data) if a particular sample is to be reanalyzed |  |  |
| PL\_FREQ\_DATA\_TYPE\_SEQ2 | NUMBER(8) | N | Auto-generated sequence number to reference a measurement parameter. Foreign key to the BCDATATYPES table |  |  |
| PL\_FREQ\_UPPER\_BIN\_SIZE2 | NUMBER(6,3) | N | Upper limit of bin size |  |  |
| PL\_FREQ\_LOWER\_BIN\_SIZE2 | NUMBER(6,3) | N | Lower limit of bin size |  |  |
| PL\_FREQ\_BUG\_COUNT2 | NUMBER(6) | N | Number of organisms in extracted subsample |  |  |
| PL\_FREQ\_BUG\_SEQ2 | NUMBER(6) | N | Auto-generated sequential number to track individual organisms |  |  |
| PL\_FREQ\_DATA\_VALUE2 | NUMBER(10,5) | N | Data value |  |  |
| PL\_FREQ\_DATA\_QC\_CODE2 | VARCHAR2(2) | N | Quality control code for data. Foreign key to the BCQUALCODES table | Should be between 0 and 9 |  |
| PL\_FREQ\_DETAIL\_COLLECTOR2 | VARCHAR2(50) | Y | Name of the collector (individual) for the data |  |  |
| PL\_DETAIL\_DATA\_TYPE\_SEQ2 | NUMBER(8) | N | Auto-generated sequence number to reference a measurement parameter. Foreign key to the BCDATATYPES table |  |  |
| PL\_DETAIL\_DATA\_VALUE2 | NUMBER(10,5) | N | Data value |  |  |
| PL\_DETAIL\_DATA\_QC\_CODE2 | VARCHAR2(2) | N | Quality control code for data. Foreign key to the BCQUALCODES table | Should be between 0 and 9 |  |
| PL\_DETAIL\_DETAIL\_COLLECTOR2 | VARCHAR2(50) | Y | Name of the collector (individual) for the data |  |  |
| PL\_INDIV\_DATA\_TYPE\_SEQ2 | NUMBER(8) | N | Auto-generated sequence number to reference a measurement parameter. Foreign key to the BCDATATYPES table |  |  |
| PL\_INDIV\_BUG\_SEQ2 | NUMBER(6) | N | Auto-generated sequential number to track individual organisms |  |  |
| PL\_INDIV\_DATA\_VALUE2 | NUMBER(10,5) | N | Data value |  |  |
| PL\_INDIV\_DATA\_QC\_CODE2 | VARCHAR2(2) | N | Quality control code for data. Foreign key to the BCQUALCODES table | Should be between 0 and 9 |  |
| PL\_INDIV\_DATA\_COLLECTOR2 | VARCHAR2(50) | Y | Name of the collector (individual) for the data |  |  |
| CREATED\_BY | VARCHAR2(30) | N | User ID of the person who uploaded the data | must match entry in BCS table |  |
| CREATED\_DATE | DATE | N | Date that data were uploaded to the edit table | must match entry in BCS table |  |
| DATA\_CENTER\_CODE | NUMBER(2) | N | Code representing the data centre (that uploaded data). FK reference to the BCDATACENTERS table | See code table |  |
| BATCH\_SEQ | NUMBER(10) | Y | Stores the user specified batch number or job number in order to group/categorize a dataset that is in the process of being validated. This will enable a user to process more than one dataset at one time | For example: AAAAMMMSSS. AAAA for the year the mission was done; MMM mission number; SSS sequence. For zooplankton data of the IML-12-44 mission, it could be: 2012044001 and for the phytoplankton dataset it could be 2012044002 |  |

**1**: These seven fields together must make a unique combination; if not, the database considers entries as duplicates and will only load one occurrence.

2: If there are no data for FREQUENCY, DETAIL, of INDIVIDUAL, these fields may be left blank. However, if data exist, null / not null rules must be respected.