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| **Column** | **Title** | **Description** |
| **A** | CVZ Laboratory number | These are sequential numbers given to an individual bat when sampled |
| **B** | Field sheet | Indicates whether a field sample sheet was filled out at the sampling site therefore implying if there is a hard copy of the data available in the archives. Requires a binomial value (Y/N) |
| **C** | Necropsy sheet | If the bat died and organs were taken, a tissue sheet is completed in the field. If there is a hard copy of the organs taken, then the column indicates yes. Requires a binomial value (Y/N) |
| **D** | Tattoo number | This is a sequential number given to an individual bat that gets released after processing. It is an independent variable that gets assigned based on the location. i.e. Mahune bats will have the tattoo SM\_\_\_ and Meletse bats will have the tattoo A\_\_\_. The tattoos help us keep track of recaptured individuals. i.e. row 20 and 11, the bat was caught again on a separate date so another row gets inserted under the same laboratory number and gets stated as a recapture under the tattoo number. |
| **E** | Other project number | This is a number that usually gets assigned by another lab from which the sample is received. This iis a value that cannot be selected but has to be typed in. This number couls also be one that is temporarily assigned to an individual in the field and this number goes on the tubes containing the samples. Once received at the centre, it gets assigned a sequential laboratory number. |
| **F** | Museum number | If a bat is taken as a voucher, the individual will get sent to the Ditsong Museum of Natural History after the necropsy has been performed. The museum assigns a catalogue number to the individual and sends us this number along with the confirmation of species identification. |
| **G** | Experimental Colony | Binomial value (Y/N): Indicated whether the live bat was taken to the NICD for experimental purposes. |
| **H** | Source/Host | Host refers to the type of bat sampled, either an insectivorous or frugivorous bat. On rare occasions this may also be a sample that is not a bat i.e. civit, mongoose etc. Source is used when it is an environmental sample i.e. Environmental-cave water, Environmental-Rousettus aegypriacus colony urine etc. |
| **I** | Date collected | The date in which the individual was caught and sampled in the format dd-mm-yyyy |
| **J** | Species name | Name of the species sampled. This is what we would prefer to have a drop down menu function for as currently our largest issue is the spelling of the species name. |
| **K** | Confirmation of species identification | This is data received from the museum or barcoding. If the species has been confirmed, this column will contain one of the tree options as follows:   1. Morphological 2. Barcoding (Cytochrome b) 3. Barcoding (Cytochrome c oxidase I)   The two barcoding options must be able to link to a file containing the sequence details. |
| **L** | Locality | This contains information on the location/area visited for sampling. This will be the name of an area, district or town |
| **M** | Site | Specific site sample from within the locality. |
| **N** | Province/region | The province/region the locality is based in. |
| **O** | Country | The country the province is based in. |
| **P** | Dec (S) | GPS location of the specific site |
| **Q** | Dec (E) | GPS location of the specific site |
| **R** | Received from/Collectors | Place or person from which the sample or individual was received. In the case of field trip; who collected the individuals or samples. |
| **S** | Sex | Sex of the individual. An option of either M (Male), F (Female) or Unknown. |
| **T** | Age | Indicative of the age of the individual. An option of A (Adult), J (Juvenile), SA (Sub-adult) or Unknown. |
| **U-W** | Voucher | Indicates whether the individual died or was taken as a voucher. Must be indicated as to how individual died. An option of either Y (Yes) or – (No). |
| **Y-Z** | WB | WB=Wing Biopsy. An option of either Y (Yes, this sample was taken) or –(No, this sample was not taken) under material column (Y) and if DNA has been extracted the freezer location must be present under the DNA column (Z). |
| **AA-AC** | Blood | Indicates whether blood was taken from the individual. An option of either Y (Yes) or – (No) under material column (AA). If DNA has been extracted the freezer location must be present under the DNA column (AB). If RNA has been extracted, the freezer location must be present under the RNA column (AC). |
| **AD-AF** | Serum | Indicates whether serum was obtained from the blood collected from the individual. An option of either Y (Yes) or – (No). If DNA and/or RNA has been extracted, the freezer location must be present under these corresponding columns (AE and AF). |
| **AG** | FTA Blood | Indicates whether FTA blood was taken from the individual. An option of either Y (Yes) or – (No). This is an older method but still exists for some laboratory numbers. |
| **AH-AJ** | Fur | Indicates whether fur was taken from the individual. An option of either Y (Yes) or – (No) under material column (AH). If DNA has been extracted the freezer location must be present under the DNA column (AI). If RNA has been extracted, the freezer location must be present under the RNA column (AJ). |
| **AK-AV** | Parasite-Tick | Indicates whether a parasite (tick, flea, bat fly or unknown) was taken from the individual. An option of either Y (Yes) or – (No) under the title of the parasite. Freezer locations should be linked as a pop-up upon request if this column is marked with a Y. If DNA has been extracted the freezer location must be present under the DNA column next to that of the specific parasite. If RNA has been extracted, the freezer location must be present under the RNA column on the right of the specific parasite. |
| Parasite-Flea |
| Parasite-Bat fly |
| Parasite-Unknown |
| **AW-AY** | Par in EtOH | Indicates whether a parasite was taken from the individual and stored in ethanol. An option of either Y (Yes) or – (No). |
| **AZ-BB** | Urine | Indicates whether urine was taken from the individual. An option of either Y (Yes) or – (No) under material column (AZ). If DNA has been extracted the freezer location must be present under the DNA column (BA). If RNA has been extracted, the freezer location must be present under the RNA column (BB). |
| **BC-BE** | Feacal | Indicates whether faecal was taken from the individual. An option of either Y (Yes) or – (No) under material column (BC). If DNA has been extracted the freezer location must be present under the DNA column (BD). If RNA has been extracted, the freezer location must be present under the RNA column (BE). |
| **BF-BH** | Na Swab | Indicates whether a nasal swab was taken from the individual. An option of either Y (Yes) or – (No) under material column (BF). If DNA has been extracted the freezer location must be present under the DNA column (BG). If RNA has been extracted, the freezer location must be present under the RNA column (BH). |
| **BI-BK** | Re Swab | Indicates whether a rectal swab was taken from the individual. An option of either Y (Yes) or – (No) under material column (BI). If DNA has been extracted the freezer location must be present under the DNA column (BJ). If RNA has been extracted, the freezer location must be present under the RNA column (BK). |
| **BL-BN** | Oral Swab | Indicates whether an oral swab was taken from the individual. An option of either Y (Yes) or – (No) under material column (BL). If DNA has been extracted the freezer location must be present under the DNA column (BM). If RNA has been extracted, the freezer location must be present under the RNA column (BN). |
| **BO** | Comments | Any additional comments or information referring to the individual or samples taken. This is usually a brief description. |
| **BP** | Measurements available | If measurements for the particular individual are available on a separate spreadsheet (see tab 2), it is indicated as Y (Yes). If measurements were not taken for the individual, it is indicated as – (No). See note 2. |
| **BQ** | Brain | Indicates whether brain was taken from the individual. An option of either Y (Yes) or – (No) under material column (BQ). If DNA has been extracted, the freezer location must be present under the DNA column (BR). If RNA has been extracted, the freezer location must be present under the RNA column (BS). See note 1 & 3. |
| **BT-BV** | Brain inoculum (10% PBS) | Indicates whether brain inoculum (10% PBS) brain was taken from the individual. An option of either Y (Yes) or – (No) under material column (BT). If DNA has been extracted, the freezer location must be present under the DNA column (BU). If RNA has been extracted, the freezer location must be present under the RNA column (BV). Only an option for deceased individuals and a sample taken in the past but not currently. A |
| **BW-BY** | Heart | Indicates whether heart was taken from the individual. An option of either Y (Yes) or – (No) under material column (BW). If DNA has been extracted, the freezer location must be present under the DNA column (BX). If RNA has been extracted, the freezer location must be present under the RNA column (BY). |
| **BZ-CB** | Lung | Indicates whether lung was taken from the individual. An option of either Y (Yes) or – (No) under material column (BZ). If DNA has been extracted, the freezer location must be present under the DNA column (CA). If RNA has been extracted, the freezer location must be present under the RNA column (CB). |
| **CC-CE** | Liver | Indicates whether liver was taken from the individual. An option of either Y (Yes) or – (No) under material column (CC). If DNA has been extracted, the freezer location must be present under the DNA column (CD). If RNA has been extracted, the freezer location must be present under the RNA column (CE). |
| **CF-CH** | Spleen | Indicates whether spleen was taken from the individual. An option of either Y (Yes) or – (No) under material column (CF). If DNA has been extracted, the freezer location must be present under the DNA column (CG). If RNA has been extracted, the freezer location must be present under the RNA column (CH). |
| **CI-CK** | Kidney | Indicates whether kidney was taken from the individual. An option of either Y (Yes) or – (No) under material column (CI). If DNA has been extracted, the freezer location must be present under the DNA column (CJ). If RNA has been extracted, the freezer location must be present under the RNA column (CK). |
| **CL-CN** | Rectum | Indicates whether rectum was taken from the individual. An option of either Y (Yes) or – (No) under material column (CL). If DNA has been extracted, the freezer location must be present under the DNA column (CM). If RNA has been extracted, the freezer location must be present under the RNA column (CN). |
| **CO-CQ** | Intestines | Indicates whether intestines were taken from the individual. An option of either Y (Yes) or – (No) under material column (CO). If DNA has been extracted, the freezer location must be present under the DNA column (CP). If RNA has been extracted, the freezer location must be present under the RNA column (CQ). |
| **CR-CT** | Tongue | Indicates whether the tongue was taken from the individual. An option of either Y (Yes) or – (No) under material column (CR). If DNA has been extracted, the freezer location must be present under the DNA column (CS). If RNA has been extracted, the freezer location must be present under the RNA column (CT). |
| **CU-CW** | PEC | Indicates whether pectoral muscle was taken from the individual. An option of either Y (Yes) or – (No) under material column (CU). If DNA has been extracted, the freezer location must be present under the DNA column (CV). If RNA has been extracted, the freezer location must be present under the RNA column (CW). |
| **CX-CZ** | Bladder | Indicates whether the bladder was taken from the individual. An option of either Y (Yes) or – (No) under material column (CX). If DNA has been extracted, the freezer location must be present under the DNA column (CY). If RNA has been extracted, the freezer location must be present under the RNA column (CZ). |
| **DA-DC** | Salivary Gland/Lymph nodes | Indicates whether Salivary Gland or Lymph nodes were taken from the individual. An option of either Y (Yes) or – (No) under material column (DA). If DNA has been extracted, the freezer location must be present under the DNA column (DB). If RNA has been extracted, the freezer location must be present under the RNA column (DC). |
| **DD-DF** | Repo | Indicates whether any reproductive organs were taken from the individual. An option of either Y (Yes) or – (No) under material column (DD). If DNA has been extracted, the freezer location must be present under the DNA column (DE). If RNA has been extracted, the freezer location must be present under the RNA column (DF). |
| **DG-DI** | Other | Indicates whether any other samples were taken from the individual during the necropsy. Only an option for deceased individuals. The specific details should be typed under material column (DG). If DNA has been extracted, the freezer location must be present under the DNA column (DH). If RNA has been extracted, the freezer location must be present under the RNA column (DI). |
| **DJ-DM** | Water | This is information regarding environmental water samples taken from the cave with the following required from each sub-category:   1. Microbiology report: This must indicate a Y (yes)/-(No). If yes, this must link to a pdf document containing the details of the specific report. 2. Sample: This must indicate a Y (yes)/-(No). If yes, this must link to the freezer location of the sample. 3. DNA: If DNA has been extracted, the freezer location must be present under this column 4. RNA: If RNA has been extracted, the freezer location must be present under this column |
| **DN-GW** | Test results | These contain columns for tests for each virus. Under each heading of each different virus group, the following is required:  For serology:   1. Sample tested (Y,yes/-,no) 2. Assay- this will contain a drop-down list of all assays available for these specific pathogens 3. Result- this will contain three options: Positive, Negative and blank (not tested). If this block contains positive, there must be a pop-up stating titre and allow for the insertion of a specific value with units. 4. PI: Principle Investigator, this will be a drop down menu containing options of who performed the test.   For nucleic acid:   1. Sample tested (Y,yes/-,no) 2. Assay- this will contain a drop-down list of all assays available for these specific pathogens 3. Result- this will contain three options: Positive, Negative and blank (not tested). If this block contains positive, there must be a pop-up with a link to the specific sequence. 4. PI: Principle Investigator, this will be a drop down menu containing options of who performed the test. |
| **GX** | CVZ Serology Final Result | Final results of serology. This is an accumulative result for columns DN-GW and is either Positive, Negative or blank (Not tested) |
| **GY** | CVZ Nucleic acid Final Result | Final results of nucleic acid assays. This is an accumulative result for columns DN-GW and is either Positive, Negative or blank (Not tested) |
| **GZ-HF** | Additional | This contains additional data that could be linked to each individual sample as follows:   1. Virus isolation: Virus isolated Y (Yes), No (Unsuccessful) or blank (was not attempted), the description on the right of this column gives a brief overview of the isolated virus. 2. Cell line development: Cell line developed from this individual: Y (Yes), No (Unsuccessful) or blank (was not attempted), the description on the right of this column gives a brief overview of the cell line. 3. Pathogen discovery: Sample from this individual used for pathogen discovery (Yes) or blank (was not attempted), the project title on the right of this column will be a drop down menu linking this to a specific individual and project. The project must be attached to the column on the right. |
| **HG** | Photos | This contains any photos linked to the specific individual. |
| **HH** | Publications | This contains any publications linked to the specific individual. |

**NOTE 1:** For all columns containing material for a specific sample, if marked with a yes, the freezer locations of the material bust be able to pop up on request but will require a specific user authorization.

**NOTE 2:** If measurements are selected for (Y), then we would like there to be a pop-up function or unhide function that links to the measurement sheet and immediately displays the measurements for the particular individual sampled.

**NOTE 3:** If all organs from column BQ to DI are ticked in one of the boxes, this must be linked as a notification to vouchers. If there are organs for this individual, a reminder must pop-up reminding you to tick the voucher column.