

BIOELECTRICAL IMPEDANCE ANALYSIS (BIA) INTERNATIONAL DATABASE

Guide to complete the database template

OVERALL EXPLANATION

This document details how to complete the fields in the excel file for the BIA International database. Please make sure your data adhere to these instructions:

- Columns in **YELLOW** will be autocompleted. As so, please do not enter any information in these columns.
- Columns in **RED** are mandatory, meaning that if your database does not have any of these columns it should not be submitted.
- Columns in **ORANGE** are those expected to be included, meaning that they are important for the project, but your database can still be submitted if the data is not available.
- Columns in **BLACK** are those that are not mandatory to fill, but if available and if the authors are willing to share then the potential outcomes of the project can be further improved.

This template spreadsheet contains 1 line of data already completed to assist in completing the rest of the data.

The codes used in some variables are present in 'Sheet 2'.

If you do not have data for any column (except the yellow ones), please enter 'NA' in the appropriate field.

EXPLANATION OF COLUMNS

Column A and B (Database Group and Individual ID): A unique number will be given to identify the database and the individual. Please leave these columns black as they will be completed after the submission process.

Column C (Study ID): Please enter here details of the publication where the data was published, including the DOI. If the data was not published yet then enter 'unpublished' or use a 'unique study ID', e.g., short running title. Publication details should ideally include authors (first in full plus et al), Journal, volume and pages. Abbreviated journal details are preferred. See the example in the blank spreadsheet if in doubt. Repeat the information for all individuals included.

Column D (Clinical Trials ID): Enter the trials number if the study was registered. If not registered enter NA. Repeat the information for all individuals included.

Column E (Individual ID): This is your unique ID number of the subject at the site where the work was performed. This ID should be enough for us to come back for further clarification to you if necessary.

Column F (Region): This is the region from where the individual is from. This is a coded variable with authors using the following codes: 0 = Europe; 1 = Africa; 2 = North America; 3 = South or Central America; 4 = Oceania; 5 = Asia; 6 = Antarctica.

Column G (Country): This is the country from where the individual is from. The authors should write the name of the country or, if codification is used, please disclaim what the codes mean.

Column H (Health status): This is the health status of each individual. This is a coded variable with authors using the following codes: 0 = healthy; 1 = disease.

Column I (Disease): Please mention the disease each individual has. The authors should write the disease or, if codification is used, please disclaim what the codes mean.

Column J (Athletic status): Please identify if the individual is an athlete or non-athlete. This is a coded variable with authors using the following codes: 0 = athlete; 1 = non-athlete.

Column K (Sports): If the individual is an athlete, the authors should write the name of the sport or, if codification is used, please disclaim what the codes mean.

Column L (Sex): Please enter the individuals' biological sex such as: 0 = female; 1 = male; 2= not specified.

Column M (Race and Ethnicity): Please enter the individuals' ethnicity using the following codes: 0 = White; 1 = Black; 2 = Hispanic; 3 = Asian; 4 = Other. If other, please state which it is.

Column N (Geographic Ancestry): Please enter the individuals' ancestry using the following codes: 0=Africa; 1=America; 2=Central South Asia; 3=East Asia; 4=Europe; 5=Middle East; 6=Oceania.

Column O (Age): Please enter the subject's age in years on the date the measurement.

Column P (Date of Birth): Please enter the subject's date of birth in the format 'day/month/year' (e.g., 01/01/2001). This column is necessary for nutritional status assessment.

Column Q (Date of Assessment): Please enter the date when the subject was assessed in the format 'day/month/year' (e.g., 01/01/2001). This column is necessary for nutritional status assessment.

Column R (Height): Please enter the subject's height in centimeters following international standards (please cite the reference used). Although it is preferred that height be provided to the nearest mm (0.1 cm), a precision of at least 0.5 cm is acceptable.

Column S (Weight): Please enter the subject's weight in kilograms following international standards (please cite the reference used). Although it is preferred that

weight be provided to the nearest mm (0.01 kg), a precision of at least 0.1 kg is acceptable.

Columns T and U (Body Mass Index (BMI) and BMI Cat): Column S consists of BMI determined as 'Weight (kg)/ Height² (m²)'. Column T corresponds to the BMI categories defined by the World Health Organization:

- 0 = <18.5 kg/m²
- 1 = 18.5-24.9 kg/m²
- 2 = 24.9-29.9 kg/m²
- 3 = 30.0-34.9 kg/m²
- 4 = 35.0-39.9 kg/m²
- 5 = >40 kg/m²

These columns will be filled upon submission of the database, thus please do not enter any information in these columns.

Columns V, W, X and Y (Weight for height, Height for age, Weight for age, BMI for age): These columns correspond to the z-score values for the WHO child growth standards: Weight for length/height (<https://www.who.int/tools/child-growth-standards/standards/weight-for-length-height>); Length/Height for age (<https://www.who.int/tools/child-growth-standards/standards/length-height-for-age>); Weight for age (<https://www.who.int/tools/child-growth-standards/standards/weight-for-age>); BMI for age (<https://www.who.int/toolkits/child-growth-standards/standards/body-mass-index-for-age-bmi-for-age>). Please leave these columns black as they will be completed after the submission process.

Columns Z, AA and AB (Arm, Calf and Waist Circ): Please enter the values for the circumferences of arm, calf and waist and the international standards (please cite the reference). Please provided the values to the nearest 0.1cm.

Columns ACand AD (Hip Circ): Please enter the values for the circumferences the hip. Please provided the values to the nearest 0.1cm.

Columns AE, AF, AG, and AH (Arm, Calf, Waist and Mean area): These will be completed after the dataset is received and verified so please leave them blank

Columns AI to AQ (skinfolds): Please enter the values for the skinfolds measurements and the international standards (please cite the reference).

Column AR (BIA Equipment): Please enter the name and model of the BIA device used to perform the assessments of raw BIA parameters.

Column AW (R), AX (Xc), AY (Z), and AZ (PhA): Please enter the raw resistance, reactance, OR impedance and phase angle values, respectively. Values be provided to the nearest 0.1. In the case that your device does not provide all these parameters, a minimum of 2 values are required (e.g., R and Xc, or Z an PhA).

Columns BA to BF (R/Hgt, Xc/Hgt, Z/Hgt, Rsp, Xcsp, Zsp): These columns represent the BIVA values, namely those from classic BIVA (R/Hgt, Xc/Hgt and Z/Hgt) and those from specific BIVA (Rsp, Xcsp and Zsp). These will be completed after the dataset is received and verified so please leave them blank.

Columns BH and BI (ICW): Please enter the values for intracellular water estimated using BIA, in L and/or in kg.

Columns BI

BK and BK (ECW): Please enter the values for extracellular water estimated using BIA, in L and/or in kg.

Columns BL and BM (TBW): Please enter the values for total body water estimated using BIA, in L and/or in kg.

Column BN (FFM): Please enter the values for fat-free mass estimated using BIA, in kg. If available, please provide the equation used for the calculation.

Columns BO and BP (FM): Please enter the values for fat mass estimated using BIA, in % and kg.

Columns BQ, BT and BW (ICW, ECW, and TBW): Please enter the values (in L) for intracellular, extracellular and total body water assessed through dilution techniques (e.g., deuterium oxide for total body water, sodium bromide for extracellular water, and the difference for intracellular water). If you have these data, please also share the details for this assessment, namely the dosage and protocol used. This can be done by referring to a scientific publication of the data or by providing this information when submitting the database.

Columns BX to CF (DXA variables): Please enter the values for device used, total bone mineral density (BMD TOT), tissue mass (TISSUE, in kg), fat mass (FAT, in kg), fat-free mass (FFM, in kg), lean mass (LEAN, in kg), total bone mineral content (BMC, in kg), appendicular lean mass (APENDLEAN, in kg), and the ratio of soft tissue attenuation (R-Value). If you have these data, please also share the details for this assessment, namely the equipment used and the requirements of the exam. This can be done by referring to a scientific publication of the data or by providing this information when submitting the database.

Columns CG and CH (Body Volume): Please enter the value for body value (in L) either by underwater weighing or air displacement plethysmography. If you have these data, please also share the details for this assessment, namely the equipment used and the requirements of the exam. This can be done by referring to a scientific publication of the data or by providing this information when submitting the database.

Columns CI to DB (Metabolic Variables): Please enter the values for any metabolic variables you possess, namely those regarding biochemical analysis or blood pressure.

Columns DC to DE (Physical Function): Please enter the values for any physical function variables you possess, such as $\text{VO}_{2\text{max}}$ (ml/kg/min) or handgrip strength.

If you have other variables that are not being considered in this template that you consider to be of interest for this project, please mention that when submitting your database.

Also, feel free to share any doubt that may arise.