

Search & Match Service Data submission information

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XML file format

1. Introduction

WMDA is using XML (Extensible Markup Language) file, which is considered an industry standard that is extendable, robust and easy to use. Several people from the community formed a working group to create the required XML Schema Definition (XSD) files. These files define the elements that are allowed in the XML file, the order of the elements and the values that will be accepted. The names of the elements are based upon EMDIS specifications and aligns with the EMDIS Data Dictionary when appropriate. Several elements are basic elements that should be included in all files, but there are also elements that are specific for only donors or only cord blood units (CBUs).

We will now explain the composition of the XML file and how you should use the XSD reference files.

2. XSD schema files

WMDA is offering two XSD schema files that define the structure of your XML file: basicTypes.xsd and Inventories.xsd.

The Inventories file describes the structure of the XML file and the order of the elements. Here you can also find if a certain field is mandatory or not (minOccurs="0"-> not mandatory). This file includes many "complexType": an XML element that contains other elements and/or attributes. In the file you can see that the values of the elements can be defined here, like the elements GRID and ID, or that after the name of the field a "type" is defined. For example for the element with name BIRTH_DATE you see type="bareDateType". The definition of "bareDateType" is described in the basicTypes.xsd file.

Related to XSD versions, our data upload system always supports latest 3 versions of XSD. And in this page, we keep the latest version to be displayed. If there is another version, it will be in the collapse object before the tables.

Supported versions: 2.1, 2.2, 2.3 till 2021.Oct

We will now describe the global structure of the XML file and the elements.

Please note: For a lot of elements, we use abbreviations as allowed values. The explanation of all those abbreviations can be found in the XSD files. Most abbreviations are also the same as used for EMDIS and clarified in the [EMDIS dictionary](#).

2.1 InventoryType elements

Field Identifier	Required	Description	Type	Length	Comment
CREATION_TIME	Yes	Creation time stamp of the inventories (in UTC)	dateTime	minimal 20	Without fractional seconds the length is 20, for example: 2016-08-23T13:16:48Z. Additional notes: CREATION_TIME is defined as "Creation time stamp of the <INVENTORIES>" that means the time in UTC when the complete and valid file was finally created at the registry. This can be the same as SNAPSHOT_TIME.
LISTING_ORGANIZATION	Yes	Organisation that lists the donor /cbu provided as ION	ionType: number between 1000 and 9999	4	Issuing Organisation Number (ION) allocated by ICBBA. This can be different from the POOL when another organisation is sending the data to WMDA.
POOL	Yes	Physical location of the donors /CBUs of the inventory provided as ION	ionType: number between 1000 and 9999	4	Physical location of the donors/CBUs of the inventory provided as ION.

CONTENT_TYPE	Yes	Type of the inventory items, i.e. donor ("D") or CBU ("C")	contentType	1	The content-type is also shown in the fileName. When CONTENT_TYPE is "D", the INVENTORY must contain <DONOR>-blocks. When CONTENT_TYPE is "C", the INVENTORY must contain <CBU>-blocks.
UPDATE_MODE	Yes	Update mode of the inventory, i.e. FULL or DIFF	updateModeType	4	Only UPDATE_MODE "FULL" is currently supported. Always the complete inventory should be send.
SNAPSHOT_TIME	No	Timestamp of the 'data snapshot' (in UTC)	dateTime	minimal 20	Without fractional seconds the length is 20, for example: 2016-08-23T13:16:48Z Additional notes: SNAPSHOT_TIME in the element <INVENTORY> is defined as "timestamp of the data snapshot in UTC" that means the timestamp of the creation of this part of the complete file. This can be the timestamp of the XML export and I guess that in most of the cases it will be identical to the CREATION_TIME.
SCHEMA_VERSION	Yes	Version of the applied XML Schema Definition (XSD)	schemaVersionType		The schema version is very important as this determines the validation rules that should be applied during the processing of your file.

2.2 ItemBaseType elements (for Donors and CBUs)

Field Identifier	Required	Description	Type	Length	Comment
ID	No for Donor Yes for CBU	Unique identifier of the donor/CBU	String	17	Unique identifier of the donor/CBU: If you are an EMDIS member, you can use the same ID as you use for that system (EMDIS hub code + donor identification allocated by the associated donor registry). For non-EMDIS members we recommend to use two digit ISO country code of the associated donor registry + donor identification allocated by the associated donor registry. For example: AU600196166, DEGOE-35487, US087013165, SB45. However, you are also allowed to use just the donor ID allocated by your registry.
GRID	Yes for Donor	Global registration identifier of the donor	String	19	ONLY applicable for donors. GRID format allowed is: XXXXXXXXXXXXXXXXXXXX. Only upper case letter and numbers are allowed. The first 4 characters include the ION were the donor is registered. The following 13 characters contain the donor specific ID and the last two characters are check characters that are calculated from the 17 previous characters. Note: For the generation of the value of GRID, check the "checksum" calculation rule in GRID user guide and a WMDA "checksum" calculator example here . More detail you can check the GRID project page here .
ATTR	No	Describing attribute of the donor/CBU according to house rules of the sending organization.	String	3	
BIRTH_DATE	Yes	Date of birth of the donor/CBU	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
SEX	No	Biological gender of the donor/CBU	sexType	1	sexType: "F","M" F = Female M = Male NOTE: Mandatory for donors, optional for CBUs
ABO	No	Blood group (ABO) of the donor/CBU	aboType	2	aboType: "A","B","O","AB"
RHESUS	No	Rhesus (Rh) factor of the donor/CBU	rhesusType	1	rhesusType: "P","N" P = Positive N = Negative NOTE: "+" and "-" are not supported

ETHN	No	Ethnic group of the donor/CBU	ethnType	4	ethnType: "AFNA", "AFSS", "ASSW", "ASSO", "ASCE", "ASSE", "ASNE", "ASOC", "CAEU", "CAER", "CANA", "CAAU", "HICA", "HISA", "AF", "AS", "CA", "HI", "MX", "OT", "UK" AFNA = African: North Africa AFSS = African: Sub-Sahara Africa ASSW = Asian: Southwest Asia (Middle East, Turkey) ASSO = Asian: Southern Asia (India, Pakistan, Bangladesh, Sri Lanka, Bhutan, Nepal) ASCE = Asian: Central Asia (Eastern Russia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan) ASSE = Asian: Southeast Asia (China, Mongolia, Burma, Laos, Cambodia, Thailand, Vietnam, Taiwan) ASNE = Asian: North and Northeast Asia (Japan, North Korea, South Korea) ASOC = Asian: Oceania (Pacific Islands, excluding Japan, Australia, Taiwan, Sakhalin, Aleutian Islands) CAEU = Caucasian: Mainland Europe, Greenland, Iceland, Western Russia CAER = Caucasian: Eastern Russia CANA = Caucasian: North America (USA, Canada, Mexico) CAAU = Caucasian: Australia (Australia, New Zealand) HICA = Hispanic: Central America, Caribbean HISA = Hispanic: South America MX = Mixed / multiple OT = Other (e.g. Australian Aborigine) UK = Unknown
CCR5	No	CCR5 status of the donor/CBU	ccr5Type	2	ccr5Type: "DD", "WW", "DW" DD = Deletion (delta 32) - homozygous DW = Deletion (delta 32) / wildtype - heterozygous WW = Wildtype - homozygous
HLA	Yes	HLA of the donor/cbu	hlaType		Explained separately at hlaType 2.3
KIR	No	KIR genotype of the donor/CBU	kirType		Explained separately at kirType 2.4
IDM	No	Infectious disease markers (IDM) and other relevant tests of the donor/CBU	idmType		Explained separately at idmType 2.5
RSV_PAT	No	Unique identifier of the patient the donor/CBU is reserved for (STATUS=RS).	String	17	The value comprises the EMDIS patient identification, where the patient search centre is an EMDIS member, otherwise the value is empty. For example: AU9654021, DE275342, US2277450. NOTE: This field is not required for status "RS" and can be transmitted as empty if privacy concerns exist.
STATUS	Yes	Status of the donor/CBU	statusType	2	statusType: "AV", "TU", "RS" ("DE" is not supported yet) AV = Available for transplantation purposes TU = Temporarily unavailable RS = Reserved DE = Deleted, permanently unavailable
STAT_END_DATE	No	Date until which the current status will be applicable	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"

2.3 hlaType elements

HlaType fields can be divided in hlaSerFieldsType and hlaDnaFieldsType

hlaSerFieldsType: HLA values obtained by serological typing methods

hlaSerFieldsType = "<FIELD1>" string of max length 5 "</FIELD1>", "<FIELD2>" string of max length 5 "</FIELD2>";

Example: <SER><FIELD1>1</FIELD1><FIELD2>5</FIELD2></SER>

Serological typing results can be given for loci that are defined as hlaLocusType. These loci include HLA-A, -B, -C, -DRB1, -DQB1.

hlaDnaFieldsType: HLA values obtained by DNA based typing methods

hlaDnaFieldsType = "<FIELD1>" string of max length 20 "</FIELD1>", "<FIELD2>" string of max length 20 "</FIELD2>";

Example: <DNA><FIELD1>01:01</FIELD1><FIELD2>05:01</FIELD2></DNA>

DNA typing results can be given for loci that are defined as hlaLocusType and hlaLocusDnaOnlyType. These loci include HLA-A, -B, -C, -DRB1, -DQB1, -DRB3, -DRB4, -DRB5, -DQA1, -DPA1, -DPB1.

Finally, previously the dot20 file format allowed to submit values like 01 in DNA fields. We can no longer accept this and you have to submit the equivalent of 01, so '01:XX'.

Minimal required elements

Minimal typing values for Donor: A (either SER or DNA), B (either SER or DNA)

Minimal typing values for CBU: A (either SER or DNA), B (either SER or DNA), DRB1 (either SER or DNA)

Please note:

- It is no longer possible to submit string HLA values; only single values are allowed.
- When a donor or CBU has homozygous alleles/values, please use the following notation:

```
<HLA><A><SER><FIELD1>1</FIELD1><FIELD2 /></SER></A> ...
or
<DQB1><DNA><FIELD1>05:02:01G</FIELD1><FIELD2 /></DNA></DQB1>
```

Field Identifier	Required	Description	Type	Length	Comment
SER	depends on content type and DNA fields provided	HLA values obtained by serological typing methods	hlaSerFieldsType	5	Each SER element contains two other elements: FIELD1 and FIELD2
DNA	depends on content type and SER fields provided	HLA values obtained by DNA based typing methods	hlaDnaFieldsType	20	Each DNA element contains two other elements: FIELD1 and FIELD2
FIELD1		HLA value of allele 1		5 or 20	Element within the element SER and DNA
FIELD2		HLA value of allele 2		5 or 20	Element within the element SER and DNA
A	Yes	HLA-A values	hlaLocusType		Both SER and DNA possible; either SER or DNA values required
B	Yes	HLA-B values	hlaLocusType		Both SER and DNA possible; either SER or DNA values required
C	No	HLA-C values	hlaLocusType		Both SER and DNA possible
DRB1	Yes (CBU) No (Donor)	HLA-DRB1 values	hlaLocusType		Both SER and DNA possible; either SER or DNA values required for CBU
DRB3	No	HLA-DRB3 values	hlaLocusDnaOnlyType		Only DNA possible
DRB4	No	HLA-DRB4 values	hlaLocusDnaOnlyType		Only DNA possible
DRB5	No	HLA-DRB5 values	hlaLocusDnaOnlyType		Only DNA possible
DQA1	No	HLA-DQA1 values	hlaLocusDnaOnlyType		Only DNA possible
DQB1	No	HLA-DQB1 values	hlaLocusType		Both SER and DNA possible
DPA1	No	HLA-DPA1 values	hlaLocusDnaOnlyType		Only DNA possible
DPB1	No	HLA-DPB1 values	hlaLocusDnaOnlyType		Only DNA possible

2.4 kirType elements

The kirType Field Definitions consists of the type: kirLocusType. This is defined as a String with 3 characters: "POS" or "NEG". "POS" means "Presence of KIR gene", "NEG" means "Absence of KIR gene".

The following elements are possible and in this specific order:

```
<KIR2DL1>,<KIR2DL2>,<KIR2DL3>,<KIR2DL4>,<KIR2DL5A>,<KIR2DL5B>,<KIR2DS1>,<KIR2DS2>,<KIR2DS3>,<KIR2DS4>,<KIR2DS5>,<KIR2DP1>,<KIR3DL1>,<KIR3DL2>,<KIR3DL3>,<KIR3DS1>,<KIR3DP1>
```

There is another field called <KIR_GL> (URI that refers to a GL-string registered with a GL-service or direct GL-string for absence / presence) this field is not used at the moment and must be empty.

Field Identifier	Required	Description	Type	Length	Comment
KIR gene e.g. KIR2DL1	No	KIR genotype e.g. KIR gene 2DL1	kirLocusType	3	valid values: "POS" = presence of KIR gene; "NEG" = absence of KIR gene

2.5 idmType elements

There are many infectious disease markers (IDM) possible in the element IDM. Many IDM elements can have either the values idmValueType or idmValueExtType

idmValueType includes the following values: "P","N"

idmValueExtType include the following values: "P","G","M","B","H","O","N"

Field Identifier	Required	Description	Type	Length	Comment
CMV	No	Cytomegalovirus status	idmValueExtType	1	idmValueExtType: "P","G","M","B","H","O","N" P = IgG or IgM positive, test did not differentiate G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive H = IgG positive, IgM not tested O = IgG negative, IgM not tested N = Both IgG and IgM negative EMDIS data dictionary also has a 'Q' (questionable / unclear) but that will not be applicable within the data submission file.
CMV_DATE	No	Date of CMV test	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"

Field Identifier	Required	Description	Type	Length	Comment
ANTI_CMV	No	Antibody to Cytomegalovirus status	idmValueExtType	1	idmValueExtType: "P","G","M","B","H","O","N" P = IgG or IgM positive, test did not differentiate G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive H = IgG positive, IgM not tested O = IgG negative, IgM not tested N = Both IgG and IgM negative EMDIS data dictionary also has a 'Q' (questionable / unclear) but that will not be applicable within the data submission file.
CMV_NAT	No	Cytomegalovirus nucleic acid testing (NAT) status	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative
ANTI_CMV_DATE	No	Date of CMV test	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
CMV_NAT_DATE	No	Date of CMV NAT test	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
HBS_AG	No	Hepatitis B status (hepatitis B surface antigen)	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative
ANTI_HBC	No	Hepatitis B status (antibody to hepatitis B core antigen)	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative
ANTI_HBS	No	Hepatitis B status (antibody to hepatitis B surface antigen)	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative
ANTI_HCV	No	Hepatitis C status (antibody to hepatitis C virus)	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative
ANTI_HIV_12	No	Antibody to Human immunodeficiency virus (HIV) 1/2 status	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative
HIV_1_NAT	No	Human immunodeficiency virus (HIV)-1 nucleic acid testing (NAT) status	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative
HIV_P24	No	Human immunodeficiency virus (HIV) p24 status	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative

HCV_NAT	No	Hepatitis C nucleic acid testing (NAT) status	idmValueType	1	idmValueType: "P","N" P = Positive N = Negative
ANTI_HTLV	No	Antibody to human T-cell lymphotropic virus (HTLV) I/II status	idmValueExtType	1	idmValueType: "P","N" P = Positive N = Negative
SYPHILIS	No	Syphilis status	idmValueExtType	1	idmValueType: "P","N" P = Positive N = Negative
WNV	No	West Nile Virus status	idmValueExtType	1	idmValueType: "P","N" P = Positive N = Negative
CHAGAS	No	Chagas status	idmValueExtType	1	idmValueType: "P","N" P = Positive N = Negative
EBV	No	Epstein Barr Virus status	idmValueExtType	1	idmValueExtType: "P","G","M","B","H","O","N" P = IgG or IgM positive, test did not differentiate G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive H = IgG positive, IgM not tested O = IgG negative, IgM not tested N = Both IgG and IgM negative EMDIS data dictionary also has a 'Q' (questionable / unclear) but that will not be applicable within the data submission file. Please leave blank for Q.
TOXO	No	Toxoplasmosis status	idmValueExtType	1	idmValueExtType: "P","G","M","B","H","O","N" P = IgG or IgM positive, test did not differentiate G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive H = IgG positive, IgM not tested O = IgG negative, IgM not tested N = Both IgG and IgM negative EMDIS data dictionary also has a 'Q' (questionable / unclear) but that will not be applicable within the data submission file. Please leave blank for Q.
HBV_NAT	No	Hepatitis B virus (HBV) nucleic acid testing (NAT) status	idmValueExtType	1	idmValueType: "P","N" P = Positive N = Negative
PB19_NAT	No	ParvoB19 nucleic acid testing (NAT) status	idmValueExtType	1	idmValueType: "P","N" P = Positive N = Negative
ALT	No	Alanine aminotransferase status in units per litre	Short		Number, no decimals, minimal value is 1

2.6 donItem elements

DonItem elements contain elements that are specific for donors and not applicable for CBUs.

Field Identifier	Required	Description	Type	Length	Comment
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STAT_REASON	No	Additional information relevant to the donor status. Can only be used for "TU" status.	statReasonDonType	2	statReasonDonType: "DO", "DD", "MR", "PR", "TX", "MO", "UC", "OT", "TQ", "UK" DO = Donor is too old DD = Donor died MR = Medical reasons PR = Personal reasons TX = After transplantation MO = Donor has moved UC = Unable to contact donor OT = Other reasons TQ = Typing questionable UK = Unknown
CONTACT_DATE	No	Date of last confirmed contact - defined as the date of an active form of communication (e.g. a query about status, an address update, confirmation of their interest in donating) via any channel (e.g. email, mail, phone, website), post registration, from a donor to the registry. Any communication from the registry to the donor that does not lead to an activity of the donor suggesting his further interest in donation is explicitly excluded (e.g. annual mailing without reaction).	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
CHECKUP_DATE	No	Date of the last medical checkup - defined as the date of a donor health assessment that indicates whether a donor is minimally suitable to be considered for donation, regardless if eligible for only one donation type, and includes questions about current medication and health issues (e.g. completion of a health screening questionnaire at Extended Typing or Verification Typing). The donor health assessment can be completed by any means (e.g. paper-based, online, phone). This does not require any physical examination of a donor.	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
WEIGHT	No	Weight in kg Please note that current validation only allows [40-199] kg	Short		Number between 1 and 999, no decimals
HEIGHT	No	Height in cm Please note that current validation only allows [100-250] cm	Short		Number between 1 and 999, no decimals
NMBR_TRANS	No	Number of blood transfusions	Short		Number: zero or greater, no decimals
NMBR_PREG	No	Number of pregnancies	Short		Number: zero or greater, no decimals
NMBR_MARR	No	Number of marrow donations	Short		Number: zero or greater, no decimals
NMBR_PBSC	No	Number of PBSC donations	Short		Number: zero or greater, no decimals

COLL_TYPE	No	Collection type, i.e. the willingness of the donor to donate in a specific manner	String	1	collTypeType: "M", "P", "B" M = Marrow P = PBSC B = Both PBSC & Marrow
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2.7 cbulterType elements

CbulterType elements contain elements that are specific for CBUs and not applicable for donors.

Field Identifier	Required	Description	Type	Length	Comment
STAT_REASON	No	Additional information relevant to the CBU status. Can only be used for "TU" status.	statReasonCbuType	2	statReasonCbuType: "QR","AD","CD","DS","XP","MR","OT","UK" Proposed reasons for Status TU: QR = Quarantined; AD = Administrative Proposed reasons for Status DE: CD = Cord Destroyed or Damaged; DS = Distributed for infusion; XP = ExpiredCD = Cord Destroyed or Damaged; MR = Medical reasons OT = Unavailable for other reasons; UK = Unknown
LOCAL_ID	No	Identification of CBU locally at the associated CBB	String	17	
BAG_ID	No	Identification as it appears on the bag. If more than one bag is available then this data attribute is not populated	String	17	
BANK_MANUF_ID	No	Unique identifier of the CBB that manufactured the CBU. ID shown in table in tab Cord blood bank IDs	String	10	PLEASE NOTE: For the upload the fields BANK_MANUF_ID and BANK_DISTRIB_ID should be fulfilled with a new ID for the corresponding cord blood banks (See column "WO number at share.wmda.info/display/WMDAREG/Database) and not with the EMDIS IDs. These IDs are important to allow WMDA to identify if the CBU is from an accredited bank which will be displayed within a search report.
BANK_DISTRIB_ID	No	Unique identifier of the CBB distributing the CBU. ID shown in table in tab Cord blood bank IDs	String	10	PLEASE NOTE: For the upload to WMDA the fields BANK_MANUF_ID and BANK_DISTRIB_ID should be fulfilled with a new ID for the corresponding cord blood banks (See column "WO number at share.wmda.info/display/WMDAREG/Database) and not with the EMDIS IDs. These IDs are important to allow WMDA to identify if the CBU is from an accredited bank which will be displayed within a search report.
COLL_DATE	No	Date that the CBU was collected	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
PROC_DATE	No	Date that the processing started	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
PROC_METHOD	No	Processing method used	procMethType	3	procMethType: "HES","DGS","CEN","FIL","FIC","PER","OTH" HES = Hydroxy-Ethyl-Starch DGS = Density Gradient Separation CEN = Centrifuge FIL = Filtration FIC = FICOL PER = PERCOL OTH = Other NOTE: Values "NOT" and "UNK" are not supported "NOT" can now be found in CB_PROD_MOD = "NOT", "UNK" has to be transmitted as empty (CB_PROD_MOD = "")

PROC_ME TH_TYPE	No	Processing method type used	procMet hTypeT ype	3	procMethTypeType: "MAN","SPX","OTP","AXP","OTH" MAN = Manual SPX = Sepax OTP = Optipress II AXP = AXP OTH = Other
FREEZE_D ATE	No	Date that the CBU was frozen	bareDat eType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
FREEZE_M ETH	No	Freezing method used	freezeM ethType	1	freezeMethType: "C","M" C = Controlled Rate M = Manual
PROD_MOD	No	Product modifications made	prodMo dType	3	prodModType: "BCE","DNE","PLR","PRR","RBR","NOT","OTH" BCE = Buffy Coat Enriched DNE = Density Enriched PLR = Plasma Reduced (Volume reduction only) PRR = Plasma and RBC Reduced RBR = RBC Reduced (depletion) NOT = Not reduced OTH = Other
BAG_TYPE	No	Type of bag used (bag fractions / split unit)	bbagTy peType	5	bagTypeType: "80/20","50/50","40/60","NS" (no split)
BAGS	No	Number of bags for CBU sub units	Short		Number between 1 and 99, no decimals
BACT_CULT	No	Bacterial culture	cultValu eType	1	cultValueType: "P","N","D" P = Positive N = Negative D = Not done
FUNG_CULT	No	Fungal culture	cultValu eType	1	cultValueType: "P","N","D" P = Positive N = Negative D = Not done
HEMO_STA TUS	No	Hemoglobinopathy screening status	hemoSt atusType	2	hemoStatusType: "DN","DU","NS","CD","NC","DT","DD" DN = Screening done, normal results DU = Screening done, unusual findings NS = No screening done CD = Can be done at time of release NC = Cannot be done DT = Thalassemia DD = Drepanocytosis
VOL	No	Collected volume before processing (without additives) in ml	Short		Number between 10 and 400, no decimals
VOL_FRZN	No	Total volume frozen (post processing, prior to cryopreservation) in ml	Short		Number between 10 and 400, no decimals
TNC	No	Total number of nucleated cells (before processing)	Float		Number with decimals, minimum is 0.0E0, maximum is 999.9E7
TNC_FRZN	No	Total number of nucleated cells (post processing, prior to cryopreservation)	Float		Number with decimals, minimum is 0.0E0, maximum is 999.9E7
RED_BC_F RZN	No	Total number of nucleated red blood cells (post processing, prior to cryopreservation)	Float		Number with decimals: minimum is 0.0E0, maximum is 999.9E7
MNC_FRZN	No	Total Number of mononucleated cells (post processing, prior to cryopreservation)	Float		Number with decimals
CD34PC	No	Total number of CD34+ cells (before processing)	Float		Number with decimals
CD34PC_F RZN	No	Total number of CD34+ cells (post processing, prior to cryopreservation)	Float		Number with decimals
CFU_FRZN	No	Total count of colony forming units (post processing, prior to cryopreservation)	Float		Number with decimals, minimum is 0.1E5, maximum is 999.9E5
VIABILITY	No	Viability as percentage value	Short		Number between 0 and 100, no decimals
VIABILITY_ DATE	No	Date that viability was tested	bareDat eType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"

VIABILITY_CELLS	No	Type of cells tested for viability	viabilityCellsType	6	viabilityCellsType: "TNC","CD34PC","CD45PC" NOTE: VIABILITY_CELLS = "CD34PC" corresponds to CB_VIABILITY_CELLS = "CD34" in EMDIScored. VIABILITY_CELLS = "CD45PC" corresponds to CB_VIABILITY_CELLS = "CD45" in EMDIScored.
VIABILITY_METHOD	No	Method used to calculate the viability	viabilityMethodType	2	viabilityMethodType: "7A","PI","TB","OT" 7A = 7AAD PI = Propidium Iodide TB = Trypan Blue OT = Other
ATT_SEG	No	Number of attached segments available	Short		Number between 0 and 99, no decimals
DNA_SMPL	No	DNA samples available?	Boolean		true,false
OTH_SMPL	No	Samples other than DNA available?	Boolean		true,false
CT_COMPLETE_DATE	No	Date of completion of confirmatory typing (CT)	bareDateType	10	Date without timezone information, example 1968-06-28, Date Delimiter = "-"
CT_SMPL_TYPE	No	Confirmatory typing (CT) sample type	ctSmpTypeType	2	ctSmpTypeType: "AS","WB","RC","FP","ED" AS = CBU Contiguous Attached Segment WB = Whole Blood Sample RC = Red Cell Fraction (pellet) FP = Blood Spotted Filter Paper ED = Extracted DNA
AL_RED_BC	No	Number of red cell fraction aliquots	Short		Number between 0 and 99, no decimals
AL_SER	No	Number of serum aliquots available	Short		Number between 0 and 99, no decimals
SER_QUANT	No	Total quantity of serum available in ml	Float		Number between 0.0 and 99.9, one decimal
AL_PLA	No	Number of plasma aliquots available	Short		Number between 0 and 99, no decimals
PLA_QUANT	No	Total quantity of plasma available in ml	Float		Number between 0.0 and 99.9, one decimal
MAT	No	Data of the mother of the infant associated with the CBU	matType		see further on this webpage matType

2.8 matType elements

The matType elements are a sub-element from the element CBU.

Field Identifier	Required	Description	Type	Length	Comment
ID	No	Identification used to identify the maternal donor as assigned by the registry	String	15	
ID_BANK	No	Identification used by associated CBU manufacturer to identify maternal detail	String	15	
HLA	No	HLA of the mother of the infant associated with the CBU	hlaType		see above in section 2.3 hlaType
IDM	No	Infectious disease markers (IDM) and other relevant tests of the mother of the CBU	idmType		see above in section 2.5 idmType
AL_SER	No	Number of serum aliquots available	short		Number between 0 and 99, no decimals
SER_QUANT	No	Total quantity of serum available in ml	Float		Number between 0.0 and 99.9, one decimal
AL_PLA	No	Number of plasma aliquots available	Short		Number between 0 and 99, no decimals
PLA_QUANT	No	Total quantity of plasma available in ml	Float		Number between 0.0 and 99.9, one decimal

