

## Guidelines for the Blood Transfusion Services

### 23.5: Blood group labels

<http://transfusionguidelines.org/red-book/chapter-23-specification-for-the-uniform-labelling-of-blood-blood-components-and-blood-donor-samples/23-5-blood-group-labels>

### 23.5: Blood group labels

These labels are required for the purpose of blood group identification on the blood collection and satellite packs. The blood group can fall into one of eight classifications as shown in Table 23.1. Alternative labels, for use in special circumstances, are also described.

The blood group label is part of a complete overstick label and must be attached to the blood collection pack and/or satellite pack in the appropriate place immediately adjacent to the donation number. This is to allow a continuous straight-line read of the combined labels.

Label dimensions are defined below:

44 mm  $\pm$ 1 mm wide  $\times$  99 mm  $\pm$ 1 mm deep

(range 43–45 mm wide  $\times$  98–100 mm deep)

#### 23.5.1: Label colour

All labels must be produced in black and white. All characters must be solid black on white except for RhD negatives where the ABO character must be in outline, and the 'RhD NEGATIVE' must be in solid white on a black background.

#### 23.5.2: Printing

Group labels must be demand-printed at the point of labelling. The label must be generated in response to the electronic entry of a donation number and, once affixed to the blood pack, must be verified by the concatenated electronic entry of the codes from the donation number label and the group label. Valid blood group labels must only be generated for units which have been fully tested and are suitable for transfusion.

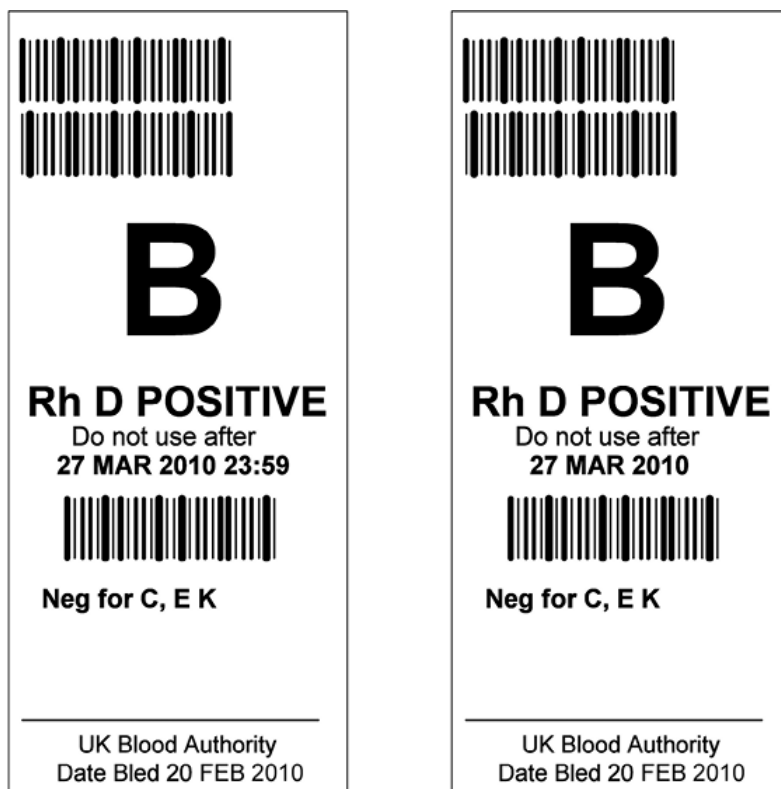
#### 23.5.3: Information content

The label design is illustrated in Figure 23.5. The content is described in the subsections below from the top down.

##### 23.5.3.1: Group label verification number

This must be printed at the top left-hand side of the label in barcode format only. It must be an ISBT 128 number, complying with one of the national definitions (&a or &b; see section 23.3.1.3) . The distance of the barcode from the left-hand edge of the label must not be less than 2.5 mm or more than 4 mm.

The barcode must be between 7 mm and 10 mm high.



**Figure 23.5 ABO/Rh blood group label layouts showing ‘Do not use after’ with and without time**

### 23.5.3.2: Expiry day/month

The day and month of expiry may be included in the top right-hand corner (optional) of the label in eye-readable form and, if present, this must be in a DD/MM format. The text must be at least 2.5 mm away from the printed barcodes.

### 23.5.3.3: Blood group

The blood group barcode must be positioned below the group label verification number barcode separated by a gap of between 1 mm and 5 mm. The left-hand edges of the codes must be aligned. The blood group barcode must be between 7 mm and 10 mm high.

The format of the ISBT 128 group code will follow IDSBT 128 Data Structure 002 (see ICCBBA Standard Technical Specification).

In Data Structure 002, the value that holds the ABO/RhD and usage information is held in 2 characters labelled as ‘gg’. The UK values of ‘gg’ for standard donations (without donation use limitations) are indicated in Table 23.1.

For donations using these group codes, the eye-readable blood group must be presented in two parts. The ABO group must be printed immediately below the group barcode. The characters must be solid black for RhD positives, and outline for RhD negatives.

The RhD status must be indicated immediately below the group barcode and eye-readable ABO. The text must be ‘RhD POSITIVE’ in solid black characters, or ‘RhD NEGATIVE’ in solid white characters enclosed in a black rectangular background.

The UK values of ‘gg’ used where donation use limitations apply are indicated in Table 23.2.

The eye-readable text associated with these codes is illustrated in Table 23.3 using O RhD POSITIVE as an example.

**Table 23.1 Standard blood group classifications**

Text	gg value	Text	gg value
O RhD POSITIVE	51	O RhD NEGATIVE	95
A RhD POSITIVE	62	A RhD NEGATIVE	06
B RhD POSITIVE	73	B RhD NEGATIVE	17
AB RhD POSITIVE	84	AB RhD NEGATIVE	28

**Table 23.2 Usage limitation**

ABO RhD blood groups	Usage – Directed donation only (gg value)	Usage – Emergency use only (gg value)	Usage – Directed donation, crossover permitted (gg value)	Usage – Autologous donation, crossover permitted (gg value)	Usage – Autologous use only (gg value)
O Rhesus D POSITIVE	47	48	50	52	53
O Rhesus D NEGATIVE	91	92	94	96	97
A Rhesus D POSITIVE	58	59	61	63	64
A Rhesus D NEGATIVE	02	03	05	07	08
B Rhesus D POSITIVE	69	70	72	74	75
	13	14	16	18	19

B Rhesus D NEGATIVE					
AB Rhesus D POSITIVE	80	81	83	85	86
AB Rhesus D NEGATIVE	24	25	27	29	30

**Table 23.3 Blood group and donation use label text**

gg	Label text
47	DIRECTED USE ONLY O RhD POSITIVE
48	EMERGENCY USE ONLY O RhD POSITIVE
50	DIRECTED (Eligible for Crossover) O RhD POSITIVE
52	AUTOLOGOUS (Eligible for Crossover) O RhD POSITIVE
53	AUTOLOGOUS USE ONLY O RhD POSITIVE

**23.5.3.4: Expiry date or 'Do not use after'**

The expiry date must be presented in eye-readable and barcode formats. The eye-readable text must be printed with characters of no less than 3 mm height. The content as a minimum must comprise the day number, the month represented by its first three characters, and the four-digit year (e.g. 1 FEB 2010). Where a system can include time to be printed as part of the eye-readable text it must be recorded after the year in the 24-hour format (e.g. 1 FEB 2010 23:59).

Currently the expiry date is coded using a Codabar barcode. The barcode must have a start code of 'a2' and a stop code of '4a'. The data content must be the last three digits of the year, and a three-digit Julian day number; thus 1 Feb 2010 would be represented by '010032', i.e. the 32nd day of the year.

While the current practice may allow the use of either 'Expiry date' or 'Do not use after' to identify when the component expires, consideration should be given to adopt 'Do not use after'.

#### **23.5.3.5: Additional information (standard donations)**

Additional information may appear immediately below the expiry date in an area no less than 10 mm and no more than 25 mm high. The data content of this section is at the discretion of the labelling authority, but is available for providing additional information on phenotypes, CMV status etc. Some UK Blood Establishments use a Codabar barcode of a8738a to indicate anti-CMV negative in addition to the eye-readable description.

#### **23.5.3.6: Collection facility identification**

The identification of the collecting facility may be indicated in eye-readable format below the additional information section of the group label. Alternatively, this information may be printed as part of the donation identification number (see section 23.4). The text content will be identified by the relevant national service and may comprise one or two lines of text.

#### **23.5.3.7: Date bled**

This must be printed in eye-readable form only at the bottom of the label. The characters must be no less than 3 mm high. The format must be day number as two digits, first three characters of the month name, and the four-digit year, e.g. 01 JAN 2010. Where a system can include time to be printed as part of the eye-readable format, it must be recorded after the year in the 24-hour format (e.g. 1 JAN 2010 23:59).

#### **23.5.3.8: Label design for units with use limitations**

An example of a blood group label design for units labelled with use limitations is shown in Figure 23.6. The lower section, used for additional information on standard labels, is used to indicate recipient information. It is important to recognise that this information is for identification of the recipient for which the donation is intended, but does not replace the need for crossmatch labelling or documentation.

Note: The NHS No. is in use in England; other countries will have an equivalent patient identification system that will be used in its place. Where this is the case, the numbering system used must be clearly identified so as not to introduce any ambiguity.



**Figure 23.6 Label for unit with use limitations**

#### 23.5.3.9: Alternative labels

There are five status labels defined for use in the 'blood group label' location. The specification for these labels is divided into two sections, one for essential information which must be present on the label as specified, and one for optional information which may be added if desired.

All labels are to be demand-printed black on white.

The labels covered by this section of the specification are:

- HOLD label for use on donations where testing information is outstanding.
- NOT FOR TRANSFUSION label for use on units which are microbiology negative but not suitable for transfusion.
- RED CELLS NOT FOR CLINICAL USE label for use on donations which are microbiology negative but where the red cell component is unsuitable for transfusion.
- BIOHAZARD label for use on donations found to be microbiology positive.
- EMERGENCY USE ONLY label for use on donations which are to be issued for transfusion prior to completion of all mandatory testing.

#### 23.5.3.10: 'HOLD' label specification

##### *Essential information*

ISBT 128 barcode: ISBT 128 group code (ICCBBA Data Structure 002) where gg = 'Mq'. Positioned to allow concatenated read with an adjacent donation number.

Text: The word 'HOLD' in upper-case letters of minimum height 6 mm

Text: The words 'FURTHER INVESTIGATION REQUIRED' in upper-case letters of minimum height 3 mm.

*Optional information*

Text: The word 'Reason:' followed by a free-format message giving the reason for hold

Text: Identification text of the testing centre

Text: The words 'Date Bled:' followed by the date bled.

**23.5.3.11: 'NOT FOR TRANSFUSION' label specification**

*Essential information*

ISBT 128 barcode: ISBT 128 group code (ICCBBA Data Structure 002) where gg = 'Md'. Positioned to allow concatenated read with an adjacent donation number.

Text: The words 'NOT FOR TRANSFUSION' in upper-case letters of minimum height 4 mm.

*Optional information*

Text: The word 'Reason:' followed by a free-format message

Text: The words 'Blood Group' followed by the ABO/RhD type if known

Text: Identification text of the testing centre

Text: The words 'Date Bled:' followed by the date bled.

**23.5.3.12: 'RED CELLS NOT FOR CLINICAL USE' label specification**

*Essential information*

ISBT 128 barcode: ISBT 128 group code (ICCBBA Data Structure 002) where gg = 'Mf'. Positioned to allow concatenated read with an adjacent donation number.

Text: The words 'PLASMA USE ONLY' in upper-case letters of minimum height 2 mm

Text: The words 'RED CELLS NOT FOR CLINICAL USE' in upper-case letters of minimum height 4 mm.

*Optional information*

Text: The word 'Reason:' followed by a free-format message

Text: The words 'Blood Group' followed by the ABO/RhD type

Text: Identification text of the testing centre

Text: The words 'Date Bled:' followed by the date bled.

**23.5.3.13: 'BIOHAZARD' label specification**

*Essential information*

ISBT 128 barcode: ISBT 128 group code (ICCBBA Data Structure 002) where gg = 'Mb'. Positioned to allow concatenated read with an adjacent donation number.

Text: The word 'BIOHAZARD' in upper-case letters of minimum height 4 mm

Text: The words 'HIGH RISK' in upper-case letters of minimum height 6 mm

Symbol: Biohazard warning symbol of minimum height 20 mm

Text: The words 'INACTIVATE BEFORE DISPOSAL' in upper-case letters of minimum height 2 mm.

*Optional information*

Text: Identification text of the testing centre

Text: The words 'Date Bled:' followed by the date bled.

**23.5.3.14: 'USE IN EMERGENCY ONLY' label specification**

*Essential information*

ISBT 128 barcode: Under ISBT 128 it is necessary to include the historical ABO/RhD type within the barcode. This is achieved by using the modified ISBT 128 group code, where gg is as defined in Table 23.2. Positioned to allow concatenated read with an adjacent donation number.

Text: The words 'BLOOD GROUP NOT CONFIRMED, USE IN EMERGENCY ONLY' in upper-case letters of minimum height 4 mm

Text: The words 'UNCONFIRMED BLOOD GROUP:' followed by the unconfirmed ABO/RhD type if known

Text: The words 'DATE BLED:' followed by the date of collection

Text: The words 'EXPIRY DATE:' followed by the expiry date. Minimum text height 2 mm

*Optional information*

Text: Identification text of the testing centre

Text: Free-format additional status information such as 'Mandatory Microbiology Tests Negative'.