# Standardized 2D Label Design for Blood Products

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## Background

The ISBT 128 Standard was designed to ensure the highest levels of accuracy, safety, and efficiency for donors and patients. Blood establishments using ISBT 128 reported increasing challenges of including more information on blood component labels. Additionally, facilities seek to increase efficiency in processing hundreds of thousands of units each year without compromising safety. The current international ISBT 128 blood label was designed over 15 years ago and has four, sometimes five, standardized linear barcodes. It was proposed that a new label design, using a single 2D symbol (i.e., Data Matrix), be developed to satisfy these demands.

Moving towards a single 2D symbol on the label will:

- Increase efficiency by reducing the number of barcode scans;
- Allow for better organization of information;
- Decrease training and confusion on which barcode to scan.

## Methods

An international committee was formed by ICCBBA with experts from various regions.

They began with published survey results (Transfusion Med. 2014 Apr;24(2):89-98) from the UK which determined hospital views on the optimal placement of critical information on a label. Two of the authors participated on this committee. Then label information was categorized as either necessary or unnecessary. The Committee then surveyed blood facilities and hospitals in various regions to identify elements of the label that could be internationally standardized.

Different scanning mechanisms (e.g., hand held scanners and flatbed scanners) were taken into consideration when determining the best placement of the 2D symbol. Several draft labels were distributed for comment and a best-fit design was created based on feedback.

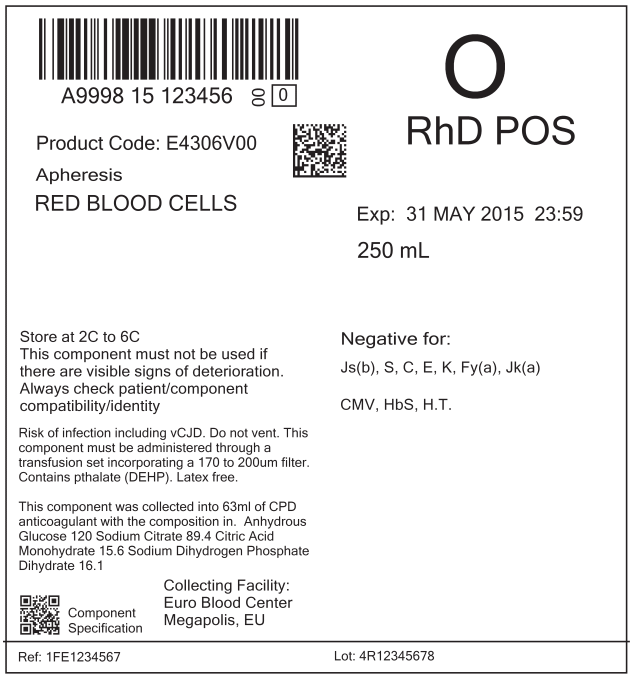
## Results

A new label design was created. Information that is important to the end-user is in the upper half of the label. This includes the Donation Identification Number, Product Code, product name, ABO/RhD, expiry date, volume, and the Data Matrix symbol.

The lower right of the label includes test results and the processing facility (if different than the collection facility).

The lower left of the label contains the collection date, storage conditions, regulatory text, static information, and collection facility. Component specifications may be provided via a second 2D symbol (using QR symbology) that takes the user to a website that displays this information.

An ISBT 128 compound message will be used to encode the information into the Data Matrix symbol. Minimally it will include the Donation Identification Number, Product Code, ABO/RhD, and expiry date. Additional information may optionally be encoded.




## Conclusions

The ISBT 128 standardized blood label will move towards the use of a single Data Matrix barcode and eventually eliminate linear barcodes on the label. This will improve efficiency at the blood center and hospital by requiring a single scan to capture all the information currently encoded within 4 or 5 linear barcodes. It will group key information for the transfusionist in the upper half of the label, while static information will appear in the lower half of the label. A transition period of ten years is anticipated. Facility software must be updated before the new label can be implemented. Design feedback can be submitted to ICCBBA.