



DINselect™

*On-Demand printing—
One facet of DINselect™*

white paper



Introduction

DINselect™ consists of two ways of producing your donation identification labels— we can provide you with labels printed with your required bar code sequence— “preprint”— or you can print labels at your facility— “on-demand.” You can even use a combination of both options. We know every facility is different - different procedures, different workflows, different label designs. That's why our flexible DINselect™ program is based on what you need.

This white paper specifically covers the on-demand option and how it can save you time and and significantly decrease the amount of money you spend on labels.

The Donation Identification Number (DIN) is acknowledged to be a significantly critical element for labeling blood products. Over the years, the technology and processes to produce this label have evolved, but continue to rely on conventional preprint and supplier verification technology. This white paper details the historical impact of these high cost labels and introduces improved methodology to dramatically save time and money while improving operations and enhancing compliance safety. The intangible benefits include much greater peace of mind and security when using a more technically advanced ondemand DIN labeling system.

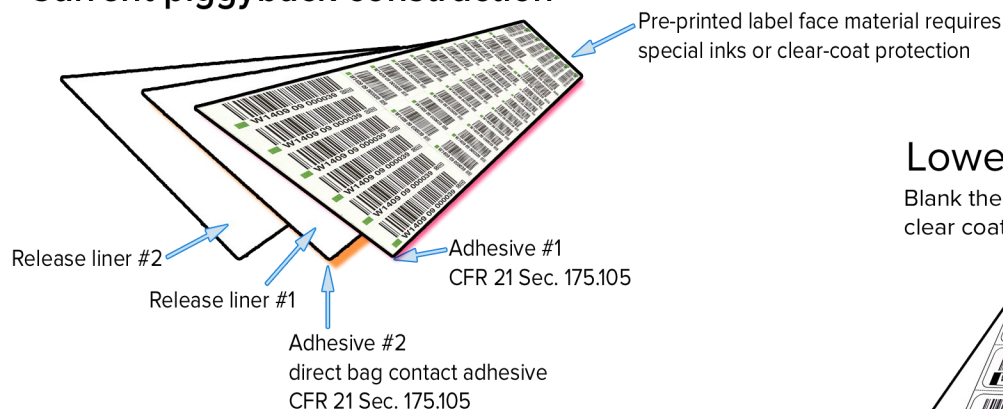


CURRENT DIN LABELING IN BLOOD COLLECTION FACILITIES

For many years, the commonly accepted practice of the U.S. blood banking community has been to purchase significant inventories of these DIN labels in a sequenced, preprinted format. By doing so, facilities secure the best price and reduce the number of costly and time consuming reorders (3-6 week lead time). However, one negative consequence of ordering these labels in annual volumes is that it is difficult to accurately estimate the number of labels needed in a given year; thus either incurring a label shortage or excess. The ISBT 128 standard requires that year of blood collection (with 30 day grace period) be encoded in the bar code, labels encoded with the current year cannot be used the following year*, thus creating a shortage or surplus. On the flip side, all labels are priced based on volume, so if an “extra” order must be placed near the end of the year due to a shortage to fulfill a facility’s requirements, this smaller volume order may be even more expensive than the original, accounting for an even greater supply cost.

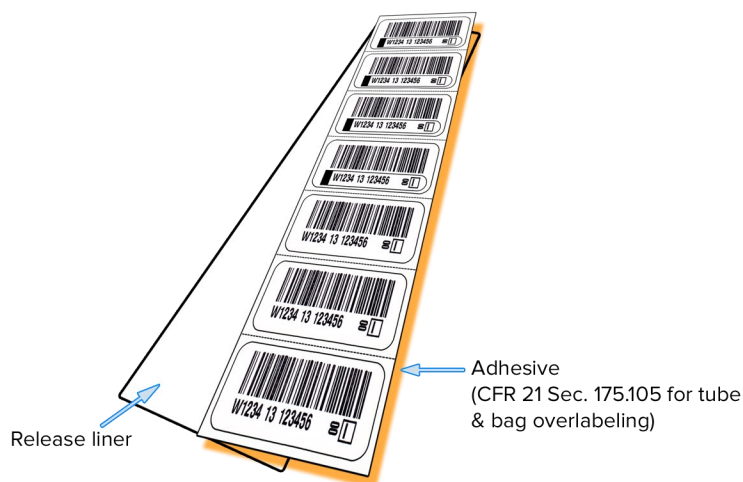
DIN label material is designed using a “piggyback” or double ply construction which has historically been very expensive. More specifically, piggyback labels have three layers. The top layer (or face sheet ply) is where the bar code is imprinted. The middle layer is a release liner that has an adhesive coated backing used for carrying the labels for subsequent removal, and the bottom layer is a standard release liner. The purpose of this sandwich design is so that “sets” of labels may be “torn off” the roll or in fanfold format and each set can be attached to other bags and transferred to another location. Each “set” contains a number of individual labels that will be used in processing or by a blood transfusion service.

Current piggyback construction



Lower cost DINselect label

Blank thermal transfer film requires no clear coat protection (single ply only)



* ICCBBA does allow for a one month variance in the date of collection—meaning that for the first month of the year, a facility can continue to use the previous year encoded in the bar code (for example, 2020 labels can be used in January of 2021) which does aid in using up label inventory, but again, it is near impossible to order the exact quantity needed, and excess label inventory is common. This “exception” may not be considered best practice.



PIGGYBACK CONSTRUCTION

The reason that pre-printed piggyback labels are pricey is not limited to unanticipated purchasing volumes, but the basic construction can be inefficient. The “label on top of label” design is more expensive; plus, it makes peel off and adherence more difficult. Labels can pop off of the set during centrifugation or during subsequent processing. Missing critical DIN labels absolutely creates administration problems and potential lost revenue. Any label error may lead to an unusable blood bag and significant lost revenue.

Additionally, with the need for sequence integrity and high dollar value of pre-printed DIN label inventory, they must be securely stored as inventory, administratively issued, traced and tracked. Labels are unnecessarily used when a “visit” does not become an actual donation. That number must then be voided, destroyed, accounted for and then a new one must be given to the next potential donor, at both fixed and mobile donation sites. All of these soft costs in labor, time, cash inventory, and processing add up quickly when the system is not as efficient as it could be.

COLOR CODED PIGGYBACK LABELS – TRULY A BENEFIT?

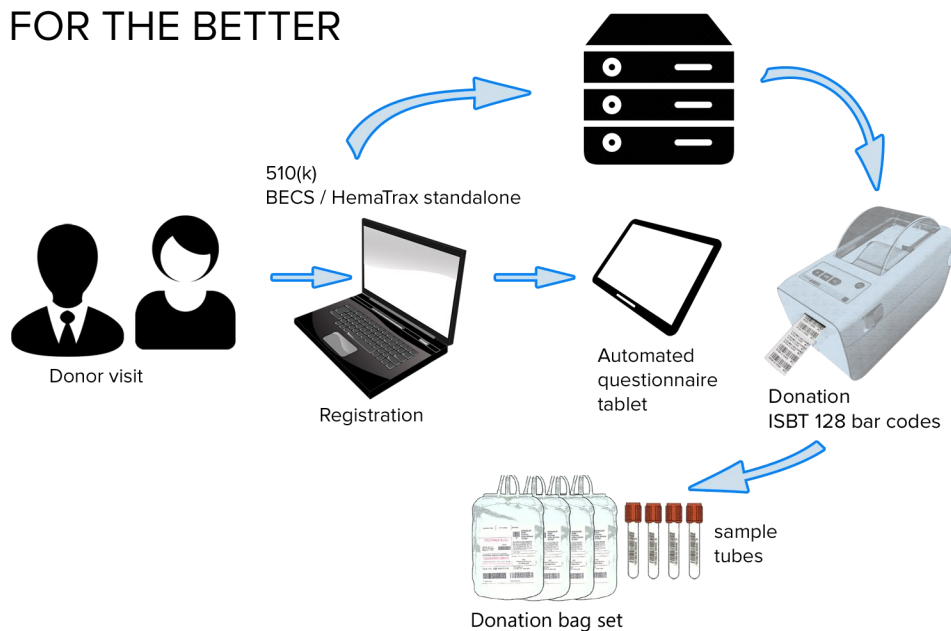
Originally, color was used on blood bank labels to differentiate ABO types and to comply with FDA requirements for certain caution/warning statements. Studies done in the 1990’s concluded that if labels were not actually read by the individual, the colors had little real time impact on error elimination.



Color coding has recently been added by some label suppliers as a perceived enhancement to their pre-printed DIN piggyback sets. The use of color to

differentiate tubes, tops, etc. is intended to aid in the processing of collected units of blood. The benefit of distinguishable colors, however, can be muddled by the fact that individuals interpret colors differently. For example, many colors in the red/green spectrum are not practical due to red/green color blindness. In fact, 10% of all men have this color blindness. Five percent of men and women have yellow/blue color blindness. Using color can actually increase the chance for error rather than decrease it.

TECHNOLOGY CHANGES FOR THE BETTER

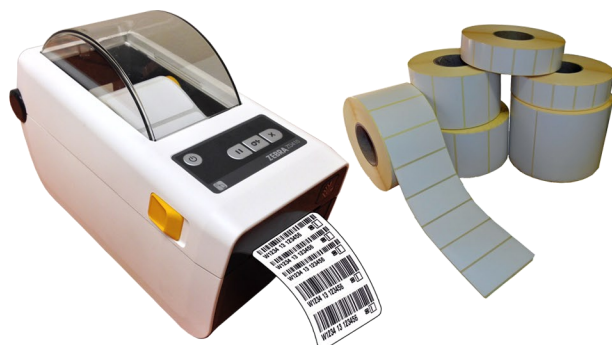


Due to the declining use of blood in transfusions which translates into lost revenue for blood banks, facilities are searching for ways to lower costs. One way to quickly recoup costs is through the use of on demand printing, rather than purchasing pre-printed DIN labels. Even though the technology for pre-printed labels continues to improve, and has enjoyed reduced manufacturing costs in supplies, labor and production process, on-demand still is a great cost advantage over



TECHNOLOGY CHANGES FOR THE BETTER (continued)

preprints by combining innovative label material and software systems. All Digi-Trax® label designs employ "Easy Peel" edges. These designs make it simple to remove all label segments from the liner. Pre-printing requires multiple scanning and/or use of vision systems to ensure and certify accuracy. In existing systems, extra printed labels and manual tracking must be used to keep accurate label counts and numerical syntax.



There are also ways in which to significantly reduce the manufacturing cost of the label using a different design of the DIN. These constructions have been successfully developed and thoroughly tested by Digi-Trax® in real settings. All DINselect™ label adhesives meet FDA CFR 21, Sec. 175.105. For more information, see our contact information at the end of this white paper.

BEST CASE -- USE YOUR 510(k) CLEARED BECS SOFTWARE



A new, more efficient and secure way to issue DIN labels and track them throughout your process is by placing the control within your 510(k) cleared software. All the existing pre-print methods ultimately depend upon conventional software to produce safe sequencing. Consider it the ultimate computer controlled assurance system to print-issue the DIN through your blood establishment computer system (BECS). Algorithms are employed in this process for each fixed and mobile location to keep real-time individual sequence in a usable database. For the first time, this real-time data can be the basis for compliance tracking, reporting and administrative look back. With security always a concern, assign different levels of password protection for different employees' activities.

Automated logs will track all activity while reports and dashboards can even be incorporated for use by management, making the regulatory job more efficient. Whether you choose to implement on demand labeling in an integrated environment (in conjunction with your BECS system to issue the DIN) or in our standalone system, you print only what you need, when you need it at a much lower cost than preprints.



BENEFITS OF EXPANDING USE OF ON-DEMAND LABELING TO INCLUDE DINs

As mentioned previously, most facilities currently use proven, on demand label printing for all ISBT 128 compliant bar code labels. By expanding this effort to include DINs, a facility will:

- Reduce the cost of your entire blood bank labeling operation as supplies are less expensive
- Improve productivity with Digi-Trax® “Easy Peel” label edges
- Reduce lead times from 3-6 weeks to next day
- Decrease inventory costs by eliminating the need to store. Issue and track rolls of labels
- Avoid lost labels during centrifuge and other processing by using improved label constructions
- Stop costly manual tracking and similar administrative activities
- Eliminate the need to destroy labels for non-draws (eliminate throwaways)
- In real time, get access to what numbers were printed, who printed them and when
- Save valuable space and improve control over supplies both in mobiles and at fixed sites with no label rolls remaining on counters, desks, etc.
- Send cash directly to the bottom line
- Increase efficiencies in the mobile site labeling operations
- No non-readable bar codes

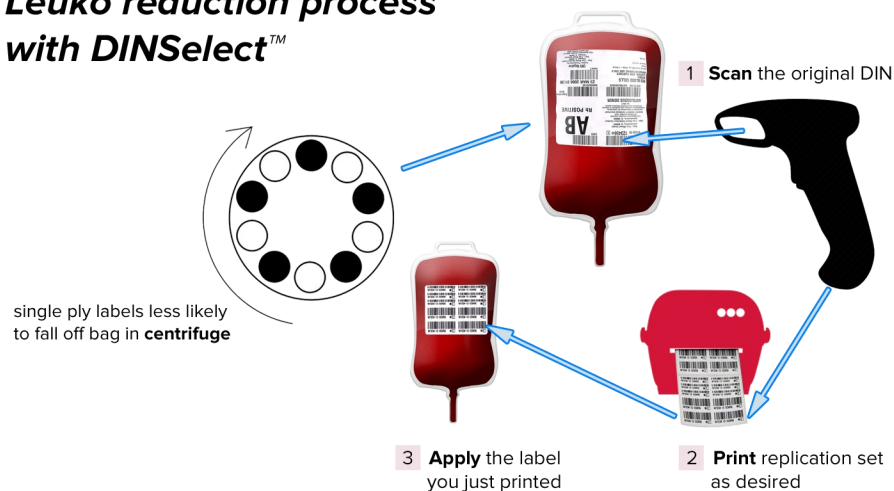
CASE IN POINT

“DINselect will offer a significant cost savings for Blood Bank of Delmarva as we won’t have to use a unit number set for deferred donors. DINs for lab processing and final labeling will be generated using a replicator; thus providing more savings by eliminating the unnecessary printing of DINs for certain donation types and incomplete donations.”

Margaret Hannan
Manager, Quality Systems
Blood Bank of Delmarva



Leuko reduction process with DINSelect™





CONCLUSION

Digi-Trax® has extensive experience working with all the most popular BECS companies to cooperatively modernize facilities through the entire ISBT 128 on-demand labeling processes. Our first DINselect on-demand partnership is with BBCS. If you are on their software module, ABO Wheels, we can now demonstrate how to generate a real cash flow at blood banks by embracing the interfaced DINselect™ concept.

Industry-wide pressure to cut costs will continue as a result of decreased blood use. The consolidation of blood banks is becoming a reality. Medical reimbursements under any existing or new political environment will continue to push for decreases in payments (reimbursements) forcing all laboratory operations to cut costs. Use the integrated option of DINselect™ if you are currently an BBCS ABO wheels client and improve the efficiency of your operation while slashing supply costs - more cash to the bottom line.

Find out more about our on demand options to print DIN numbers - either using our Digi-Trax standalone software or through your BECS company. Together, we can cost effectively and securely issue, print, track, trace and report all DIN labeling activity easily and accurately.



ABOUT DIGI-TRAX®

Digi-Trax® is instrumental in transforming healthcare organizations across the world by applying bar coding and RFID strategies. As a technology solutions partner, we enhance client data structures while mitigating risk to improve your workflow. Now and into the future, we will be with you every step of the way to implement and support the right strategy for your facility.

