Blood transfusion throughout time

1667 The first fully documented human blood transfusion was administered by Dr. Jean-Baptiste Denys.

1818 Dr. James Blundell perform the first successful human blood transfusion in a postpartum haemorrhage patient.

1901 - 1907 Karl Landsteiner discovers the first three human blood groups. Ludwig Fleissner suggests that the safety of transfusion might be improved by cross-matching blood.

1930 - 1940 The Rh blood group system is discovered by K. Landsteiner, A. Wiener, P. Levine and R.E. Stetson.

1978 FDA requires blood bags to be labelled to clearly state whether they are “paid” or “volunteer”.

1985 Immediately after the FDA licenses the first test to detect the antibody to HIV, Red Cross Blood Services regions begin testing all newly donated blood.

The future that lies ahead

Today, approximately 25% of the worldwide population makes use of blood transfusions each year and the percentage is expected to continue increasing at a rate of 7-9%.

Tremendous progress in the correct management of blood transfusions has been made. Today blood can be used more effectively if component therapy is practiced. One unit of donated blood can be divided into components, including red cells concentrates, fresh frozen plasma, cryoprecipitates and platelet concentrates, to meet the needs of more than one patient.

Avery Dennison is dedicated to improve the quality management in the entire blood cold chain. Our label solutions are highly effective in:

- Ensuring accurate labeling at bedside and donation areas
- Providing the ability to trace the blood packet throughout the entire cycle

Did you know?

- 9% of blood donors can save up to 3 lives
- Less than 38% of population is eligible to donate blood
- Platelets critical for cancer patients have a shelf life of only 5 days

*T Red Cross: www.redcrossblood.org
** World Health Organization: www.who.int/bloodsafety/en/

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The risk of an adverse outcome from an erroneous transfusion is estimated to exceed the risk of acquiring infectious diseases. About 5% to 10% of HIV infections worldwide are the result of transfusions from contaminated blood or blood products.

At Avery Dennison, we understand that self-adhesive labels play a crucial role by ensuring correct labeling for identification and traceability at bedside and donation areas. Thus preventing:

- Samples mix-up due to simultaneous handling of specimens from multiple patients
- Blood product mix-up due to storage in same container
- Erroneous cross-matching

Our Research & Development engineers designed a label construction that can meet very stringent standards and endure extreme environmental conditions during collection, processing and storage:

- Withstand temperatures ranging from -80˚C to +120˚C
- Adhere on moist or icy surfaces even at -80˚C
- Conforms to frozen wrinkled blood plasma bags

Avery Dennison’s Plasma Bag Labels are specially designed for labeling at low temperatures. Our labels will apply quickly, clearly and permanently on Plasma bags right out of freezer without wiping or drying.

Key advantages:

- Suitable sterilization in autoclave
- Good adherence during the centrifugation and thawing in warm water processes
- DIN ISO 3826 compliant

Remove the labels to view the advantages of using Fasson blood bag labeling material.

Accurate identification

Primary labels

In the supply chain, the bag manufacturers pre-apply the primary labels on the blood and plasma bags before filling them with anticoagulant and sterilization in autoclaves. The primary labels (also referred to as a base label) carry the manufacturer’s information, identification and approval icons and bar codes with important traceability information.

Key advantages:

- Suitable for cold surface applications
- Can be used for the majority of the typical printing techniques in laboratories
- DIN ISO 3826 compliant

Remove the labels to view the advantages of using Fasson blood bag labeling material.

Secondary labels

The secondary labels applied during blood processing are important as they contain information such as donor identification number, donor type, product code and expiration information, as well as the matrix tracking bar codes.

Key advantages:

- Labels withstand temperatures ranging from -30 deg C to +120 deg C
- Good adherence on moist or icy surfaces even at -30 deg C
- Labels conform to uneven surfaces
- Decrease incorrect cross matches
- Avoid waste, reduce costs of destroying unidentifiable products

Remove the labels to view the advantages of using Fasson blood bag labeling material.

Plasma labels

In the supply chain, the bag manufacturers pre-apply the primary labels on the blood and plasma bags before filling them with anticoagulant and sterilization in autoclaves. The primary labels (also referred to as a base label) carry the manufacturer’s information, identification and approval icons and bar codes with important traceability information.

Key advantages:

- Suitable sterilization in autoclave
- Good adherence during the centrifugation and thawing in warm water processes
- DIN ISO 3826 compliant

Remove the labels to view the advantages of using Fasson blood bag labeling material.