



Date of publication: 10th February 2009

Implementation: To be determined by each Service

Change Notification UK National Blood Services No. 4 - 2009

Clarification on storage temperature for high glycerol frozen red cells

Applies to the Guidelines for the Blood Transfusion Services in the United Kingdom – 7th Edition 2005

There is a lack of clarity in section 8.8 of the Guidelines for the Blood Transfusion Services in the United Kingdom regarding the storage temperature of frozen red cells. The current wording is not clear regarding cells frozen by the low glycerol method, and requirements when using the high glycerol method are less restrictive. The changes outlined below align requirements with those given in the Council of Europe “*Guide to the preparation, use and quality assurance of blood components - 14th edition (2008)*”

8.8 Red Cells, Thawed and Washed, Leucocyte Depleted

Please delete: “Storage (for general guidelines see Section 7.6)

The storage period for red cells in the frozen state will be influenced by the nature and concentration of the cryoprotectant but normally should not exceed 10 years. Storage is normally at –80°C or colder. Maintenance of a constant storage temperature is important, particularly if a low glycerol cryoprotectant system is used.”

Replace with: “Storage (for general guidelines see Section 7.6)

Maintenance of a constant storage temperature is important, particularly if a low glycerol cryoprotectant system is used. Storage should be controlled to ensure

- –60°C to –80°C if stored in an electrical freezer, when a high glycerol method is used
- –140°C to –150°C if stored in vapour phase liquid nitrogen, when a low glycerol method is used.

The storage may extend to at least 10 years, if the correct storage temperature is guaranteed.”

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