SAHARA-TSC

Standardised thawing of blood stem cells now has a name

Safe tempering method

- Allows a fast and temperature-controlled thawing of cryopreserved products
- Successfully tested using cryopreserved leukapheresis products from mobilised donors with volumes ranging from 60 ml to 120 ml
- Permanent agitation in order to achieve an almost homogeneous temperature profile within the leukapheresis product
- During the thawing process the adaptation compress serves as a passive heat reservoir which cools off whereas the temperature of the warming shell is controlled actively by an electrically heated warming plate
- Delayed key reaction prevents unintentional aborting of the thawing process
- Warming shell, warming plate and adaptation compresses can be taken out of the device separately and can easily be cleaned and disinfected

The standard of blood stem cell thawing

Protocol printer

- Documentation of the preparation temperature
- Documentation of the system test
- Documentation of the error messages in case of a failure

Hygienic thawing conditions

- Easy to clean and disinfect warming shell which can even be autoclaved prior to thawing the leukapheresis product

Integrated system test

- Checking the device function
- Calibration of the temperature sensors
- Additional measuring apparatus not necessary
- Documentation by means of a protocol printer

Temperature monitoring

- Measurement of the preparation temperature by means of an infrared sensor
- Documentation by means of a protocol printer

Adaptation compress TSC

- The gel-filled adaptation compress TSC is suitable as a heat reservoir for thawing cryopreserved blood stem cell preparations
- Prior to thawing cryo-preserved leukapheresis products, one adaptation compress per preparation has to be pre-warmed to between 37°C and 40°C

Preparation viscosity check

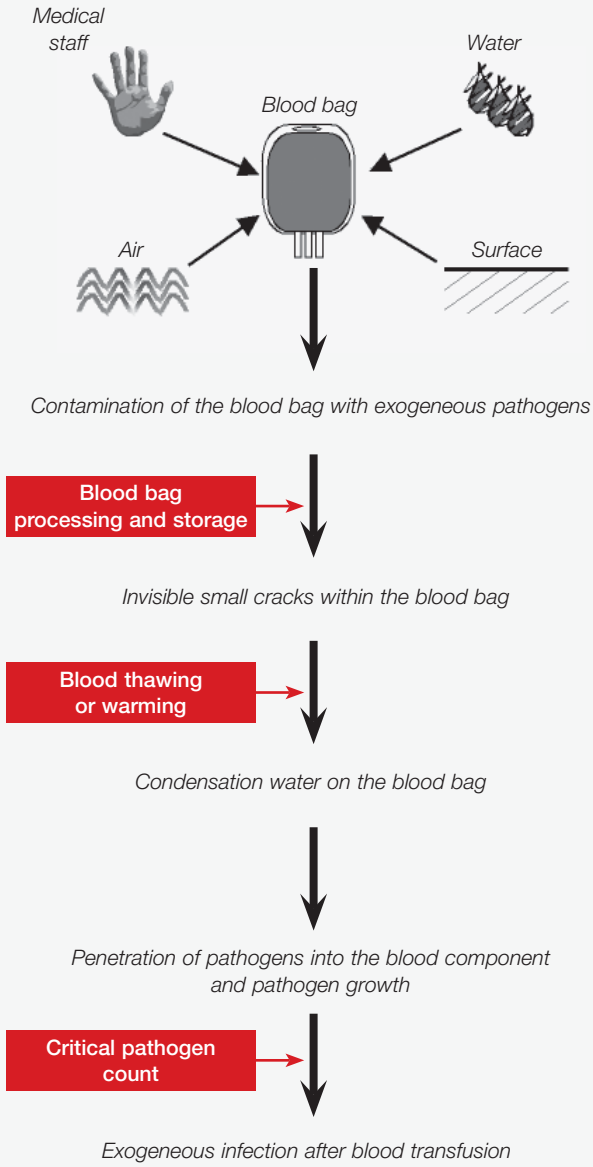
- Visual and sensorial verification of the stem cell preparation during the entire thawing process

Agitation

- Gentle agitation to achieve an almost homogeneous temperature profile within the bag and to prevent damage to the stem cells

The hygienic alternative

- Dry tempering device
- Contamination risks by water-borne pathogens as associated with water baths are prevented



Inoculation of exogenous pathogens during warming of blood components

What are the causes for a microbial contamination of blood components by exogenous germs?

Exogenous bacteria originate from the blood donator's skin, from water, air, the blood bag material or the environment, but also from the medical personnel's hands. They can be inoculated during blood collection or during preparation and storage of blood components.

While the blood components are processed, mechanical forces may cause small cracks within the bags (mainly within frozen bags). These cracks subsequently allow the invasion of pathogens into the blood component. Contamination may even occur when blood components are warmed (see figure), namely when

- the direct environment of the blood bag to be warmed is highly contaminated, or
- the outer surface of the blood bag to be warmed is populated with pathogens.

Thus, various cases of a transfer of pseudomonades were observed when previously uncontaminated fresh frozen plasma and cryoprecipitates were thawed using water baths.

1. Montag T. et al. **Bakterielle Kontamination von Blutkomponenten**, Bundesgesundheitsbl. - Gesundheitsforsch. - Gesundheitsschutz 42, 132-142, 1999
2. Sazama K. **Bacteria in Blood for Transfusion**, Arch. Pathol. Lab. Med., 118, 350-365, 1994
3. Puckett A. **Bacterial contamination of blood for transfusion: a study of the growth characteristics of four implicated organisms** Med. Lab. Sci. 43, 252-257, 1986

Maintenance

The company TRANSMED Medizintechnik GmbH & Co. KG hereby declares that except for security-relevant checks no further regular maintenance works are required for the dry tempering devices SAHARA-III basic model, SAHARA-III MAXITHERM and SAHARA-TSC.

The test of the device functions, inclusive of the calibration of the temperature sensors, can be performed independently by the user by means of the integrated system test. For this, no further measuring instruments are required.

SARSTEDT

SAHARA-TSC • Ordering Information

SAHARA TSC

Order No.	Description
97.8710.600	SAHARA-TSC Warming device for stem cell preparations
97.8710.602	SAHARA-TSC 115V Warming device for stem cell preparations, 115V/60Hz mains supply

Accessories

Order No.	Description
97.8710.570	Protocol printer
79.8710.575	Paper for protocol printer
79.8710.576	Ink ribbon for protocol printer
79.8710.610	Adaptation compress TSC
97.8710.620	Warming shell SAHARA-TSC Aluminum shell for storing stem cell preparations

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