

NucleoSave Cards

Convenient storage of blood samples
at room temperature

NucleoSave

Blood Storage Cards

- storage at room temperature
- stabilizes DNA
- used equivalent to FTA® Classic Card application



NucleoSave blood storage cards

- ✓ **Convenient storage at room temperature**
 - ...no costly refrigeration
 - ...no costly shipping on dry ice
- ✓ **Stabilizes DNA upon long-term storage**
 - ...DNA collected on NucleoSave cards is stable for years
 - ...a permanent solution
- ✓ **Easy extraction of preserved DNA with NucleoSpin® Tissue kit**
 - ...reliable extraction system reduces the failure rates significantly
 - ...high DNA yield and quality
 - ...suitable for use in real-time PCR assays

Convenient storage of blood samples at room temperature

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Blood storage card

Stabilizes DNA and prevents damage upon long-term storage

Use of liquid blood samples always implicates storage and stability problems whenever the blood is not directly used as starting material for DNA extraction after blood withdrawal. Long-term storage of liquid whole blood requires freezer capacity (-20°C) as DNA has limited stability in whole blood at any higher temperatures. Especially if shipping of blood samples is required, it is difficult to guarantee maintenance of the cold chain.

Nowadays downstream applications and detection systems are significantly improved in terms of sensitivity - thus less DNA is required for the downstream applications and a single blood spot includes sufficient DNA for genotyping.

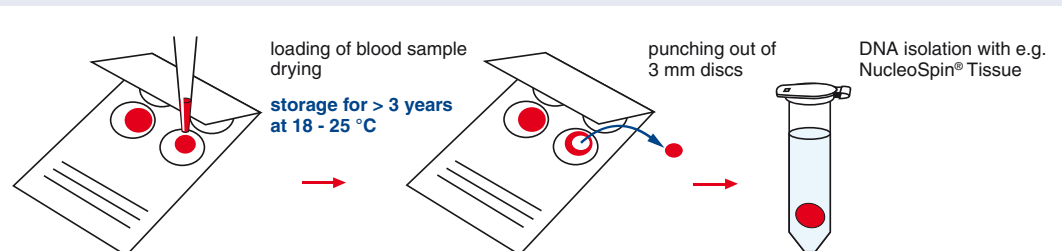
NucleoSave blood storage cards guarantee long term storage of blood by a sophisticated impregnation of the specialized filter paper. This prevents DNA from damage and degradation upon storage. Genomic DNA isolated from blood samples stored on NucleoSave cards at room temperature for over 3 years has been successfully used for PCR, real-time PCR, and genotyping.

NucleoSave cards are not intended for diagnostic and therapeutic use. Distribution and use in the USA is prohibited for patent reasons.



Procedure

- Load up to 200 μl blood sample onto collection circles
- Let the card dry for 30-60 min and store at $18^{\circ}\text{C} - 25^{\circ}\text{C}$.
- For DNA extraction punch out 3 mm disk and purify DNA with a reliable DNA purification kit, e.g. NucleoSpin[®] Tissue



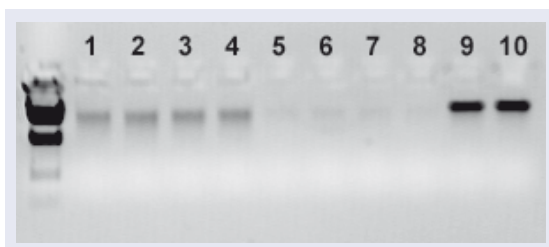
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*Perfect in combination
with reliable DNA
purification kits
-> much lower risk of
failure in downstream
applications*

Application Data

Isolation of genomic DNA from dried blood spots



Lane 1-4: DNA isolated from NucleoSave cards; lane 5-8: DNA isolated from product W; lane 9-10: Genomic DNA purified from 20 μ l of fresh blood as a reference.

Blood samples were stored on NucleoSave cards and on storage cards of competitor W, respectively. The cards were stored for 24 months at room temperature and genomic DNA was subsequently purified from three 3 mm punches per extraction following the NucleoSpin[®] Tissue support protocol. DNA was finally eluted in 100 μ l whereof 10 μ l were applied to the presented agarose gel. Typical DNA yields were 5-30 ng (NucleoSave cards) and 1-5 ng with product W. Typical DNA fragment lengths were about 20 kb.

NucleoSave blood storage cards result in very good yield and purity of integer genomic DNA – the combination of NucleoSave blood storage cards and the NucleoSpin[®] Tissue extraction kit is significantly superior to competitor W!

PCR amplification of gDNA purified from blood samples stored on NucleoSave cards

DNA was purified from blood samples stored for 24 months on a NucleoSave card, following the NucleoSpin[®] Tissue support protocol.

10 μ l of the purified DNA were each used as template for a subsequent PCR amplification of a 5.2 kb fragment.



NucleoSave blood storage cards prevent DNA from damage and degradation upon storage. The subsequent DNA purification with NucleoSpin[®] Tissue results in high quality and integrity of the purified DNA - thus even amplification of very long DNA fragments is enabled!

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