

# Snap-Freezing in every Operational Theatre!

Mobile Snap-Freezing Device for biobanking processes of pathology samples

Thomas Müller<sup>a</sup>, Timo Gemoll<sup>b</sup>, Tomm Schmidt<sup>a</sup>, Anna Krampitz<sup>b</sup>, Vincent von Walcke-Wulffen<sup>a</sup> & Jens Habermann<sup>b</sup>

<sup>a</sup> BioKryo GmbH, Sulzbach/Saar; <sup>b</sup> Universität zu Lübeck

aufgrund eines Beschlusses des Deutschen Bundestages

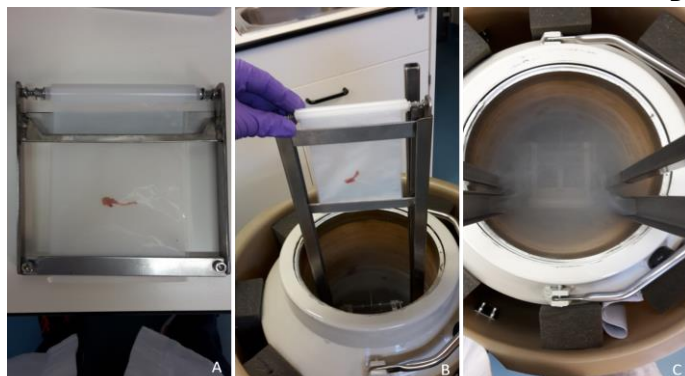


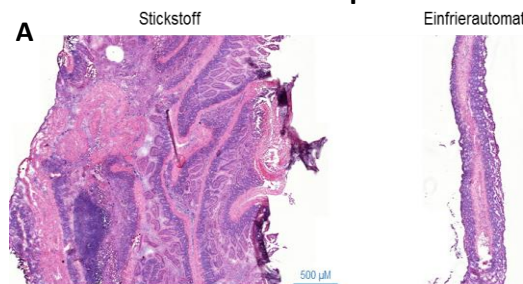
Figure 1: Handling of the Snap-Freezing Device. **A)** Preparation of the sample in PTFE-bag, **B)** Sample right before triggering the plate mechanism, **C)** Sample in PTFE-bag in-between the cryogenic plates in the freezer

## Goals:

- Quick freezing of medical samples from the OR or the laboratory for molecular analysis in pathology and surgery:
    - ⇒ **preservation of the current status of a cell** (RNA, DNA, proteins, effector molecules)
  - storage in cryovessels at < -150°C
  - no use of LIN or isopentane at the place of freezing ⇒ **no hazardous materials**
  - functional after opening for up to 4 hours
  - functional with a closed lid for approximately 10 days
- ⇒ **long lifetime / long stand-by duty**

➔ **New standard in personalized medicine!**

## mouse experiment



## clinic

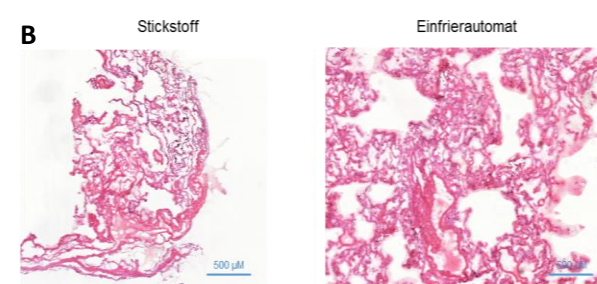


Figure 2: exemplary comparison of tissue sections. **A)** Bowel tissue of the same mouse **B)** Lung tissue of the same patient. The tissue samples were cut in two same-sized sections, which were afterwards preserved in liquid nitrogen (left) or in the Snap-Freezing Device (right). The tissue sections were treated with hematoxylin and eosin stain. The microscopic magnification is represented by a blue measuring bar (500 µM).

Parameters	Results
histological	slight bruising of the tissue no change in tissue morphology ⇒ histological evaluation possible without impairment
molecular-diagnostic	clarification of the results trough the fast, standardized freezing without any significant impact on quality or concentration of DNA RNA proteins protein phosphorylation
remarks	user-friendly, because of illustrated manual without personal introduction applicable

→ Quality of sample comparable on histological and molecular biological levels

## Contact

BioKryo GmbH - Industriestraße 5 - 66280 Sulzbach/Saar - Germany - Tel.: +49 6897 952 8696 - Fax: +49 6897 952 8698 - contact@biokryo.com - biokryo.com

Gefördert durch:



aufgrund eines Beschlusses  
des Deutschen Bundestages



**KF3340401SB4**



**03TU14F002**