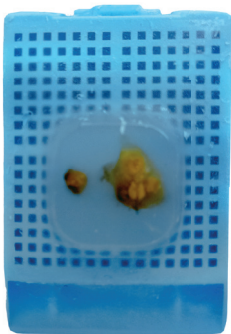


Decalcification Guide

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In order to prepare bone-containing tissue for microtome sectioning, decalcification is an important step in histological preparation. Depending on the tissue, thorough decalcification is time-consuming and can sometimes take several days.



Decalcification on the block



Femoral head



Nasal septum

Using the **USE 33** with its ultrasound technology and in conjunction with the **USEDECALC** and **USERAPID** solutions, the decalcification time can be significantly reduced compared to the conventional procedure without damaging the morphology. For bone marrow biopsies, femoral heads, and nasal and auditory cartilage, the time can be reduced by up to 75%. Material with a high proportion of corticalis can reach a reduction in the decalcification time of between 40 and 60%. The infiltration processes of fixation media are also significantly accelerated.

The **USE 33** features a digital temperature controller that ensures the temperature to be constantly in the optimal range. For the decalcification process, it is usually at around 16 °C – 18 °C.

Temperature stability is a key factor in ensuring that the morphology and antigenicity are preserved completely. There are no shrinkage artifacts, nor does the tissue swell. That is particularly advantageous for subsequent immunohistochemical examinations.



USE 33 Ultrasonic Rapid Decalcifier






Different Sample Inserts for USE 33



A common side effect of the decalcification process is hardening of prepared cells, which can lead to difficulties in interpretation of the final result. To counteract this effect, using neutralizing EDTA solutions such as **USEDECALC** is recommended. Its neutralizing effect causes the cells to return to a “relaxed” state. The relevant structures can now be seen much more clearly and the result is of perfect quality.

This and other information was collected as part of a study. If you are interested to obtain it, the study is available as a PDF file (English) from Ms. Kirsten Meier, **MEDITE Medical GmbH** (kirsten.meier@medite.de).




General bones

- Fix tissue adequately
- Water adequately
- Use **USERAPID** Decalcifying Solution  1 – 24 hrs. *(depending on material)*
- Water briefly  approx. 1 hr.
- Use EDTA **USEDECALC**  10 min. – 1hr. *(depending on material)*
- Water running
- Continue regular embedding process

Biopsies, bone marrow and breast punches

- Fix tissue adequately
- Water adequately
- Use EDTA **USEDECALC**  1 hr. – 24 hrs. *(depending on material)*
- Water running  10 min. – 1hr. *(depending on material)*
- Continue regular embedding process

Descaling on the block

- Cut the block
- Water adequately
- Place block in **USERAPID** Decalcifying Solution  1 – 24 hrs. *(depending on material)*
- Water briefly  approx. 1 hr.
- Use EDTA **USEDECALC**  10 min. – 1hr. *(depending on material)*
- Water running
- Continue regular embedding process

USERAPID Decalcifying Solution

Cat. No. 40-3300-00

- Special acid-based solution for quick decalcifying of histological material
- pH-neutral and buffered
- Decalcification time: 1 – 24 hours, depending on sample size
- Maximum preservation of morphological structures
- Shelf time up to two years (storage at 4 °C – 25 °C, away from light)
- Perfect for use with the **MEDITE USE 33** Ultrasonic Accelerated Decalcifier



USEDECALC Decalcifying Solution

Cat. No. 40-3310-00

- Special buffered EDTA solution for quick decalcifying of sensitive histological material
- Reduction of decalcification time to 50 – 75% compared to conventional EDTA decalcification
- Maximum preservation of morphological structures
- Specifically developed for immunohistological applications
- pH neutral and buffered
- Shelf time up to two years (storage at 4 °C – 25 °C, away from light)
- Perfect for use with the **MEDITE USE 33** Ultrasonic Accelerated Decalcifier



The **USE 33** and the decalcification solutions **USERAPID** and **USEDECALC** are available at **MEDITE Medical GmbH**. We would be happy to make you an individual offer! Contact us:



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