



Instructions for use

Decalcifier standard 6483

Acid-based Decalcifier for Histology

The decalcifier standard is used for acid decalcification of bone materials and other calcified tissues. The solution contains trichloroacetic acid (5%) and formalin. Trichloroacetic acid is a strong organic acid that demineralizes calcified material by removing the calcium ions from the tissue. The specimens become easy to cut and can be prepared. Trichloroacetic acid may cause further changes in tissue, e.g. nucleic acids are hydrolyzed and, therefore, the staining characteristics of cell nuclei are significantly reduced.

Trichloroacetic acid and formalin have also fixing properties. Nevertheless, we recommend sufficient fixing of specimens before decalcifying to avoid morphological damages in unfixed tissue.

The decalcifier standard is suitable for all routine work. For *in situ*-hybridizations and for enzyme- and immunostaining methods we recommend our decalcifier soft (6484) on base of EDTA.

Application

The decalcification takes place at room temperature. Put the fixed tissue into the decalcifier solution (ratio tissue to decalcifier 1:20) and make sure that the tissue is completely covered with liquid. The length of the decalcification depends on the size and type of the material. Little bones (diameter a few mm) or tissue blocks (5-10 mm thick) need 1-2 days for a complete decalcification. Change the solution at least once every 24 hours.

The end-point of the decalcification can be determined by puncturing the material at an area of less relevance for the diagnostic procedure. The tissue must be completely rubber-like. Another possibility is an ammonium oxalate test to find out if there are still calcium ions in the solution: Remove a small amount of the used decalcifier solution and adjust the pH value with ammonia solution to > 7 . Then add the same amount of ammonium oxalate solution 3%. After 30 min there must not be any turbidity (calcium oxalate). Otherwise, the decalcification procedure must be continued. Avoid a too long residence time of the solution.

After the decalcification it is necessary to rinse the tissue several times in high proof alcohol to avoid shrinking artifacts and swelling of soft tissue. Then the dehydration is finished and after a clearing step the specimen can be embedded in paraffin.

Storing

The solution should be stored tightly sealed at room temperature.
Shelf life is minimum 2 years after manufacture.



Danger H314-H350-H335-H411-EUH208

P273-P280-P302+P352-P305+P351+P338-P310

Full text of hazard- and precautionary statements
see material safety data sheet section 2.2.

Decalcifier standard

500 ml	glass	6483.1
1 L	glass	6483.2
2.5 L	plastic	6483.3
5 L	plastic	6483.4

Carl Roth GmbH + Co. KG

Schoemperlenstraße 3-5 • 76185 Karlsruhe
P.O. Box 100121 • 76231 Karlsruhe
Phone: +49 (0) 721/ 5606-0
Fax: +49 (0) 721/ 5606-149
info@carloth.com • www.carloth.com

sse 06/2021

The company is a limited partnership with headquarters in Karlsruhe, reg. court Mannheim HRA 100055. Roth Chemie GmbH, with headquarters in Karlsruhe, reg. court Mannheim HRB 100428, is the personally liable partner. Managing Director: André Houdelet. Sales tax identification number: DE 143621073.