

Poly-NoCal Endpoint Determination Kit

Background

The control of decalcification is of great importance if well stained sections are to be obtained.¹ Over-decalcification interferes with nuclear and cytoplasmic staining and destroys cell structure. Under-decalcification can cause poor dehydration and infiltration during tissue processing and ultimately sectioning problems.² There are many ways to determine endpoint: needle penetration, cutting, bending, x-ray and chemical. X-rays or a chemical test is the most accurate. Poly-NoCal EndPoint Determination Kit supplies everything you need to conduct the chemical analysis. The test is simple to perform, less costly and faster than X-rays. The test depends on the detection of calcium in the used decalcifying solution. If calcium is present a precipitate will form, when the solution is clear, the endpoint is reached.

Method:

- Using the measuring vials in the kit, add a fragment of litmus paper.
- Pipette 2 ml of decalcifying solution from the bottom of the specimen bottle, avoiding bone particles. The litmus paper will be red at this time.
- Pipette approximately 2 to 6 ml of 5% Ammonium Hydroxide to the decalcifying solution until the litmus paper turns gold. It is important that the pH range of the nearly neutralized solution lie between 3.5 and 7.5.³
- Now add 1 ml of 5% ammonium oxalate.
- If no precipitate forms after 30 minutes, the decalcification is complete.
- If any cloudiness develops, further decalcification is required. **The decalcifying fluid must be replaced.** Be sure to rinse specimen bottle clear of calcium deposit before adding new solution.
- The test can be applied every four hours, changing the solution after each positive test. The time interval is contingent on the size of the specimen versus the strength of the decalcifying solution.

Ordering Information:

Cat. #	Description	Size
24119	Poly-NoCal Endpoint Determination Kit Contents of Kit: • 500ml 5% Ammonium Hydroxide • Measuring vials • 250ml 5% Ammonium Oxalate • pH Papers	1 kit
24163	Poly-NoCal & Fixative	1 liter
24164	Poly-NoCal Decalcifying Solution*	1 liter

To Order:

In The U.S. Call: 1-800-523-2575 • 215-343-6484
In The U.S. FAX: 1-800-343-3291 • 215-343-0214

In Germany Call: (49) 6221-765767
In Germany FAX: (49) 6221-764620

Comments:

For use with less than 15% organic acid decalcifiers such as **Poly-NoCal and Poly-NoCal & Fixative**. While actual use conditions may vary, each kit typically performs up to 200 tests.*For more information about Poly-NoCal Decalcifying Solutions request Data Sheet # 523

Reference:

- Clayden EC; J. Med. Lab. Tech., **10**(3):103-123, 1952.
- Callis G, Sterchi D; J. Histotechnology, **21**(1):49-58, 1998.
- Sheehan DC, Hrapchak BB; *Theory and Practice of Histotechnology*, 2nd ed. Mosby, St. Louis, 1980, pp 90-92.
- Luna, LG; *Histopathologic Methods and Color Atlas of Special Stains and Tissue Artifacts*, 1st Edition, Johnson Printers, Maryland, 1992.
- Villanueva AR; J. Histotechnology, **9**(3):155-61, 1986.