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TECHNICAL DATA SHEET 524

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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:

- 1. Using the measuring vials in the kit, add a fragment of litmus paper.
- Pippette 2 ml of decalcifying solution from the bottom of the specimen bottle, avoiding bone particles. The litmus paper will be red at this time.
- Pippette 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
- 4. Now add 1 ml of 5% ammonium oxalate.

Ordering Information:

Cat.# 24119	Description Poly-NoCal Endpoint Determination Kit Contents of Kit: • 500ml 5% Ammonium Hydroxide • Measuring vials • 250ml 5% Ammonium Oxalate • pH Papers		Size 1 kit
24163	Poly-I	NoCal & Fixative	1 liter
24164	Poly-I	NoCal Decalcifying Solution*	1 liter
To Order: In The U.S. Call: In The U.S. FAX:		1-800-523-2575 • 215-343-6484 1-800-343-3291 • 215-343-0214	
In Germany Call: In Germany FAX:		(49) 6221-765767 (49) 6221-764620	

- 5. 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.
- 7. 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.

Comments:

Size	For use with less than 15% organic acid decalcifiers such as			
1 kit	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:			
	1. Clayden EC; J. Med. Lab. Tech., 10 (3):103-123, 1952.			
1 liter	 Callis G, Sterchi D; J. Histotechnology, 21(1):49-58, 1998. 			
	3. Sheehan DC, HHrapchak BB; Theory and Practice of			
1 litor	Histotechnology 2nd ed Moshy St. Louis 1980			

Histotechnology, 2nd ed. Mosby, St. Louis, 1980, pp 90-92. Luna, LG; *Histopathologic Methods and Color Atlas of*

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.

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