



## R.B.D. PLATINUM RAPID BONE DECALCIFER INSTRUCTIONS

Item# DCR0157

(Revised 03/08/18)

*R.B.D. Platinum* is a rapid, easily controllable bone decalcifier. The acid component of *R.B.D. PLATINUM* reacts with calcium in mineralized tissues to form soluble calcium salts. The milder action of *R.B.D. PLATINUM* allows gentle decalcification, with tissue sections having superb histological detail. *R.B.D. Platinum* can be used on all types of bone.

### **DIRECTIONS**

1. Tissues should be thoroughly fixed before decalcification. Most standard fixatives can be used prior to *R.B.D. Platinum* use. To insure adequate fixation and decalcification, specimens should be trimmed to less than 1 cm thickness. **DO NOT COMBINE FORMALIN FIXATIVES AND R.B.D. PLATINUM DECALCIFER.**
2. Do not use metallic equipment or tissue cassettes for decalcification. *R.B.D. PLATINUM* corrodes most metals after long periods of exposure. Decalcified tissue may be placed in metallic equipment after washing.
3. **DO NOT OVER DECALCIFER.** Because *R.B.D. PLATINUM* action is rapid, DO NOT leave specimen in *R.B.D. PLATINUM* longer than necessary. **MOST SPECIMENS CAN BE DECALCIFED IN TWO HOURS OR LESS.** Be sure to use a sufficient volume of *R.B.D. PLATINUM*; a minimum 20:1 ratio of *R.B.D. PLATINUM* to tissue is strongly recommended. Tissue size and density are the key determinates affecting the time required for complete decalcification. Most mature bones of 1 cm size are decalcified in 2 to 8 hours; smaller cancellous bone in 1 to 2 hours. Bone biopsies are decalcified in 2 to 4 hours. Teeth and entire femur heads may require overnight treatment. If *R.B.D. PLATINUM* action is too rapid, it can be diluted with distilled water. Determine the end point of decalcification using standard methods (e.g. flexibility, chemical analysis, or X-ray). Frequent mild agitation of larger specimens will reduce treatment time; all tissues should be checked periodically to verify complete decalcification.
4. Proceed with routine processing and embedding. Washing tissue prior to processing is optional.
5. Excess time in *R.B.D. PLATINUM* can result in poor hematoxylin staining. If this occurs, satisfactory results can be obtained by treating deparaffinized slides prior to hematoxylin staining with aqueous saturated lithium carbonate (1-2 minutes) or 10% aqueous sodium bicarbonate (6-8 hours). Poor histological detail and excessive artifact formation (swelling, fragmentation) can also occur from over-decalcification. *R.B.D. PLATINUM* does not remove hemosiderin.

### **STORAGE AND DISPOSAL**

1. Store at room temperature and keep container closed when not in use. Store only in a glass or plastic container. Do not use metal containers; *R.B.D. PLATINUM* will irreversibly corrode aluminum, nickel and some stainless steel.
2. After long periods of storage, a color change and increased amount of the suspended precipitate may occur. These are normal occurrences and do not affect the decalcifying potential of *R.B.D. PLATINUM*. The precipitate may be allowed to settle or removed by filtration; however, neither action is necessary.
3. *R.B.D. PLATINUM* is biodegradable as received and may be disposed into most city sanitary sewer systems when followed by a thorough water flush. Dispose *R.B.D. PLATINUM* according to federal, state and local regulations. Care should be taken to protect the finish of chrome plated plumbing fixtures.

### **PRECAUTIONS**

Material as a whole should not be considered hazardous under normal conditions of use. However, as with any laboratory reagent, avoid extensive or repeated skin contact. Avoid contact with eyes. Wash all skin contacted areas with mild soap and plenty of water. If swallowed, contact a physician immediately!

### **A CHEMICAL TEST TO DETERMINE THE END POINT OF DECALCIFICATION**

1. Pipette 5ml of *R.B.D. PLATINUM* from the bottom of the decalcification container; avoid aspirating particulate matter!
2. Add the *R.B.D. PLATINUM* to a glass test tube or flask, then add 5ml of 5% Ammonium Oxalate.
3. Next add 5ml of 5% Ammonium Hydroxide.
4. Let mixture stand for 15 minutes.
5. If the test solution is clear, decalcification is complete and the *R.B.D. PLATINUM* is still usable. If solution is cloudy and/or contains precipitant, the solution is exhausted and decalcification is not complete. Change the complete volume of *R.B.D. PLATINUM* and continue decalcifying. Check for decalcification end point frequently.

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