

REYNOLDS LEAD CITRATE

LEAD NITRATE (PbNO_3)₂ - 1.33 gm (EMS, CAT# 17900, 100 gm.)

SODIUM CITRATE ($\text{Na}_3\text{C}_6\text{H}_5\text{O}_7 \cdot 2\text{H}_2\text{O}$) - 1.76 gm (EMS, CAT# 21140, 500 gm.)

1. Prior to making the stain, a volume of approximately 100 ml distilled water should be boiled in a microwave oven in order to degas the water. the water should be allowed to cool in an airtight container until it reaches room temperature. degassing may also be accomplished by putting the water under vacuum in an erlenmeyer flask overnight. this procedure is done to avoid any carbonate in the solution which, in combination with lead, could precipitate lead carbonate and contaminate the specimen. a solution of freshly made carbonate-free sodium hydroxide should also be used in preparing the lead citrate.

2. all glassware or plastic used in making and storing the solution should be previously acid washed in 5% contrad.

3. ADD THE ABOVE CHEMICALS TO 30 ML OF THE BOILED WATER FROM STEP 1 AND SHAKE VIGOROUSLY FOR 1 MINUTE. THEN SHAKE INTERMITTENTLY FOR 30 MINUTES. THE SOLUTION SHOULD APPEAR CLOUDY.

4. ADD **8 ml 1N SODIUM HYDROXIDE**

(2 gm/50ml DH_2O) AND INVERT SLOWLY. THE SOLUTION SHOULD NOW APPEAR CLEAR.

5. Q.S. TO 50 ml WITH DEIONIZED WATER AND INVERT SLOWLY.

6. STORE FOR ABOUT 1 MONTH IN A BROWN PLASTIC BOTTLE. (IF APPARENT PRECIPITATE DEVELOPS, SUCH AS A CLOUDY SOLUTION, DISCARD AND MAKE NEW STAIN.