

BJP Operating Procedure

1. Prefilter samples through Whatman No. 1 filter paper or equivalent (*OPTIONAL*)
2. For individual units, insert unit into stand (BJP-5/40 and 10/40 units are self-standing).
3. Determine approximate sample macrosolute content (for electrophoresis or immunofixation, protein concentration should be approximately 25mg/mL)
4. Use a thin plastic pipette or syringe to introduce sample through opening at the top of cell. Avoid scratching the membrane. **Note** 5 and 10 mL fill lines on the **BJP 10** units. BJP 5 unit holds a maximum of 5 mL. For more than 10mL , use BJP 20 unit.
 - a. For **BJP 20 units** - **Sample capacity can be increased to 20 mL** by use of the ancillary reservoir. First pipette 10 mL into the BJP 20 unit, then lock the reservoir to the top opening and add up to an additional 10 mL of sample.
5. Allow sample to filter through membrane and into the absorbent pad. Sample volume will steadily decrease as macrosolute concentration progresses.
6. Use the middle meniscus to determine concentration level.
7. After you have achieved desired concentration, carefully insert a pipette or syringe into the cell bottom and draw the sample out. The sample is now ready for analysis.

(See concentration charts on reverse side)

(over) 

OPERATING TIPS:

Speed of filtration is affected by temperature, pH and protein concentration.

Filtration speed will increase proportionally to ambient temperature. For faster concentration, place the concentrator near a source of heat.

An acid sample with a pH of less than 5 will take longer to concentrate than a neutral sample (best at 6.5 to 8.5). Adjustment to a physiological pH will result in faster concentration.

Suspended particles will tend to foul the filter element. Prefiltration will clarify the sample and result in faster filtration and improved analytical results.

Initial protein concentration levels will affect concentration speed. Highly dilute samples will concentrate rapidly. Once protein concentration exceeds 2%, speed of filtration will rapidly decrease.

Concentration Factors, BJP units

BJP 10 unit

Starting Volume	Graduation Mark					
	5X	10X	25X	50X	100X	200X*
10 mL	5X	10X	25X	50X	100X	200X
5 mL	2.5X	5X	12.5X	25X	50X	100X
2.5 mL	1.3X	2.5X	6.3X	12.5X	25X	50X
2 mL	--	2X	5X	10X	20X	40X
1.5 mL	--	1.5X	3.8X	7.5X	15X	30X
1 mL	--	--	2.5X	5X	10X	20X

Example: A starting volume of 5 mL of urine concentrates to the 50X graduation mark. This represents a concentration factor of 25X. The liquid volume at this level is 0.2 mL (or 200 ul) (Calculation: 5 mL / 25 = 0.2 mL).

BJP 5 unit

Starting Volume	Graduation Mark				
	5X	10X	25X	50X	100X
5 mL	5X	10X	25X	50X	100X
4 mL	4X	8X	20X	40X	80X
3 mL	3X	6X	15X	30X	60X
2.5 mL	2.5X	5X	12.5X	25X	50X
2 mL	2X	4X	10X	20X	40X
1.5 mL	1.5X	3X	7.5X	15X	30X
1 mL	--	2X	5X	10X	20X

Example: A starting volume of 2 mL of spinal fluid at the 100X graduation mark represents a 40X concentration factor. The liquid volume would be .05 mL (or 50 ul) -- (calculation: 2mL / 40 = 0.05 mL)

BJP 20 unit

Starting Volume	Graduation Mark					
	5X	10X	25X	50X	100X	200X*
	2000ul	1000ul	400ul	200ul	100ul	50 ul
20 mL	10X	20X	50X	100X	200X	400X
15 mL	7.5X	15X	37.5X	75X	150X	300X
10 mL	5X	10X	25X	50X	100X	200X
5 mL	2.5X	5X	12.5X	25X	50X	100X
2 mL	1X	2X	5X	10X	20X	40X

Example: A starting volume of 10 mL of urine concentrates to the 50X graduation mark. This represents a concentration factor of 50X. The liquid volume at this level is .2 mL (or 200 ul) (Calculation: 10 mL / 50 = .2 mL).

IF YOU HAVE QUESTIONS, PLEASE CALL 1-800-456-4633