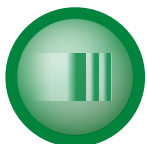


# BENCE-JONES PROTEINS CONCENTRATION

APACOR

Uricon<sup>®</sup>  
PROTEIN CONCENTRATOR



# ELECTROPHORESIS

SINGLE USE IN VITRO DIAGNOSTIC DEVICE

## Health and Safety Benefits

- Single, re-sealable cell
- Exceptionally easy to use, just add sample
- Unique closure luer lock lid reduces possibility of contamination, unpleasant odours or spillage
- Stable construction - disposable device
- No cross contamination single cell device
- No refilling necessary to achieve a 300x concentration

## Performance Benefits

- Maximum 15ml capacity
- Fixed deadstop (50µl) prevents the inadvertent drying out of sample
- Ultra low protein binding membrane allows rapid, proportionate concentration of antibody chains
- Highly hydrophilic membrane surface allows excellent product recovery even with low molecular weight proteins.
- 5ml urine concentration in under 40 minutes

## Product Description

The Uricon® concentrator provides a reliable method for the rapid concentration of proteins from clinical samples such as serum and urine. It is of particular interest to hospital laboratories carrying out routine enrichment of body fluids prior to electrophoresis.

Samples are introduced into an isolated chamber within the concentrator where one inner surface is a membrane of selective permeability, backed by a pressure resistant absorbent pad and gel. The gel removes water and low molecular weight molecules from the sample solution by absorption so that the retained components of the sample are progressively concentrated. A suitable concentration of the sample is eventually reached for analysis, for example electrophoresis.

## Applications

- Concentration of clinical samples, (eg: serum, cerebrospinal fluid, urine) prior to electrophoresis / immunofixation.
- Routine enrichment of urine specimens prior to immunofixation for the detection of Bence-Jones proteins
- Concentration of research samples.
- Desalting by repetitive dilution & concentration.

## Performance

A 5ml sample of urine would be expected to concentrate 100x to 50µl in less than 40 minutes.

## Calculating Concentration Factors

The device is graduated with fill volumes (v) from 10ml to 0.5ml. The device is also marked with concentration graduations (g) for initial fill volumes of 5ml and 10ml.

Where a different fill volume (v) is used, the concentration factor (Cf) is equal to the achieved concentration graduation (g) (on right side) where:  
 $Cf = gv/10$

## Recovery of Dry Samples

The Uricon® concentrator has an impermeable dead stop at the base of the unit which will prevent the sample from completely drying out. However if the sample is left too long in the concentrator the remaining solvent will evaporate and the sample will go to dryness. Should this occur, proteins can be returned to solution by pipetting approximately 100µl of buffered saline or the original unconcentrated urine in and out of the dead stop region several times.

## Storage and Disposal

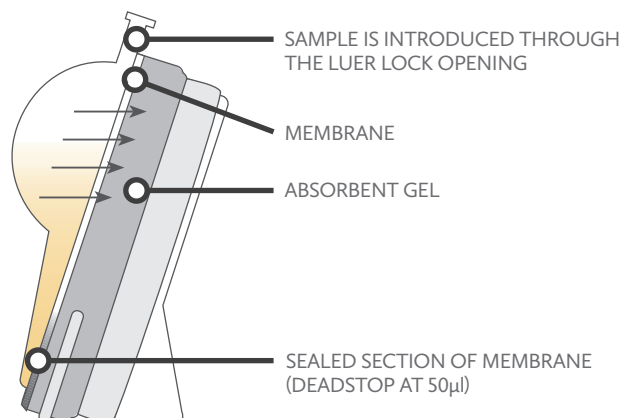
If the sample is to be retained, seal and keep refrigerated at +4°C. Use within 5 days. Discard if fungal growth is observed. Autoclave contaminated units prior to disposal or incinerate.

## Bence-Jones Proteins Concentration

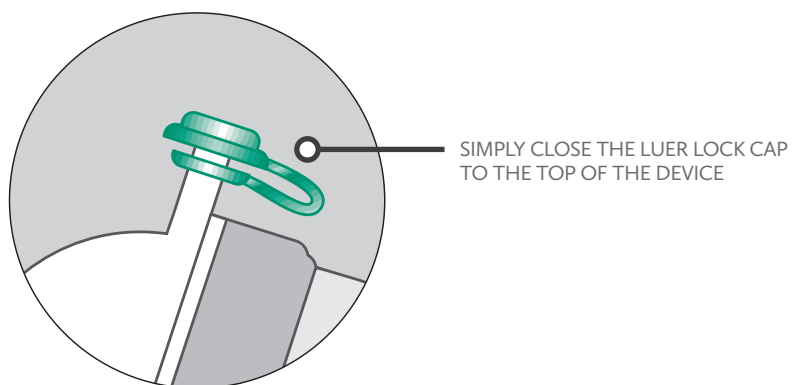
According to the literature (Damaccol Waldestrom et.al) a pathological level of protein is 0.6mg/ml. Using the advance Uricon® device recovery and observation of concentrations as low as 0.001mg/ml of Bence-Jones proteins have been obtained. This enables early diagnosis of the disease and appropriate treatment may be employed sooner than before.

## STEP 1 - SAMPLE PREPARATION

Remove single cell from box and packaging. Introduce the required volume of sample through the top of the cell with a pasteur pipette.



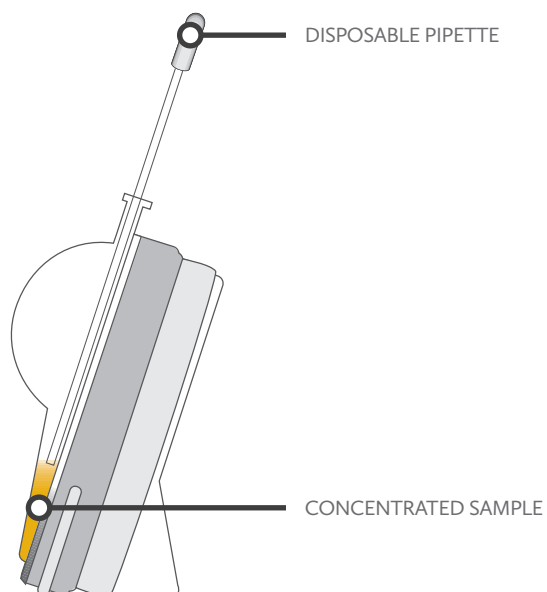
## STEP 2 - UNIT CLOSURE



## STEP 3 - CONCENTRATE RECOVERY

Concentration will proceed unattended. When the desired concentration level is reached open cap and withdraw sample using pipette provided.

For sample volumes less than 10ml, the graduations are interpreted as shown on the face of the device. Mixing the sample by drawing in and out of the pipette several times improves recovery.



## Ordering Information

URICON® PROTEIN CONCENTRATOR	PACK SIZE	CODE
Uricon® Protein Concentrators	25 x Uricon® Individual Test Units and 25 x 200µl recovery pipettes	1259

### SPECIFICATIONS

Membrane molecular weight cut-off	7500 Daltons
Maximum capacity	15ml
Maximum concentration factor	300x
Deadstop (minimum recovery)	50µl
Size (w x d x h)	44 x 54 x 87 (mm)
Pipette volume	200µl
Tests per unit	One
Normal use	5ml, 100x

**Products can be ordered direct from Apacor or from an appointed distributor**

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