

Urine Osmolality

Synonyms

Clinical Indication

Assessment of fluid and electrolyte balance. Osmolality measures the concentration of particles in solution. Osmolality (particles/Kg water) and osmolarity (particles/litre of solution) are sometimes confused, but for dilute fluids such as urine, they are essentially the same.

Urine osmolality is a useful in the investigation of polyuria. Primary polydipsia can cause a low urine osmolality and should be considered as a cause particularly in psychiatric patients. Primary polydipsia will be associated with a dilutional hyponatraemia. With primary polydipsia urine may remain dilute even with fluid restriction but serum osmolality is often low or low to normal. A prolonged water deprivation test may be required

Osmolality is a more exact measure of urine concentration than (dipstick) specific gravity and does not require correction for the presence of glucose or protein.

Part of Profile / See Also

Measured as part of a urine deprivation test.

Request Form

Combined Pathology manual form or ICE request

Availability / Frequency of Analysis

On request. When a water deprivation test is performed please contact the duty biochemist in advance to make appropriate arrangements.

Turnaround Time

On request.

Patient Preparation

No specific patient preparation required.

Sample Requirements

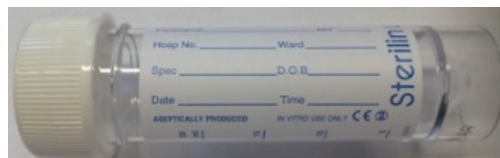
Specimen Type

Urine. **For investigation of some conditions (e.g. Diabetes Insipidus and SIADH), paired urine and serum osmolality samples are required.**

Volume

2.0 ml

Container



White Capped Universal

Reference Range & Units

Please see Clinical Interpretation below

Interferences

Interpretation & Clinical

Decision Value (if applicable)

A urine osmolality greater than 750 mOsmol/Kg excludes DI as a cause of polyuria (in classic DI serum osmolality increases to greater than 300 and urine osmolality remains less than 350 mOsmol/Kg). However, a low urine osmolality is NOT diagnostic of DI.

References

Test code

UOSM

Lab Handling

Centrifuge sample prior to analysis.
Analysed from primary sample and stored at 4°C
Urine stable for 7 days at 4°C.
Urine stable for 3 hours at 15-25°C.
Sample should be refrigerated if analysis is delayed.