**Delta**  
Delta anion gap—delta $\Delta$HCO$_3^-$  
- The difference between the rise in AG and the fall in bicarbonate

**Lactate**  
Bedside lactate (lactate oxidase method) – laboratory lactate (lactate dehydrogenase method)

**Oxygen saturation**  
Spo$_2$ (pulse oximetry) — co-oximetry SaO$_2$

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**Anion**  
$\text{Na}^+ - (\text{HCO}_3^- + \text{Cl}^-)$  
Normal range: 6–15 mmol/L

- Assists the clarification of the aetiology of metabolic acidosis—increased versus non-anion gap (see causes of metabolic acidosis)
- A reduced anion gap may be seen with:  
  - hypermagnesaemia  
  - hypercalcaemia  
  - lithium toxicity  
  - excess immunoglobulins (multiple myeloma, Intragram infusion)  
  - hypoalbuminaemia

**Anion gap (AG) corrected for hypoalbuminaemia**  
$AG_{L} = AG + 0.25 \times (44 - \text{observed albumin in g/L})$

- More accurate estimate of AG in patients with low albumin—most critically ill patients

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**Osmolar**  
Measured osmolality* — calculated osmolality*

- Calculated osmolality$^*$  
  $= 2(\text{Na} + \text{K}) + \text{urea}^* + \text{glucose}^*$

- Normal: <10 mmol/L
- Measured osmolality is calculated via the depression in the freezing point of sample

- Increased osmolar gap seen with:  
  - alcohols  
  - mannitol  
  - glycerine (e.g. TURP syndrome)  
  - radiocontrast media  
  - sorbitol  
  - maltose (e.g. Intragram—immunoglobulin)