

Osmoregulator:

Saltwater fish

- Hypo-osmotic
- The fish will lose water by osmosis
- It gains water and salt with food and by drinking.
- It removes this excess salt by excretion of salts from
 - The gills
 - The kidneys (excrete small amounts of iso-osmotic urine)

Freshwater fish

- Hyper-osmotic
- The fish will gain water by osmosis (and with food)
- It removes excess water by excretion of large amounts of dilute (hypo-osmotic) urine from the kidneys
- But also loses salts with that water.
- Uptake of salts in food and active uptake by the gills

Refer to figure 44.4 on page 1005 in text book