



SNS COLLEGE OF TECHNOLOGY

Vazhiampalayam, Coimbatore-35

(An Autonomous institution)

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Approved by **AICTE**, New Delhi & Affiliated to **Anna University**, Chennai

DEPARTMENT OF CHEMISTRY

COURSE NAME : 19CHB101- CHEMISTRY FOR ENGINEERS

I YEAR / I SEMESTER

UNIT : 4. WATER AND INSTRUMENTAL ANALYSIS

TOPIC : 4.REVERSE OSMOSIS



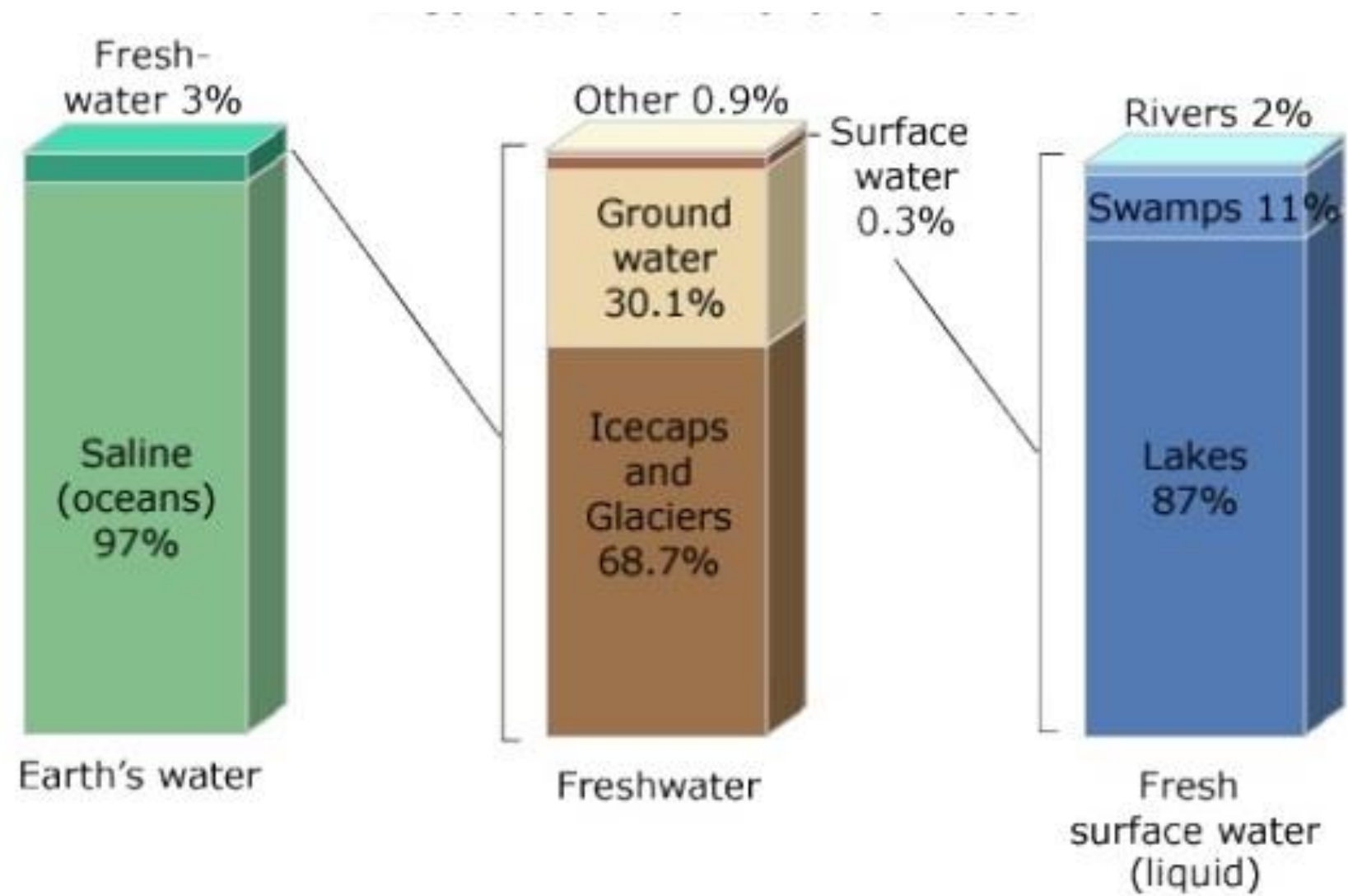


WHAT DO YOU INFER FROM THIS PICTURE





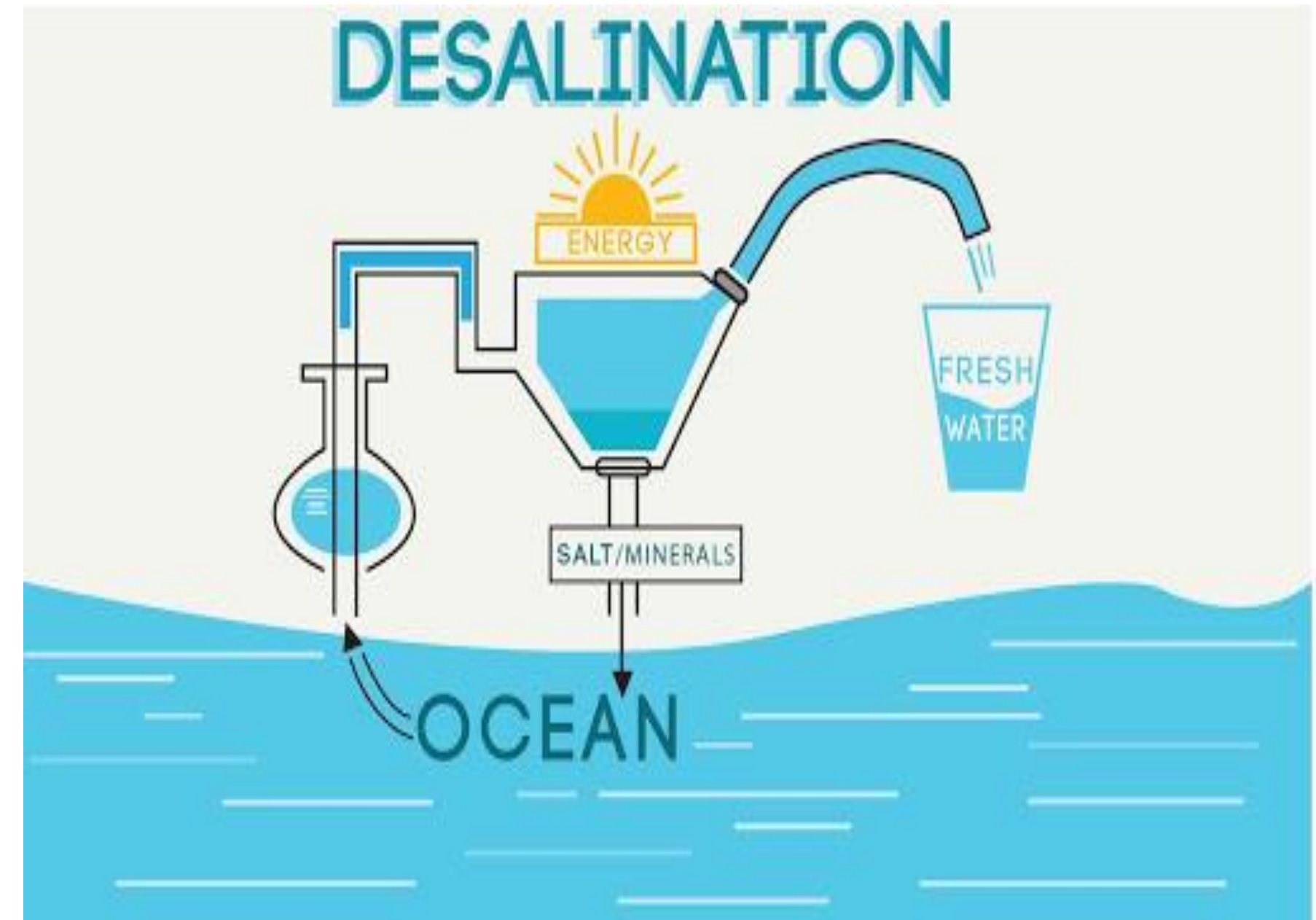
WHY DESALINATION?





DESALINATION

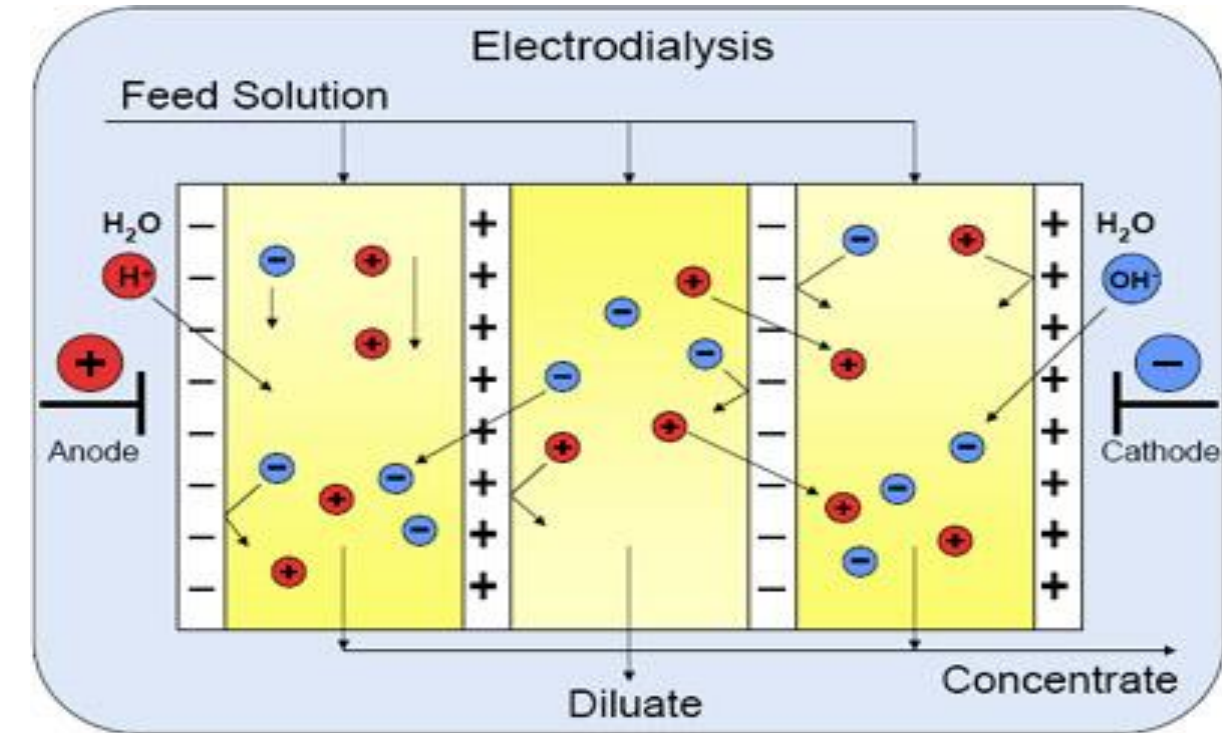
Removal of salt from water is called
Desalination



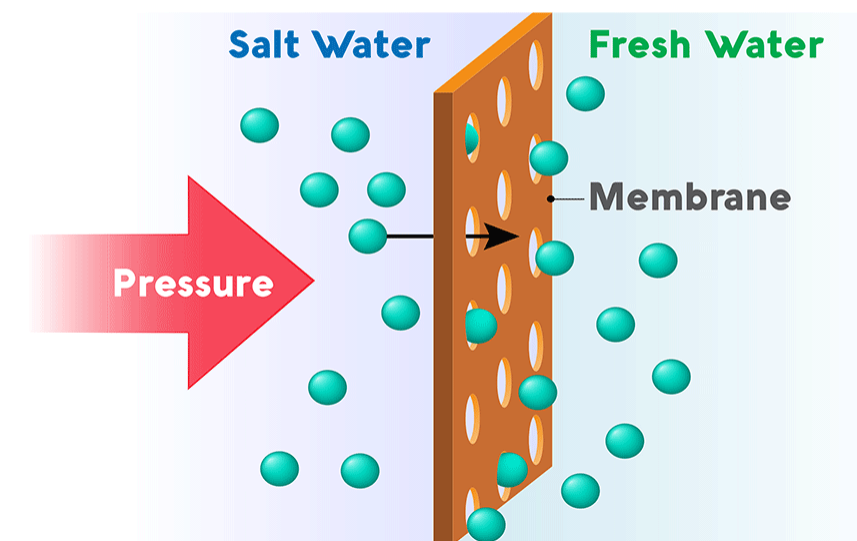


DESALINATION METHODS

- Electro dialysis
- Reverse osmosis



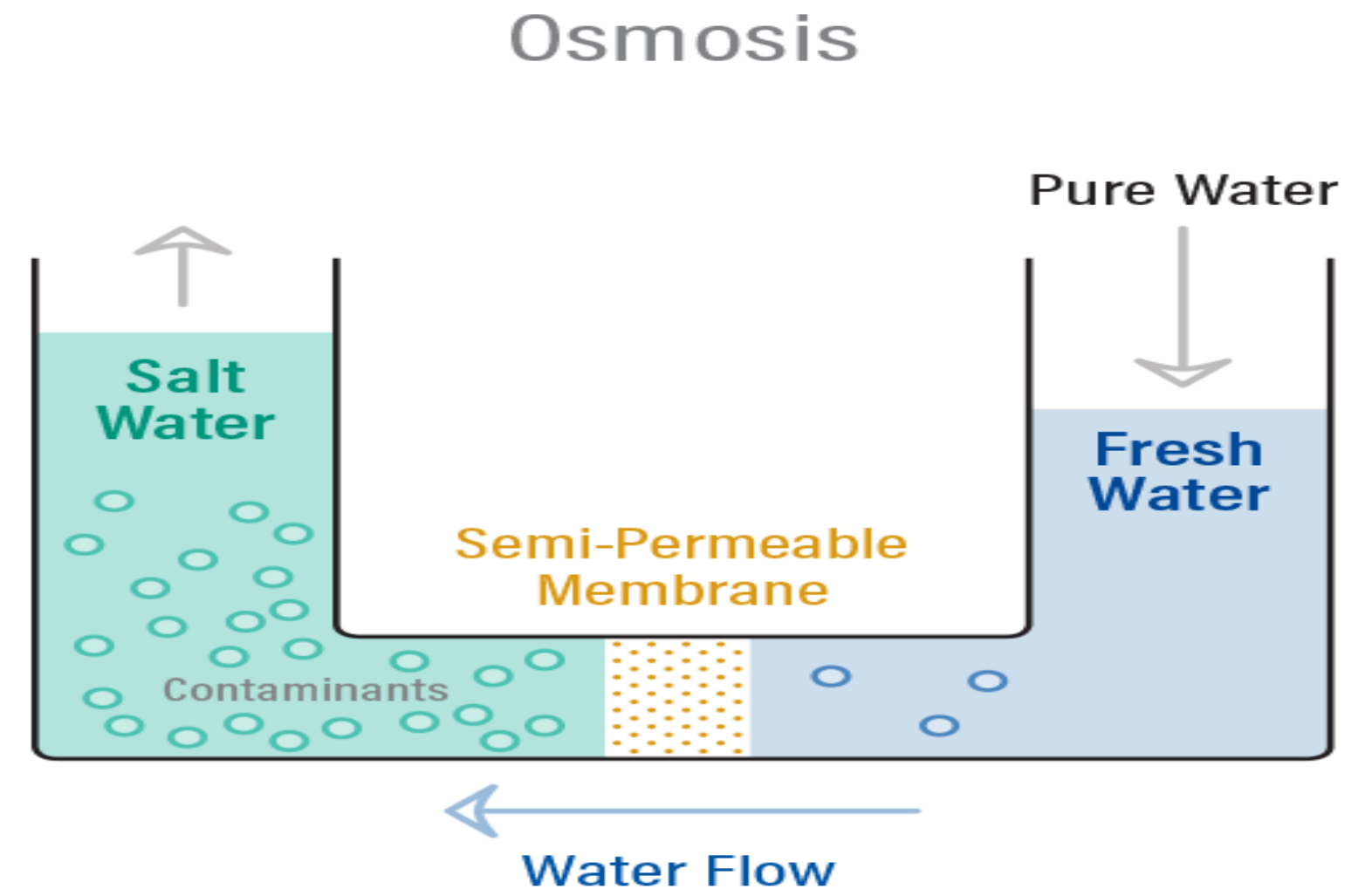
Reverse Osmosis





OSMOSIS

- When two solutions of unequal concentrations are separated by a membrane
- Flow of solvents takes place from low concentration side to higher concentration side.





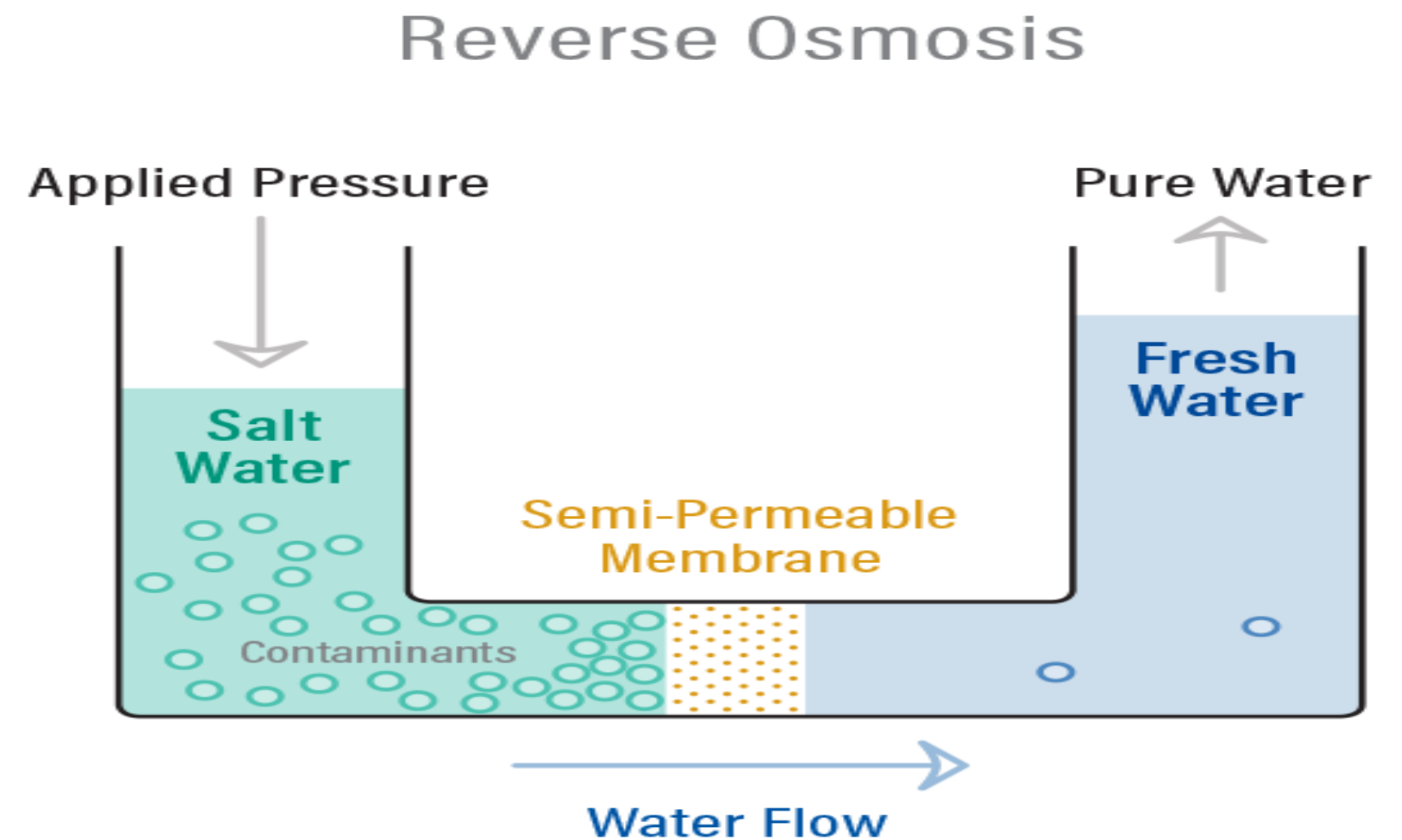
ACTIVITY





REVERSE OSMOSIS

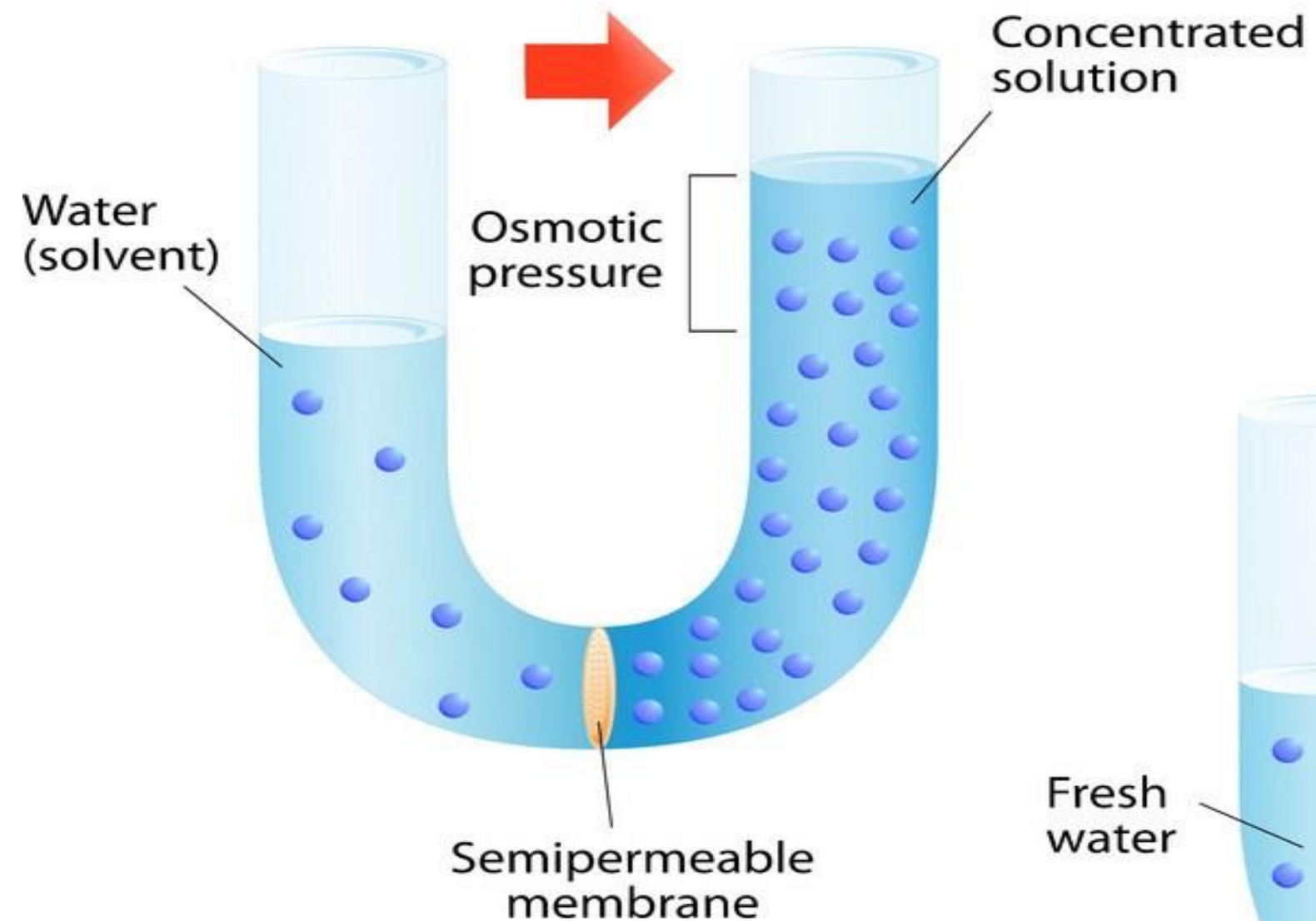
- Hydrostatic pressure applied on the higher concentrated side
- The solvent flow reverses from higher concentration side to lower concentration side



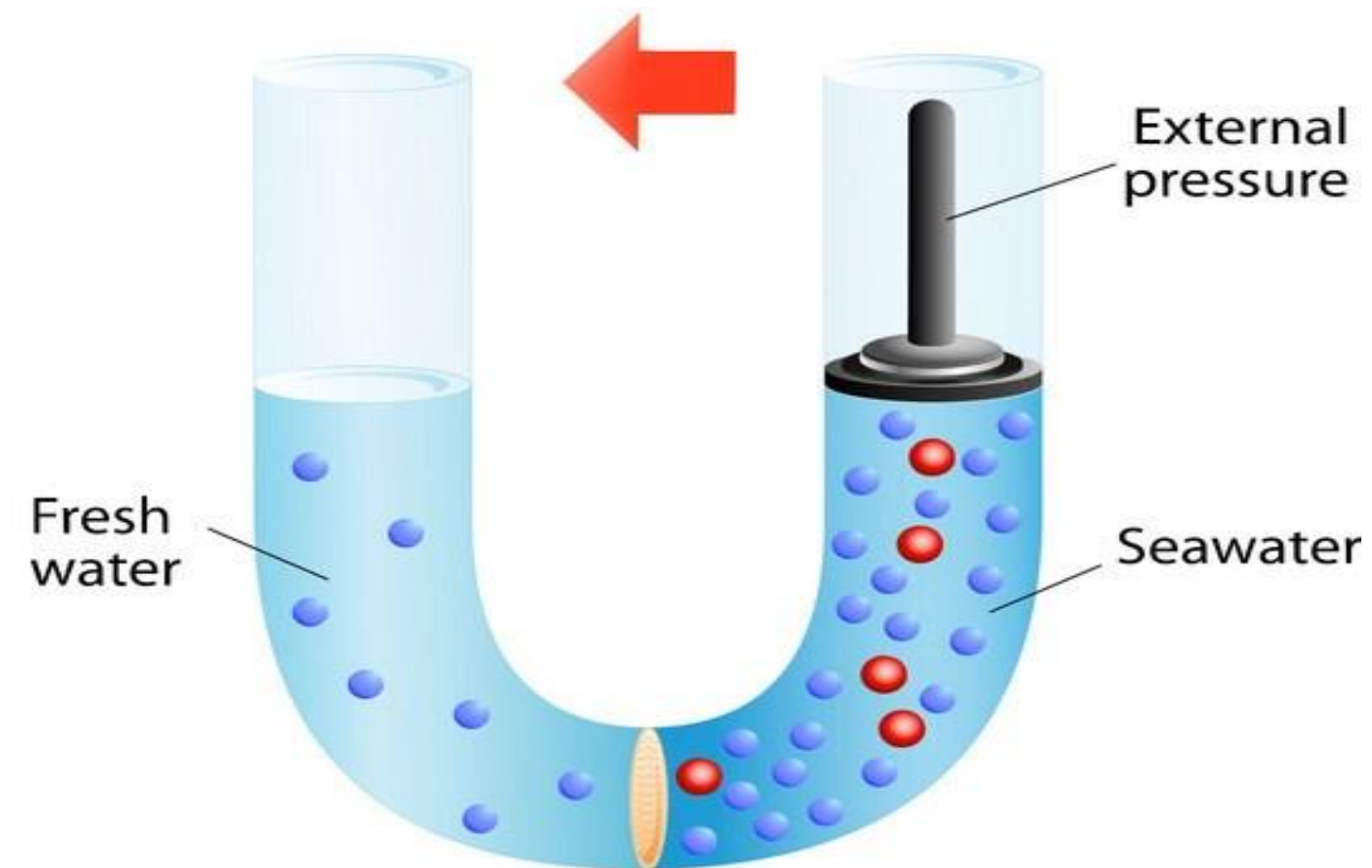


OSMOSIS AND REVERSE OSMOSIS

Osmosis



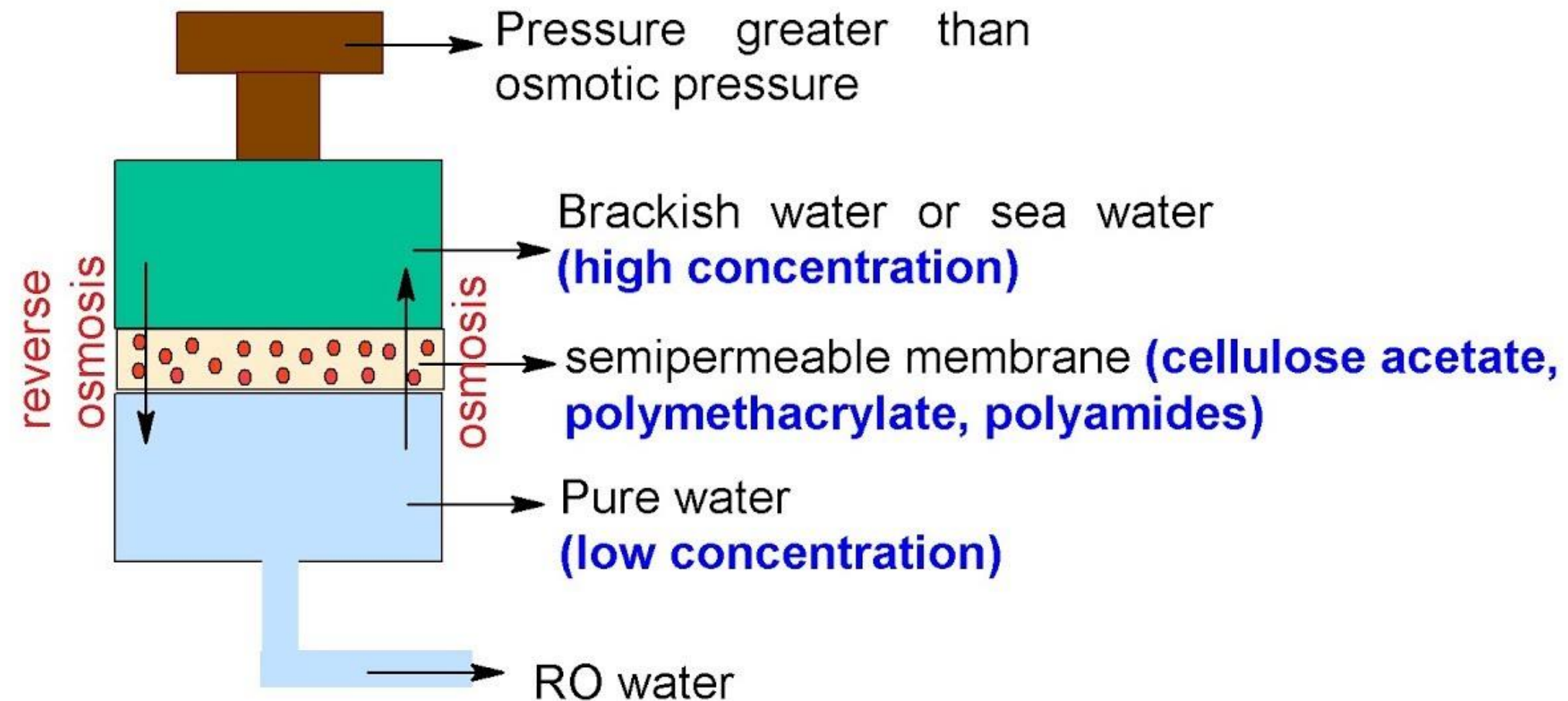
Reverse osmosis





REVERSE OSMOSIS - PROCESS

REVERSE OSMOSIS PROCESS





MERITS OF REVERSE OSMOSIS

- Removal of dissolved salts
- Energy saving technique
- Utilizable as a concentration and recovery method.
- Compact equipment
- Simple operation and control



ASSESSMENT

- With a neat diagram explain the reverse osmosis process



SUMMARY



REFERENCES



1. O.G. Palanna, “Engineering Chemistry ”Tata McGraw-Hill Pub. Co. Ltd, New Delhi.2017.
2. Wiley, “Engineering Chemistry”, John Wiley & Sons. InC, USA.
3. P.C.Jain & Monicka Jain, “Engineering Chemistry” , Dhanapat Rai Publising Company Pvt. Ltd. 2017.

THANK YOU