

Supplementary Material:

<i>Symbol</i>	<i>Meaning</i>
LRM	Low -Resistance Membrane
HRM	High Resistance Membrane
RO	Reverse Osmosis
MED	Multi-effect desalination
TDS	Total Dissolved Solid
ED	Electrodialysis
ZID	Zero-Liquid Discharge
EDR	Electrodialysis reversal
I_d	Current Density
Q	Flow Rate
LSI	Langier Saturation Index
DR	Desalination Rate
R	Ion Removal Rate
P_b^a	Perm-Selectivity of (a / b)
WRR	Water Retention Rate
CE	Current Efficiency
E	Stack Electrical Energy Consumption
P	Purity of Salt
AEM	Anode Exchange Membrane
CEM	Cation Exchange Membrane

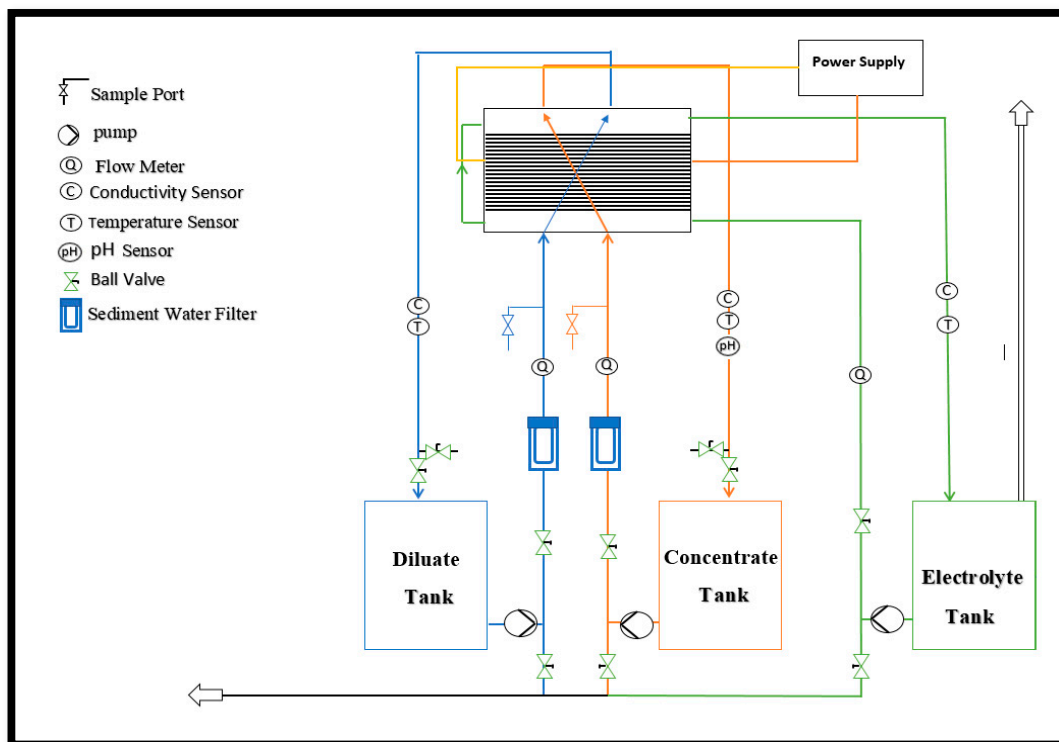
Supplementary Table S1: Glossary of all terms used in the study.

Sl.No.	Operating conditions	Salt recovered (%)	Purity of salt (%)	Sulphate (mg/Kg)	Magnesium (mg/Kg)	Sodium (mg/Kg)	Chloride (mg/Kg)	Potassium (mg/Kg)
A	300A/m ² -400L/h	97.81	89.58	2440	2008	409140	571150	8590
B	400A/m ² -400L/h	97.10	66.44	2950	1998	227340	599000	9090
C	500A/m ² -400L/h	97.10	90.58	1390	2008	404320	552330	13820
D	300A/m ² -450L/h	93.18	90.14	1310	2006	407150	564450	19250
E	400A/m ² -450L/h	96.26	86.18	2820	2004	406970	499490	9830
F	500A/m ² -450L/h	95.38	75.97	1050	2008	389200	551610	11390

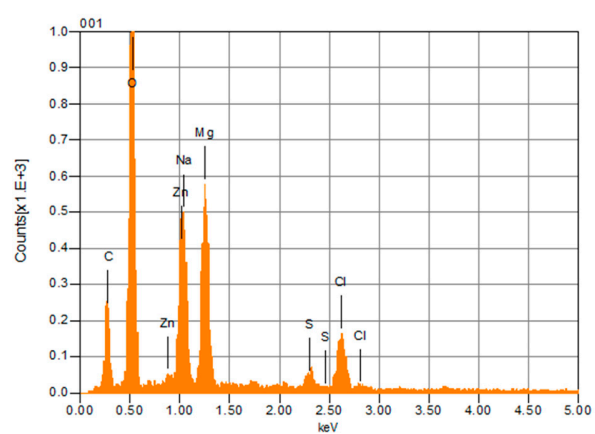
Supplementary Table S2: Salt Purity Values



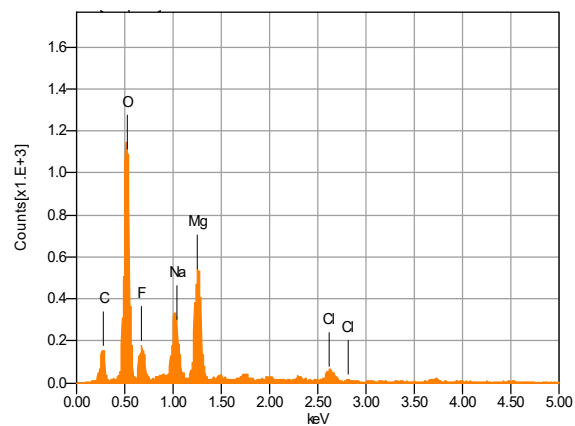
Supplementary Material Figure S1 . Salts recovered from various operating conditions.



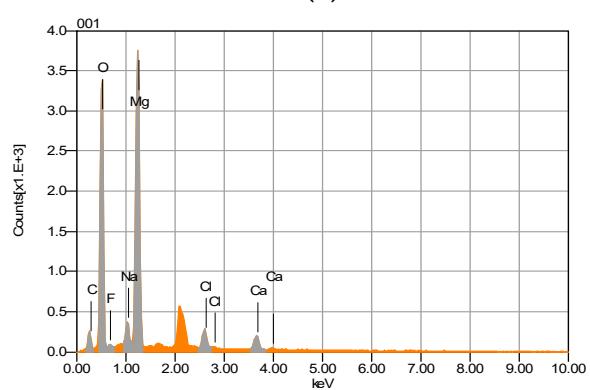
Supplementary Material Figure S2: ED Configuration



(a)



(b)



(c)

Supplementary Material Figure S3: SEM images (a) Neutral Cell, (b) CEM in LRM , (c) CEM in HRM