

## Development of a PTFE Membrane with Photo-Thermal Activated Carbon Nanomaterials for Improved Solar-Driven Membrane Distillation

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**Table (1): Represent Salts from a saline synthetic Solution.**

Salt	Weight(gm)
NaCl	24
Na <sub>2</sub> So <sub>4</sub>	4
NaHSO <sub>4</sub>	0.172
MgCl <sub>2</sub> .6H <sub>2</sub> O	7.1
KCl	0.7
CaCl <sub>2</sub>	1.14

**Table (2): percentages of the constituent elements of AC**

Weight %

	C	N	O	Al	Si	Cl	Ca	Fe
ACTIVATED CARBON_pt1	28.9	2.8	40.6	11.6	13.9	0.2	0.4	1.7
ACTIVATED CARBON_pt2	36.4	7.3	39.6	4.0	12.2			0.5
ACTIVATED CARBON_pt3	43.3	15.8	32.3	2.8	4.3			1.6

Atom %

	C	N	O	Al	Si	Cl	Ca	Fe
ACTIVATED CARBON_pt1	39.3	3.2	41.6	7.0	8.1	0.1	0.2	0.5
ACTIVATED CARBON_pt2	45.8	7.9	37.4	2.2	6.5			0.1
ACTIVATED CARBON_pt3	51.3	16.0	28.7	1.5	2.2			0.4



Fig.S1 Real form of the device ,and the used Cell with quartz window.