



Supplementary Materials

Evaluating Critical Influencing Factors of Desalination by Membrane Distillation Process–Using Multi-Criteria Decision Making

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Linguistic scale Numeric Value **Reciprocal Numeric value** Equally preferred 1 1 3 1/3 Moderately preferred 5 Essentially preferred 1/5 7 1/7Very preferred 9 1/9 Extremely preferred Intermediate importance between two adjacent 2, 4, 6, 8 1/2, 1/4, 1/6, 1/8 judgments

Table S1: Crisp numeric value of Saaty's nine-point scale [19].

Fuzzified linguistic scale	Triangular fuzzified nu-	Reciprocal of triangular fuzzi-
	meric values	fied Numeric value
Equally preferred	(1,1,1)	$\left(\frac{1}{1},\frac{1}{1},\frac{1}{1}\right)$
Moderately preferred	(2,3,4)	$\left(\frac{1}{4},\frac{1}{3},\frac{1}{2}\right)$
Essentially preferred	(4,5,6)	$\left(\frac{1}{6},\frac{1}{5},\frac{1}{4}\right)$
Very preferred	(6,7,8)	$\left(\frac{1}{8},\frac{1}{7},\frac{1}{6}\right)$
Extremely preferred	(9,9,9)	$\left(\frac{1}{9},\frac{1}{9},\frac{1}{9}\right)$
Intermediate importance between two adjacent judgments	(1,2,3), (3,4,5), (5,6,7), (7,8,9)	$\left(\frac{1}{3}, \frac{1}{2}, \frac{1}{1}\right), \left(\frac{1}{5}, \frac{1}{4}, \frac{1}{3}\right),$
		$\left(\frac{1}{7}, \frac{1}{6}, \frac{1}{5}\right), \left(\frac{1}{9}, \frac{1}{8}, \frac{1}{7}\right)$

Table S2: Triangular fuzzy scale for fuzzy analytic hierarchy process.



Figure S1: Fuzzy Triangular number (A).



Figure S2: Intersection of two fuzzy triangular numbers.