



TriSep Engineering Manual

TEMPERATURE CORRECTION FACTORS FOR TRISEP ELEMENTS

Permeate output of a membrane is partially temperature dependent. Other factors that may influence membrane permeate flow include driving pressure, osmotic pressure, differential pressure and pH. The dependency of a membrane on temperature will vary between membrane type and manufacturer. Below, are temperature correction factors for TriSep membranes to assist in estimating the effects of feedwater temperature on permeate flow rates by membrane type.

To project the estimated effects of temperature alone (all other factors constant) on permeate flow of TriSep reverse osmosis membranes, the following equation may be used. The reference temperature is 77°F (25°C).

$$TCF = e^{U(1/298 - 1/T)}$$

U = 2900 (ACM™, X-20™, XN40, and TS80 membranes)
 U=2800 (SB50 and SB20 (CA) membranes)
 T = °C + 273

Temperature		Temperature Correction Factor by Membrane Type	
Fahrenheit	Celsius	SB (CA)	ACM™, X-20™, XN40, and TS80
35	1.7	0.50	0.44
40	4.4	0.55	0.49
45	7.2	0.60	0.54
50	10.0	0.65	0.60
55	12.8	0.71	0.66
60	15.6	0.77	0.73
65	18.3	0.83	0.80
70	21.1	0.90	0.88
75	23.9	0.97	0.96
80	26.7	1.05	1.06
85	29.4	1.13	1.15
90	32.2	1.21	1.26
95	35.0	1.30	1.37