

Table 14.7 presents the predicted eutectic compositions and temperatures for the binary salt-water species found in the various streams obtained from the OLI Stream Analyzer. These are in good agreement with results from literature.

This table provides vital information for the evaluation of sequential EFC applications to selectively crystallize out different salts.

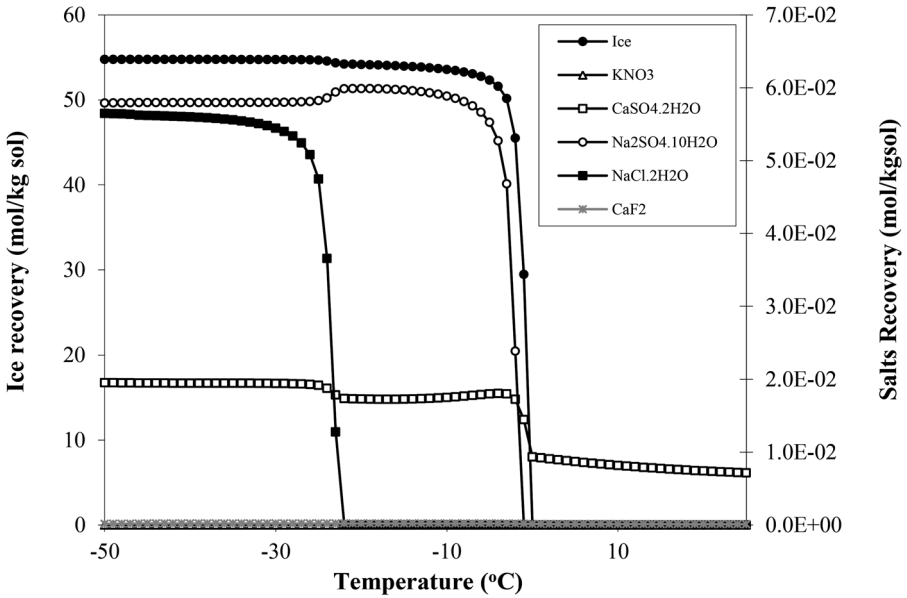


Figure 14.14 Salt and ice crystallization as a result of cooling for the brine.

Table 14.7 Predicted eutectic compositions and temperatures from OLI Stream Analyzer compared to those obtained from Pronk.⁵³

Salt	Predicted eutectic composition (wt.%)	Literature eutectic composition (wt.%)	Predicted eutectic temperature (°C)	Literature eutectic temperature (°C)
CaF ₂	0.001		-0.01	
CaSO ₄ (2H ₂ O)	0.17		-0.05	
Na ₂ SO ₄ (10H ₂ O)	3.97	3.8	-1.14	-1.2
CuSO ₄ (5H ₂ O)	11.90	11.9	-1.59	-1.5
NaF	3.33		-2.67	
KNO ₃	9.79	10.4	-2.80	-2.9
MgSO ₄ (12H ₂ O)	16.93	18.0	-3.94	-3.9
KCl(1H ₂ O)	19.50	19.7	-10.61	-10.6
NaCl(2H ₂ O)	23.27	23.3	-21.02	-21.2