



u) $\frac{X_{ice}}{X_w} = (1 - \frac{\Delta T}{\Delta T_f})$

Solids part.

100 g. $S.M.F = 13.5$ X_{new}

$\frac{13.5}{13.5 + X_{new}} = 0.60 \rightarrow X_{new} = 0.09$

$X_{ice} = X_w - X_{new}$

$X_w = X_w' = 0.865$

b) $\Delta H_{20 \rightarrow 0} = \Delta H_{20 \rightarrow -1.3} + \Delta H_{-1.3 \rightarrow 0}$

above freezing below freezing

2 levels aqueous phase -

Continuous Phase Discrete Phase Milk fat.
(Sugar Solutions) Non-fat solids

Level 1 Maxwell Equation

$$\sum_{\text{Sugar solution}} + \sum_{\text{non-fat solids}} = 1$$

ϕ

Level 2

$$\sum_{\text{aqueous part}} + \sum_{\text{milk fat}} = 1$$

Mixture