

Flash Calculation Example with Antoine								
<b>Given</b>		normal boiling pt		(z = mole fraction in feed)				
z_EtOH=	0.6	78.5 C						
z_EtCl=	0.4	13.1 C						
Ptot=	2 atm							
	1520 mm Hg							
T	85.0 C	(Try 65 degrees later)						
	358.0 K							
<b>Antoine Equation</b>			A	B	C	Temp Range ( C)		
P*_EtOH=	985.1 mm Hg		8.1122	1592.864	226.184		19.6	93.4
P*_EtCl=	6362.5 mm Hg		6.98647	1030.007	238.612		-55.9	12.5
<b>x_EtOH = (P_tot - P*_EtCl)/(P*_EtOH - P*_EtCl)</b>								
xEtOH =	0.9	(from combination of two Raoult's Law expressions)						
xEtCl =	0.1	(by difference)						
<b>y_EtOH = x_EtOH * P*_EtOH / P_tot</b>								
yEtOH =	0.5836	(from Raoult's Law for EtOH)						
yEtCl =	0.4164	(by difference)						
L =	0.052	(from mole balance)						
V =	0.948							
mols EtOH, liq =	0.03							