

PREPARATIONS OF ADDITIVE SOLUTIONS

Ramon G. Duarte, R.N.

Valley Presbyterian Hospital

PURPOSE: To present in review an algebraic approach in the preparation of additive solution for concentrate used in either 120 L batch or 34:1 proportioning systems.

METHOD: We identified 3 criteria needed and 5 calculative steps, and incorporated them in an algebraic process. We found a balanced equation that will reveal the correct amount of additive solution in mls when the product between defined volumes and formula differences are divided by the additive solution concentration in mEq/ml.

CONCLUSION:

$$\frac{KCL}{C} = 120 L (K^2 - K^1)$$

$$\frac{CaCl}{C} = 120 L (Ca^2 - Ca^1)$$

SUMMARY: KCL, the additive solution needed in mls

K¹ dialysate K⁺ on hand

K² dialysate K⁺ desired

C Concentration of additive solution in mEq/ml

CaCL the additive solution needed in mls

Ca¹ dialysate Ca⁺⁺ on hand

Ca² dialysate Ca⁺⁺ desired