STABILITY STUDY OF STANDARDISED FLUID THERAPY PREPARED BY THE PHARMACY DEPARTMENT TO TREAT PEDIATRIC DIABETIC KETOACIDOSIS

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BACKGROUND AND IMPORTANCE

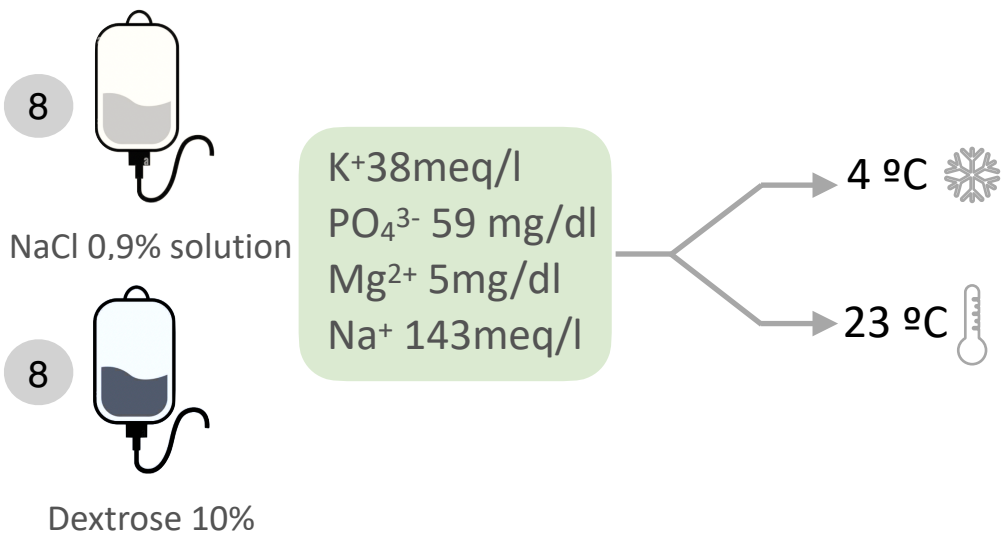
The Pharmacy Department prepares and distributes fluid therapy (2 bags-system) for the treatment of diabetic ketoacidosis (DKA) in the pediatric emergency unit.
Unfortunately, their expiration date is only 7 days due to the lack of data on stability.

AIM AND OBJECTIVES

The objective of this study was to evaluate the physical and chemical stability of these solutions prepared in the Pharmacy Department to manage pediatric DKA.

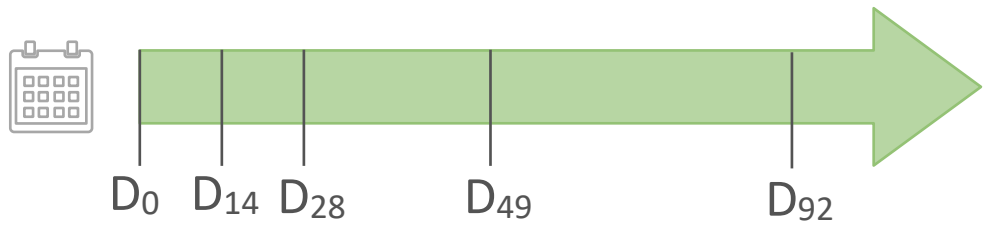
MATERIALS AND METHODS

Stabilility study design



It was accepted a desviation <5%

Chemical and physical stability



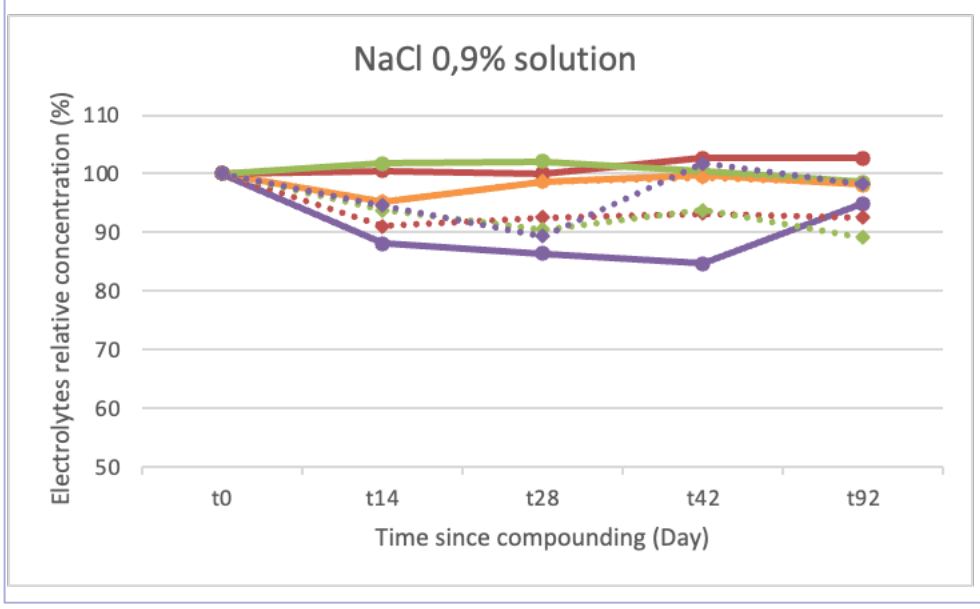
At each time of the study (Dx):

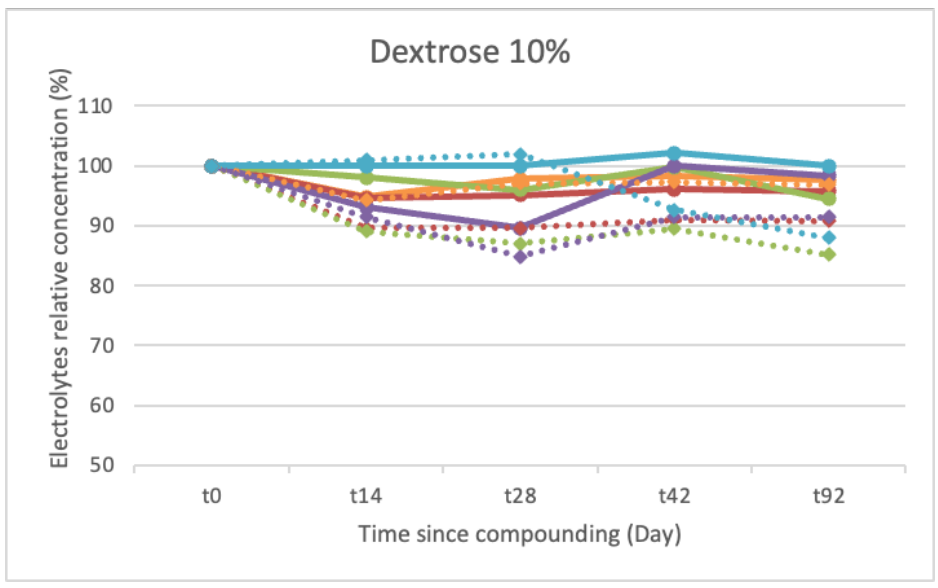
- Electrolytes concentration
  - Na+ and K+: indirect potentiometry
  - PO43-: phosphomolybdate reaction
  - Mg2+ and dextrose: enzymatic technique
- Non-visible particle count (by light obscuration particle count test)

RESULTS

✓ The electrolytes concentration remained stable during the study period

✓ The visual inspection showed physical stability as well





CONCLUSION AND RELEVANCE

The results show the stability of solutions in the period of study. Nevertheless, the beyond-use-date will be re-evaluated when a validated sterility test is performed.

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