

Chapter 10: An Evaluation of the stability and pharmacokinetics of R-lipoic acid and R-dihydrolipoic acid dosage forms in human plasma from healthy subjects.

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Introduction: Structure, stereochemistry, and mechanisms of alpha lipoic acid.

Structure, physical properties, stability, and stereochemistry of alpha lipoic acid and dihydrolipoic acid.

Stability of dihydrolipoic acid *in vitro* and during preparation.

Baseline levels of R-dihydrolipoic acid in human plasma.

Enzymatic reduction of alpha lipoic acid: Is dihydrolipoic acid an “in vivo” plasma metabolite of alpha lipoic acid?

Animal and human plasma pharmacokinetics of rac-dihydrolipoic acid.

Plasma pharmacokinetics of R-(+)-a lipoic acid in humans.

Materials.

Analytical equipment and methods.

Plasma collection and comparison of anticoagulants.

Comparisons of high-performance liquid chromatography methods of analysis.

Results and discussion: A reevaluation of the stability of R-dihydrolipoic acid.

Pharmacokinetics of Na-RLA versus R-(+)-a lipoic acid and R-(-)-dihydrolipoic acid.

Abbreviations

References