Oxalato forte inibidor da DHL e da piruvato kinase “in vitro”

**Effect of oxalate and malonate on red cell metabolism.**
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**Abstract**
The addition of oxalate to blood stored in Citrate-phosphate-dextrose (CPD) produces a marked improvement in 2,3-diphosphoglycerate (2,3-DPG) preservation; an increase in 2,3-DPG levels can also be documented in short-term incubation studies. Oxalate is a potent in vitro inhibitor of red cell lactate dehydrogenase, monophosphoglycerate mutase, and pyruvate kinase (PK). In the presence of fructose 1,6-diphosphate the latter inhibitory effect is competitive with phospho(enol)pyruvate (PEP). Determination of the levels of intermediate compounds in red cells incubated with oxalate suggest the presence of inhibition at the PK step, indicating that this is the site of oxalate action. Apparent inhibition at the glyceraldehyde phosphate dehydrogenase step is apparently due to an increase in the NADH/NAD ratio. Oxalate had no effect on the in vivo viability of rabbit red cells stored in CPD preservatives for 21 days. Greater understanding of the toxicity of oxalate is required before it can be considered suitable as a component of preservative media, but appreciation of the mechanism by which it affects 2,3-DPG levels may be important in design of other blood additives. Malonate, the 3-carbon dicarboxylic acid analogue of oxalate late did not inhibit pyruvate kinase nor affect 2,3-DPG levels.

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Phosphocreatine does not inhibit rabbit muscle phosphofructokinase or pyruvate kinase.
Fitch CD, Chevli R, Jellinek M.

**Abstract**
Certain phosphocreatine preparations contain a contaminant that inhibits phosphofructokinase and pyruvate kinase assays. The contaminant can be separated from phosphocreatine by anion exchange chromatography. After appropriate purification, phosphocreatine has no effect on phosphofructokinase or pyruvate kinase; thus, there is no evidence that it serves muscle as a regulator of these enzymes. Although the inhibitory preparations of phosphocreatine contain inorganic phosphate and trace amounts of more negatively charged phosphorylated contaminants, the inhibitor is not inorganic phosphate or pyrophosphate. The nature of the inhibitor remains to be determined.

No cerne do trabalho mostra que o contaminante é o oxalato.
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Contaminante >>>>>>>> oxalato.