

# **Frequently Asked Questions**

**Is Citrasate® cleared for clinical use by the FDA? - Yes.**

**How do I adapt my present dialysis system to allow the use of Citrasate®**

No adaptations are necessary. Citrasate® concentrate is available in standard concentrations and formulations. Simply use the jug provided or pour it into your standard A concentrate container and attach it to your dialysis system as you always do. **Keep in mind, with a higher dialysate flow rate more citrate, in relation to the blood, passes through the dialyzer, thus providing more anticoagulation.**

**What steps are necessary before dialysis with Citrasate® can be started?**

Citrasate® may be used in existing dialysis systems without altering them. There is no additional patient or system monitoring needed beyond that normally employed in treatment with standard dialysate formulations. Consequently, no staff training is necessary for the conversion to citrate dialysate.

**Can Citrasate® be “spiked” with potassium or calcium?**

Yes, it can be spiked just as you do with traditional dialysate concentrates

**Is it necessary to check clotting times when Citrasate® is used? - No.**

**Is there reason to be concerned about bleeding risk, hypocalcemia, or hypomagnesemia when treating patients with Citrasate®?**

No. There is no risk of bleeding or low blood mineral levels from citrate use, because the concentration of citrate in the dialysate is well below the level needed to produce anticoagulation of the patient's blood.

**Can dialysate flow affect Citrasate's anticoagulation benefit?**

With a higher dialysate flow rate (600, 700, 800) more citrate, in relation to the blood, passes through the dialyzer, thus providing more anticoagulation. With SLEDD treatments, longer clot free runs have been achieved when the dialysate flow is at least 175% of the blood flow rate.

**How is Citrasate supplied?**

Citrasate® is a liquid “A” concentrate, available in 1 gallon jugs, in concentrations of 36.83X and 45X. The jugs are packed four to the case. Please contact Dial Medical customer service at 800-346-2080 or by e-mail - [info@dialmedsupply.com](mailto:info@dialmedsupply.com). for more information.

**How does citrate dialysate provide the noted patient benefits?**

Citric acid is an anticoagulant. Its presence in the dialysate in 2.4 mEq/L concentration provides some anticoagulation effect in the dialyzer and venous blood line that is quickly neutralized upon reentry into the systemic circulation.

**Is Citrasate® the same as regional citrate anticoagulation?**

No. Performing dialysis with Citrasate® is no different operationally than doing regular dialysis. There is no regional infusion of citric acid employed. “It's all in the dialysate.”

**Do we need to be concerned with hypocalcemia?**

No. The concentration of citrate in Citrasate is only 2.4mEq/L; about one-fifth of the concentration used to achieve anticoagulation via traditional regional citrate infusions. The use of Citrasate does not produce measurable systemic anticoagulation; the anticoagulant effect is confined to the dialyzer and the venous side of the dialysis set-up. Citrasate generally produces a clinically acceptable transitory reduction (about 10%) in ionized calcium (ref 1). Ionized calcium begins to normalize to the pre-dialysis level as soon as the Citrasate dialysis session stops (ref 1). The consistent treatment of chronic dialysis patients with Citrasate has demonstrated no change over extended time periods in either total or ionized serum calcium levels (ref 1).

**References:**1. Ahmad S, Callan R, Cole JJ, Blagg CR. Dialysate made from dry chemicals using citric acid increases dialysis dose. Am J Kidney Dis. 35(3):493-499, 2000.