

The Exacta-Mix 2400 from Baxa Corporation

ON A DAILY BASIS, VANDERBILT UNIVERSITY MEDICAL CENTER COMPOUNDS anywhere from 70 to 90 total parenteral nutrition (TPN) preparations. Each of our orders is customizable and ordered by the medical center's nutrition support team or the pediatric residents at the Monroe Carell Jr. Children's Hospital at Vanderbilt. To compound our TPN preparations, we use two Exacta-Mix 2400 automated compounding devices and the accompanying Abacus software from Baxa Corporation.

We began using the Exacta-Mix 2400s two years ago, after using Baxter's Automix and Micromix for years. When the Micromix was recalled, the Exacta-Mix 2400 was the only device that could take its place. We felt it was incumbent upon us to provide the safest TPN we could, and between manual preparation and the Exacta-Mix, the automated device was the clear choice. We have found the Exacta-Mix to be very safe, and in addition, we have increased our compounding volume by about 20%, without adding staff.



Photos courtesy of Baxa Corporation

Procedures for Use

In the morning, TPN orders from the physician order entry system print in the compounding pharmacy. A TPN technician enters the orders using the Abacus software and a pharmacist carefully checks the identity and verifies the amounts of the TPN ingredients against the physician order. The pharmacist verifying the order generates the labels. Prior to beginning the compounding process, we draw all of the additives that need to be hung on the compounder. These, along with any macro solutions like amino acids and sterile water, are then placed on the machine.

The Abacus software then communicates with the Exacta-Mix and tells it exactly what to compound. Once a pharmacist confirms that the order the technician is about to process is in fact the order configured on the compounder, the compounding process is initiated.

A pharmacist then observes the technician during compounding via a camera that focuses on the compounder's computer screen. In this way, pharmacists can supervise the technicians from beginning to end. Once the TPN is complete, a pharmacist performs a final review and inspection, and ultimately releases the approved preparation for dispensing and administration.

Improved Safety and Workflow Efficiency

We utilize the Exacta-Mix's bar code technology to add another layer of safety to our compounding processes. We maintain an up-to-date database of NDC numbers and



bar codes in the Abacus software, and we bar code each solution before it enters the TPN compounding area. When hanging the solutions on the compounder's ports, the technician first scans the port's bar code, and then the bar code on the solution hanging from that port. In this way, the Abacus software verifies that the solutions are hung properly and that the correct amounts of each solution will be added to the final TPN bag.

The device is also able to report on the accuracy it delivers. We have configured the compounder to accept a very small percentage of error. If the compounder exceeds that percentage, the technician is alerted and the TPN has to be remade. The Exacta-Mix's reporting and documentation features also help us comply with USP Chapter <797> requirements. We are able to download configuration reports, as well as usage and authorization audit trails.

In addition, the Exacta-Mix 2400 performs the compounding process very quickly. Once the machine is configured and the ingredients have been verified, each TPN takes only about three to four minutes to prepare. That is a rapid turnover, and in fact, we had to adjust to that dramatic increase in throughput after implementing the device. For instance, we had to make sure that a pharmacist was stationed outside of the cleanroom to remove the completed TPNs, check them, and store them for delivery.

Implementation and Maintenance

The Baxa implementation team was very helpful to our staff. Originally, I was a little apprehensive when they told me how quickly they were going to train our staff, but the training process worked quite well and our staff is pleased with the machines. Our maintenance functions for the Exacta-Mix are as simple as cleaning the device following USP Chapter <797> guidelines. The Exacta-Mix 2400 is a great "workhorse," and Baxa's customer support staff has been very helpful. We always receive a rapid response to technical support questions. However, those are few and far between, as the Exacta-Mix and the Abacus software are both straightforward and easy to use. ■

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WHERE TO FIND IT:

Baxa CorporationCircle reader service number 103
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