

# CASE STUDY: SAFETY

## Decap the Safe, Ergonomic and Efficient Way

By Reda Iskarous, MT, BS

**S**afety in all aspects of the workplace is becoming an increasingly important issue—even more so in the laboratory because of biohazard substances the staff handles. Manual methods expose laboratory staff to great risks. One area that is still handled manually is the decapping of blood collection tubes, which exposes the staff to repetitive stress injury in the hand and wrist. More stress injury cases during decapping are being reported and will continue to increase as the average age of laboratory staff continues to rise. Another risk is the exposure to aerosols and splashes, evidenced by the requirement to wear a face shield or have a Plexiglas shield between the hands and face during manual decapping. A simple task, like manual decapping, can end up being a very expensive process when measured in terms of workmen's compensation, lost work, medical expenses, etc.

### Relieving the Pain

Tom Peterson, MS, MT(ASCP)SC, chemistry supervisor at the Veterans Affairs Hospital, Des Moines, IA, sent **LGP Consulting Inc.** an unprompted e-mail. His facility just started using the company's Pluggo™ decapper. "Just a quick note to let you know we have received our Pluggo and have had it in operation for several weeks. All the techs really like it and feel it is relieving some of the pain in popping stoppers from tubes. Thanks for the wonderful device to relieve repetitive motion injuries among lab staff," he wrote.

The Pluggo decapper is a safety device that eliminates the exposure to aerosols and repetitive stress injury. Pluggo is used in blood bank, chemistry, nucleic amplification testing (NAT), immunology, serology, virology, microbiology, coagulation, hematology and urinalysis labs. The Pluggo decapper has been in the United States and Canadian market since 2000 in a variety of places such as hospital labs, blood centers, reference labs and pharmaceutical trial labs.

Paul Szuts, MT, BS, MBA, chemistry supervisor, and Kathy Rutkauskas, MT, BS, Holy Cross Hospital, Ft. Lauderdale, FL, have used Pluggo since 2003. "We bought the Pluggo decapper in response to complaints from our staff about pain in the wrist caused by repetitive manual decapping," they explain. According to Rutkauskas, "The single most significant factor in decreasing the wrist pain was the implementation of the Pluggo decapper. We have had no complaints since we started using the Pluggo decapper for removing the stoppers from the tubes."

### Contamination Issues

Cross contamination is a subject that comes to mind when automated decapping is discussed. The Pluggo decapper is fitted with disposable tube covers that expose only the tube at the decapping position. This eliminates the possibility of aerosol cross contamination. The tube covers swivel along with the Plexiglas cover as the operator loads or unloads carousels. The tube cover slides in and out of its slot for easy replacement. This development has opened the doors for the use of Pluggo in places such as NAT labs.

Kathie Clark, MT(ASCP)SBB, technical director at Heartland Blood Centers, Aurora, IL, purchased two decappers in May 2003. "We had an employee exposure a few months prior even though gloves, gauze and a face shield were used. I never liked seeing the

gloves and gauze that were typically used until they had a gross blood contact. You can't change gloves with each set of tubes when you have 2,000 tubes to uncap," she notes. "But Pluggo is a self-contained unit that prevents employees from coming in direct contact with the blood as it is uncapped. The actual decapping occurs under a closed, clear Plexiglas hood—very safe and ergonomically friendly.

"We ordered a double set of carousels to keep up with the unit,

much faster than manual decapping. We put a third unit in our NAT lab when we opened it in June 2004. Pluggo is very robust; there was only one minor breakdown in the last two years and that was repaired the same day. The techs love the small size (since benchtop space is at a premium)," Clark says. "Another great feature is the option to use the cap chute either on the right or left depending on where you want the waste to go. It is very easy to clean and maintain. We have uncapped over a million tubes using Pluggo and wouldn't live without it!"

### Time Is of the Essence

Pluggo is an affordable benchtop decapper with a 10 x 16 inch footprint, extremely reliable, durable and easy to use. The instrument plugs into a regular electric outlet, 110 VAC, and can decap up to 3,000 tubes per hour. The Pluggo carousels allow the flexibility to use any standard tube size on the same instrument, and many transport tube types. The design of the carousel can accommodate a hospital lab and reference lab workload and workflow. Pluggo can decap both conventional rubber caps and Hemogard-type caps.

Paul Hoyt, MT(CLS), chemistry/immunology supervisor at Long Beach (CA) Memorial Medical Center, comments, "We had an opportunity to evaluate the Pluggo decapper system. The response from the technical staff was enthusiastic. The speed of the unit and the simple, almost intuitive, operation was a pleasant surprise in this day and age of complex instrumentation. The system can decap a carousel of tubes in the length of time it takes to load a second carousel for processing. We felt the system was so important for our staff that all departments that decap tubes were provided with their own unit."

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