Liquid Unit Dose Packaging Machines

THE MANUAL PACKAGING OF ORAL LIQUID UNIT DOSE MEDICATIONS can be time-consuming and labor-intensive, but fortunately, automated solutions are available. Liquid unit dose packaging machines work in conjunction with PCs to fill and label oral liquid unit doses. At the outset of the fill process, a pharmacist or technician enters the bulk drug information – either manually or by scanning a bulk bottle’s bar code – into a unit dose software program, which then communicates with the packaging machine to create a bar coded label for the doses to be packaged. After the user previews the label on the PC screen and confirms the packaging run information, a peristaltic pump issues the liquid medication through a tube and into medication cups that are dispensed from a tower on the packaging machine. The machine then labels each cup with the predetermined information, heat seals the label film to the cups, and perforates the film in between each cup.

By implementing this relatively easy-to-use technology, your pharmacy can achieve notable improvements in workflow efficiency. The following buyer’s guide describes some of the liquid unit dose packaging machines currently available for purchase. For more information on these products, circle their reader service numbers on PP&P’s free reader service card (bound in every issue).

**Purchase and Implementation Tips:**
- In determining your ROI, compare the cost of the machine and its consumables to the cost of the prepackaged liquid unit doses your pharmacy procures, as well as the cost of the consumables and labor involved in manual packaging.
- Notify nurses of the implementation and familiarize them with the new cups.
- Determine a storage area for the machine’s consumables.
- Prior to installing the machine, consider reinforcing the table or counter beneath it, as the weight may strain the structure.
- Back up your packaging software’s database regularly.
- Consider using tall-man lettering and color-coded cups for “look-alike, sound-alike” drugs.
- Prior to packaging, calibrate your peristaltic pump to ensure that it delivers the desired volume. Also, some overfill may be necessary to ensure the cups deliver the right amount of medication to the patient.

**The Fluidose Unit Dose Packaging System**

The Fluidose unit dose packaging system is an automated bar code packaging solution for unit dose oral liquids. A Baxa peristaltic pump, capable of pumping viscous medications from a bulk liquid drug container, is integrated with the system. The bench-scale system packages up to 15 doses per minute and utilizes Medical Packaging Inc.’s WinPakUD software, which manages the drug database, controls packaging operations, and generates a variety of reports. Packaged cups can be stored in plastic trays for inventory management and distribution. The open-face design of the packaging system facilitates material access between packaging runs. Three different cup sizes (15, 25, and 35 mL) are available in a variety of different colors for coding of medications. All materials qualify for 12-month expiration dating and meet established guidelines for light-resistant packaging. All standard health care bar codes, including DataMatrix and RSS composite, can be printed on the cups.

**Medical Packaging Inc.**

For more information, circle reader service number 63

**Pentapack NA**

Pentapack NA also offers an automated solution for liquid unit dose packaging. For more information, circle reader service number 68

**Using Thermal Transfer Printing, the Speedy Wet Cadet Liquid Unit Dose/bar Code Packaging System**

Using thermal transfer printing, the Speedy Wet Cadet liquid unit dose/bar code packaging system can be used for small runs of five to 10 doses or much larger runs of hundreds of doses. The machine delivers accuracy within 1% for volumes between 1 and 30 mL. The Speedy Wet Cadet can fill, label, bar code, and seal up to 32 cups per minute and provides up to one-year expiration dating.

**Accu-Chart Plus Healthcare**

For more information, circle reader service number 62

**A Manual Liquid Unit Dose Packaging Option**

EPS’s TampAlerT liquid packaging line is now available in 60-, 100-, and 120-mL capacities. All TampAlerT bottles, including the smaller 15- and 30-mL sizes, are stocked in either a natural polyethylene or in a white ultraviolet-inhibitive resin. The caps are available in regular screw cap or child-resistant styles. After the cap is screwed on, a tamper-evident seal adheres to the bottle. No outside equipment or heat seal accessories are necessary. TampAlerT bottles can be labeled and bar coded using Medi-Dose’s MILT software.

**EPS, Inc.**

For more information, circle reader service number 76