

CASE STUDY: Materials Science Expertise and Relentless Testing Improve Lab Label



Client:
National Lab Company

Market:
Healthcare

Solution:
Specimen Labels

Services:
Label engineering and production

Benefits:

- Fewer equipment jams
- Improved productivity
- Line-down avoidance

Situation

A large national independent lab company had consolidated five smaller labs into one new, highly automated lab. Specimens labeled at the new facility processed well, but those labeled by clients themselves posed problems, jamming equipment and shutting down lines.

Due to chain of custody requirements, labels have to stay on the specimens. Also, the automated vision systems needed a “window” into the test tube to ensure an adequate sample was inside.

The company tried taping the labels, but this was time-consuming and ineffective. They asked clients to use labels supplied by them, but this proved hard to implement and enforce.

Solution

The lab came to Taylor Healthcare, its supplier of over 100 different labels, to see if a better specimen label could be designed for clients to use. Taylor recommended wrap labels that were clear in one area and opaque in another so information could be printed using thermal transfer ribbons. Putting white ink on a clear label is difficult, since whatever is underneath tends to show through. The label material needed enough clarity for the automated vision system yet sufficient opacity to ensure no see-through beneath the label, all while meeting normal lab environment requirements.

Taylor label experts tested a dozen materials and recommended six for further testing. A first choice and alternate were chosen, then small test orders run of both. Multiple inks, primers and coatings were also tested under various combinations, including white inks for the opaque area and

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different thermal ribbon inks. Tests were run on press over a number of weeks until just the right combination was found.

The customer then ran the new labels through its own thermal printers to further test the opacity and legibility of the printed information. As a result, they found a different thermal ribbon that worked better in their own process.

Benefits

By leveraging its expertise in materials science and relentless pursuit of a better way, Taylor was able to engineer the right marriage of materials to provide the lab company with a cost-effective alternative for a high performance label that was both clear and opaque.

- Wrapped labels stopped “winging.”
- Productivity improved due to fewer equipment jams.
- Shutdowns of the highly automated lab process were eliminated, enabling the efficient processing of 50,000 samples per night.