Clinical Analyzer OEMs are constantly looking to innovate and find new ways to set their product apart from competitors, thereby gaining market share. Many device manufacturers in this market space point to the importance of two things: a need to increase throughput and the requirement to reduce potential errors.

Machine vision inspection (sometimes described as “image analysis”) can be used to increase throughput on clinical analyzers while reducing the need for an operator to monitor errors. Using a medical machine vision solution allows many functions of an inspection point to be combined into a single area. Combining multiple inspections can often be faster than stopping and indexing between individual stations. For example, medical machine vision analysis can provide detailed feedback on features such as test tube presence, cap on or off, and tube height in one inspection station. Often this result can be determined in less overall time than if each of these inspections were performed individually.

Since a machine vision solution can handle more inspection processes, operators and technicians can spend less time troubleshooting and move on to other responsibilities. The imager can also catch potential errors early in the process, before a patient sample is consumed.

In addition, the consolidation of inspections through the use of machine vision can reduce the overall hardware cost of a system by removing extraneous sensors, brackets, and cables. It can also reduce the size and space of the device, as well as, lower the number of outside vendors needed.

In addition, medical machine vision solutions typically allow for flexibility and future expansion. For example, many large OEM medical companies have begun incorporating new features into existing analysis requirements to enhance capability, including foam detection, liquid level height and color analysis. Many systems are scalable, and typically don’t require expensive lenses, lighting or hardware, which translates into a reduced overall cost of implementation.

Contact the medical machine vision experts at JADAK for a machine vision consultation.