Solving Common Water Bath Problems

Problem: A water bath is arguably one of the most common pieces of equipment in any lab. It is intended to provide a clean, stable environment for incubation, heating, and thawing. But the warm, moist environment creates a perfect incubator for microbes.

Traditionally, regular cleaning and diligent lab practices were the only means of contamination control available to the lab professional. In some cases, antibiotics are prohibited because of the effect they can have on the samples involved or because they can contribute to dangerous biofilms. In demanding tissue culture labs, for instance, water bath use can become so problematic that labs will discontinue use even though the water bath is the most sensible piece of equipment for routine tasks.

Solution: Lab Armor® Beads, a new technology from Lab Armor, tackles the problem of contamination in water baths by utilizing a dry, metallic thermal media comprised of small beads instead of water. The result is a dry bath that is far less conducive to contamination than a water-filled bath. Lab Armor® Beads can be used for many years if properly cared for; this means keeping it away from strong detergents, acids, and bases.

The benefits of a dry bath include:

1. The thermal media does not adhere to the samples in the bath as water does, and therefore cross-contamination is eliminated.
2. The unique properties of the dry media support the samples without blocks, racks, floats, or weights.
3. Because the media is dry and not subject to evaporation, baths can remain on at all times, eliminating warm-up downtime, evaporation monitoring, and routine replenishment of water.
4. The cumbersome and messy task of emptying and cleaning the lab water bath is reduced and simplified. For spill clean-up, Lab Armor® Beads can simply be scooped out, washed, and replaced.
5. Should the bath lose power during incubation, the thermal media keeps samples at temperature almost five times longer than water.

Vigorous testing has shown that Lab Armor® Beads can be employed as a replacement for water in a traditional water bath. The thermal media can be added to the clean, dry bath until the desired level is achieved, typically 80 percent full. Sample vessels of any size, configuration, or buoyancy can be embedded in the thermal media or submerged to allow for maximum temperature range and to help maintain optimal temperature uniformity.

Summary: The challenge of incubation has always been to provide an ideal environment for heating and thawing while minimizing the occurrence of contamination. The use of a dry, metallic thermal media in lieu of water in a traditional water bath is a simple way of eliminating a common source of contamination in the lab. A Lab Armor Bead Bath™ will result in a more productive lab, more successful experiments, and less lab downtime.

For more information, visit www.labarmor.com.