

# V.I.P. Treatment

## Thonhauser Color Change Technology™

### Brings Sanitation In Place and Instant Verification In Place To Your Brewery and Beyond

Words from a very wise German-trained brewmaster: "There are no secrets in brewing beer - there is only clean!" And clean must extend to every part of the process, from mash kettle to retail draft system.

Biological contaminants anywhere in the loop can adversely affect the quality of the beer. As modern brewing gear becomes more sophisticated and complex, there are more inaccessible sites in the system, resulting in more and more reliance upon cleaning in place (CIP) and sanitizing in place (SIP) technologies. While CIP and SIP are labor-saving boons to all brewery operators, relying upon their effectiveness cannot be simply a matter of trust. Traditional methods of verifying that all parts of the system are up to standard include rinse water sampling and swab testing. There are downsides to these techniques, including

the time needed for incubation and the uncertainty that comes from extrapolating the health of the whole system by testing samples taken from small ports.

The next logical step after CIP and SIP is verification in place (VIP), a process that monitors the sanitary conditions of the whole system. An exciting system from Austrian chemical company, Thonhauser Co., promises to bring VIP to your brewery from mash to tap. The Thonhauser Color Change Technology process uses a chlorine-free catalyzed

persulfate process that does not promote corrosion and naturally breaks down to environmentally safe compounds, while providing the highest levels of oxidization – twice that of chlorine-based products!

Beyond the superior sanitizing abilities of the Thonhauser product is its unique color changing properties that makes real-time verification possible. Simply put, the fluid begins as purple color and as it oxidizes organic materials in the system, the color changes in a known manner. The color

changes can be observed by eye as compared to a standard color chart or observed electronically and analyzed by software to identify up to 17 million colors for the ultimate in control. Each color indicates a level of organic

contamination that has been cleaned by the solution. When no changes are observed, the system is verified to be cleaned and sanitized.

The Thonhauser Color Change Technology has been in use at major German and Austrian breweries for several years and is now available in the U.S.A. After thorough review, the Thonhauser products are now on the Anheuser-Busch "approved" list and are expected to be adopted by a number of American brewers in the near future.

The TM Check Box Pro is a compact and portable testing system that uses the Color Change Technology combined with hardware and Verifox software that converts color changes into readings that correspond to mg/l of Total Organic Carbon (TOC). This reading gives a precise indication of the sanitary condition of the system being tested. The unit can also be calibrated to provide a simple pass/fail reading per inputs based upon the users' own QA standards.

According to materials supplied by Thonhauser, the process is very user friendly:

1. Prepare the indicator solution (e.g. TM DESANA MAX fp)
2. Pump or dispense the indicator solution through the installation to be observed (3 min. contact time)
3. Take a digital image from the solution (compared to a black)
4. Read the result on the display

The results are immediate - no waiting for incubation of samples. The entire inner surface of the system is tested and cleaned. The Check Box Pro can discern one million colors, an impressive degree of precision to be sure. The

fig. 1: heavily soiled solution at the beginning of the Cleaning



fig. 2: green color indicates organic soiling in the beverage line



fig. 3: Original, violet color indicates NO organic soiling in the beverage line



testing can be carried out by a variety of brewery personnel – no specialized microbiology education is required! The Check Box Pro is portable, making it possible to take your brewery standards "on the road", testing and sanitizing retail draught systems to ensure that your beer is as flavorful in the

tavern as it is in the brewery.

To learn more about Thonhauser Color Change Technology, go to <http://thonhauser.net/html/e/home.htm> or contact Thonhauser's U.S. rep Steve Ryan at [s.ryan@thonhauser.net](mailto:s.ryan@thonhauser.net) or 513-347-6263.

