Spring Special - Save 15%

Order an ultrasonic probe, microtip, or replaceable tip during March and April and receive a 15% discount. MUST REFERENCE CODE SPRING 15.

EXAMPLES OF THE EFFECTS OF CAVITATION EROSION ON A PROBE TIP

New ***Slightly Used*** ***Very Used***

When sonicating a liquid with ultrasonics, millions of shock waves, turbulent micro jet streams, and extremes in pressures and temperatures are generated near the tip of the probe and propagated to the surrounding medium as mechanical shear. It is this phenomenon, known as acoustic cavitation, that does the work. Cavitation also produces the undesirable and unavoidable consequence of eroding ultrasonic probes. When the probe erodes, microscopic residues are released from the tip into the liquid being processed (titanium migration), introducing impurities and potentially contaminating the liquid.

For that reason an ultrasonic probe tip should be periodically inspected for cavitation erosion. As the erosion progresses, first, the finish of the tip will change from its original polished appearance to a light gray and then to a darker grey, second, concentric circular rings will appear on the face of the probe tip, and then thirdly, the erosion will pit the probe tip to such a degree that it will have the appearance of a pumice stone. It should be noted that a highly eroded tip will not process a liquid effectively, as it will agitate the liquid rather than cavitate it, and will no longer have the ability to effectively transmit a high level of energy into the liquid.

Keep your system operating efficiently - order today!

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