

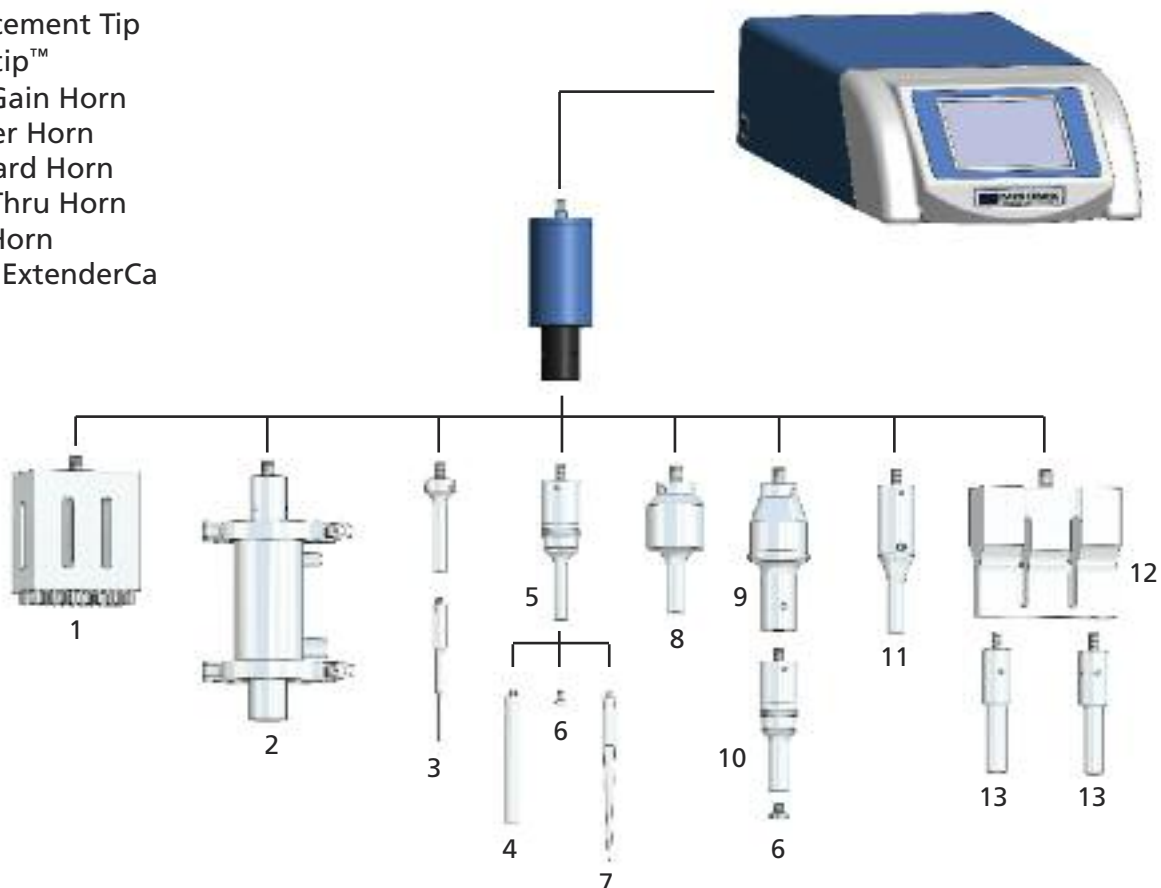
## Direct Sonication Method

Horns transmit the ultrasonic energy into a solution. Direct sonication (inserting a horn directly into a vessel) is the most popular way to process a sample. This method offers high intensity and effectively processes most samples.

The diameter of the horn's tip dictates the liquid volume that can be effectively processed. Smaller tip diameters (Microtip™ probes) deliver high intensity sonication and the energy is focused within a small, concentrated area. Larger tip diameters can process larger volumes, but offer lower intensity. Boosters and High Gain horns can be used to increase the output of large diameter horns. Horns are offered with either replaceable or solid tips and are made from titanium.



1. 96 Probe Horn
2. Floccell
3. Stepped Microtip™
4. Extender
5. Standard Horn
6. Replacement Tip
7. Microtip™
8. High Gain Horn
9. Booster Horn
10. Standard Horn
11. Flow Thru Horn
12. Dual Horn
13. Probe ExtenderCa



## Indirect Sonication Method

Indirect sonication eliminates the need for a probe to come in contact with your sample. This technique is often described as a high intensity ultrasonic bath, capable of processing multiple sample vessels at one time.

Indirect sonication is most effective for very small samples because foaming and sample loss are eliminated. Pathogenic or sterile samples are ideal for this method because aerosols and cross contamination are prevented.

The Cup Horn and Microplate Horn deliver indirect sonication. Simply place your microtubes or microtiter plate within the water filled reservoir and the sonic energy is transferred into each individual well or tube. These units are ideal for high throughput applications.



1. Microplate Horn
2. Cup Horn A
3. Cup Horn B
4. Cup Horn C

