



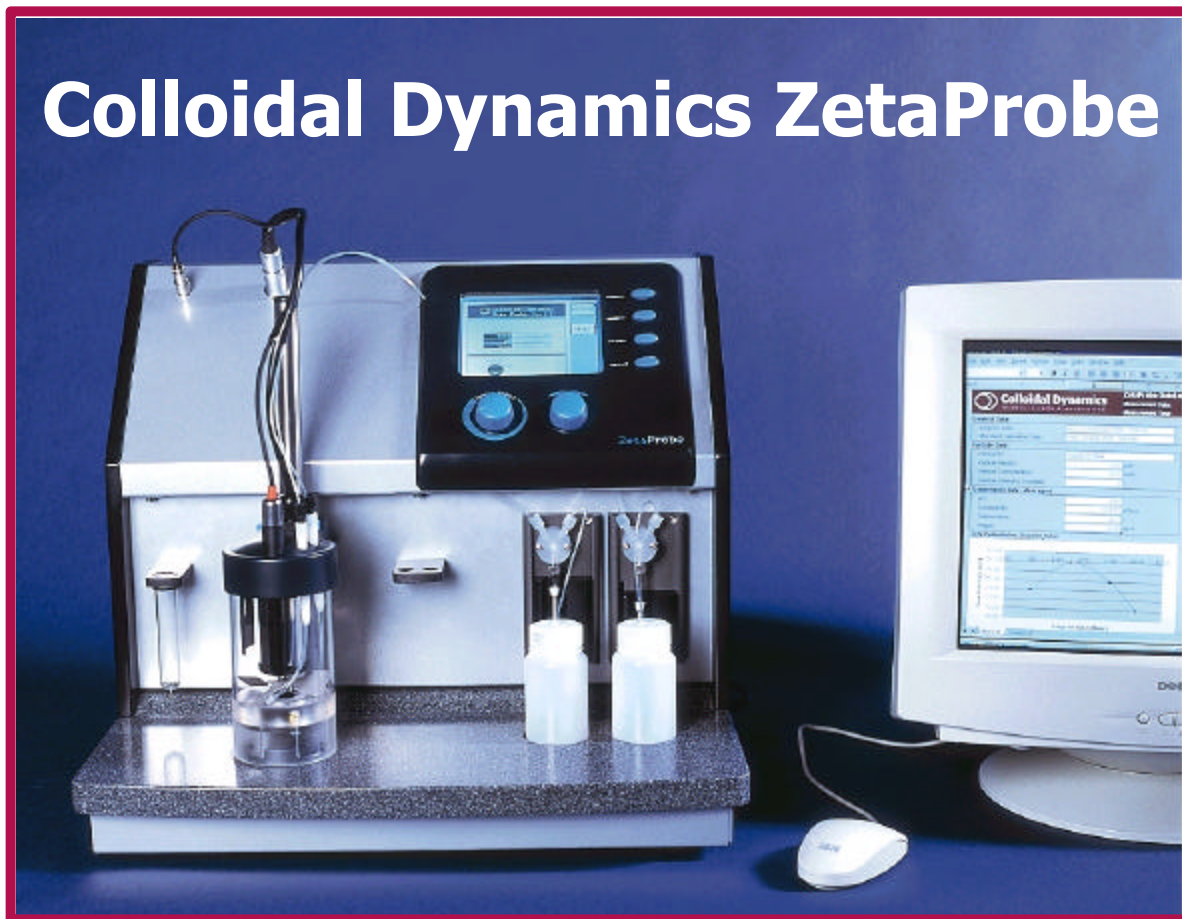
# ZetaProbe Configurations and Options

## Colloidal Dynamics



# Zeta Potential of Concentrated Colloids

## Colloidal Dynamics ZetaProbe



### ZetaProbe

#### Features & Benefits

- No sample dilution samples up to 60% volume
- Patented, multi-frequency Electroacoustic technology
- Automatic titrations
- Fast, accurate IEP determinations
- Rugged dip probe sensor
- Easy to clean
- Automatic correction for particle size effects
- Bottom axial stirring handles high viscosities

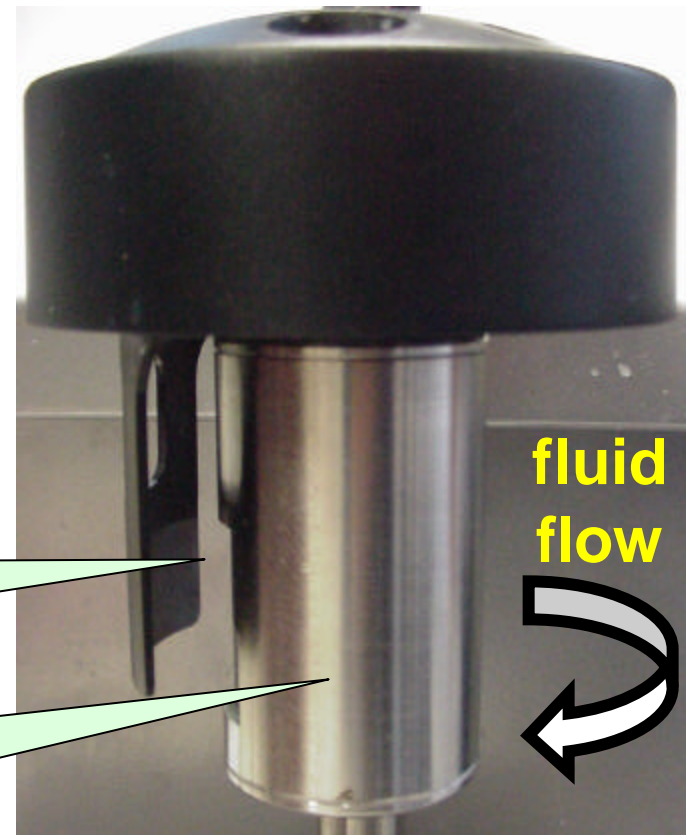


## ZetaProbe cylindrical electrode geometry

- Design ensures good slurry flow between electrodes
- Air bubbles do not get trapped between electrodes

Electric field applied across this gap

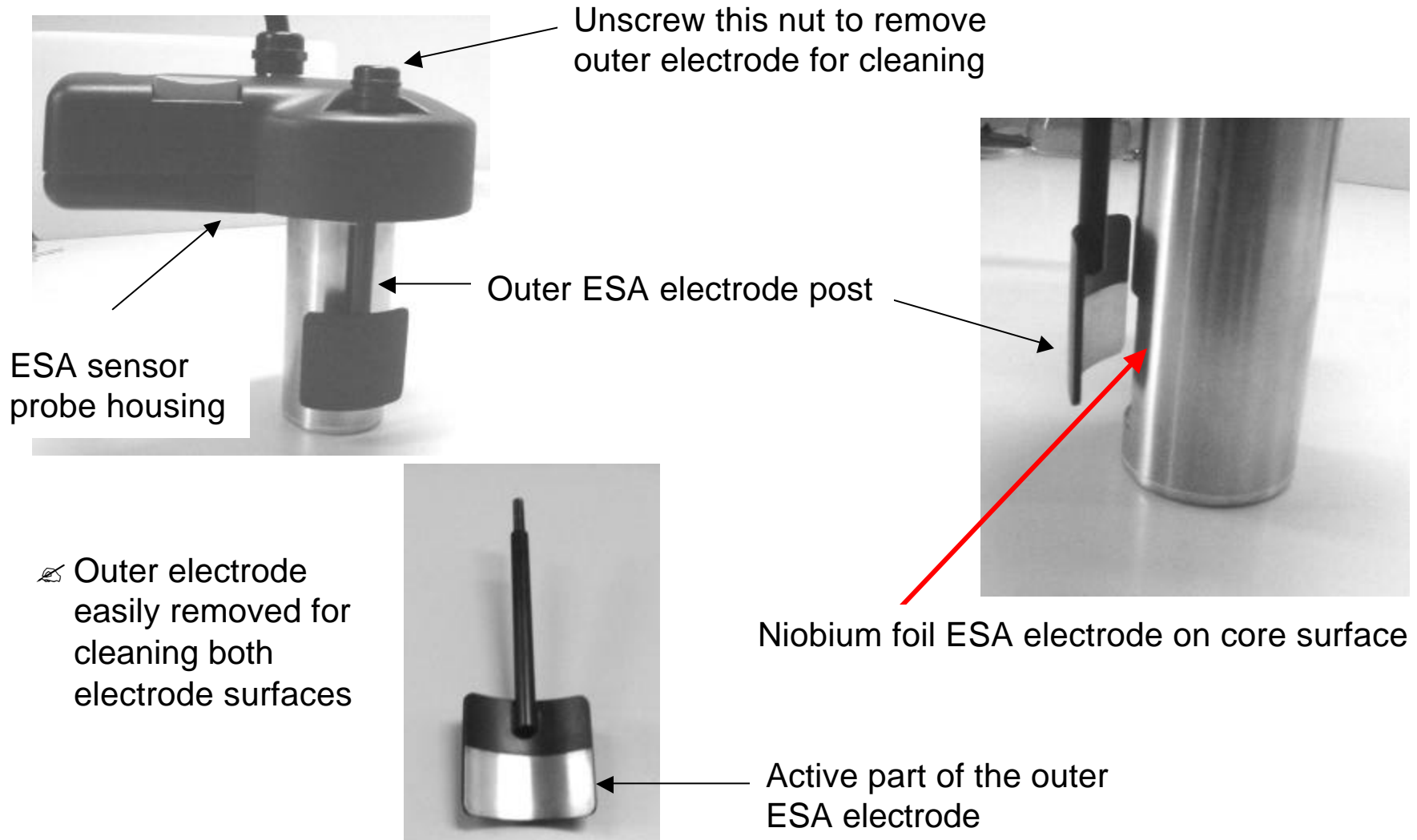
ESA signal measured on internal transducer inside cylindrical core



Probe sits in bottom-stirred cell

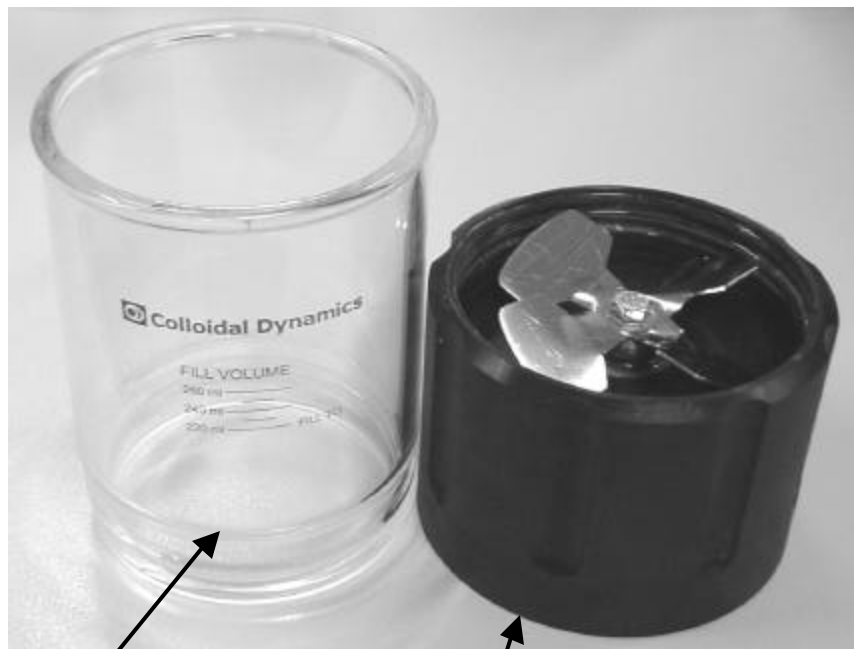


# ZetaProbe sensor components





## ZetaProbe sample cup



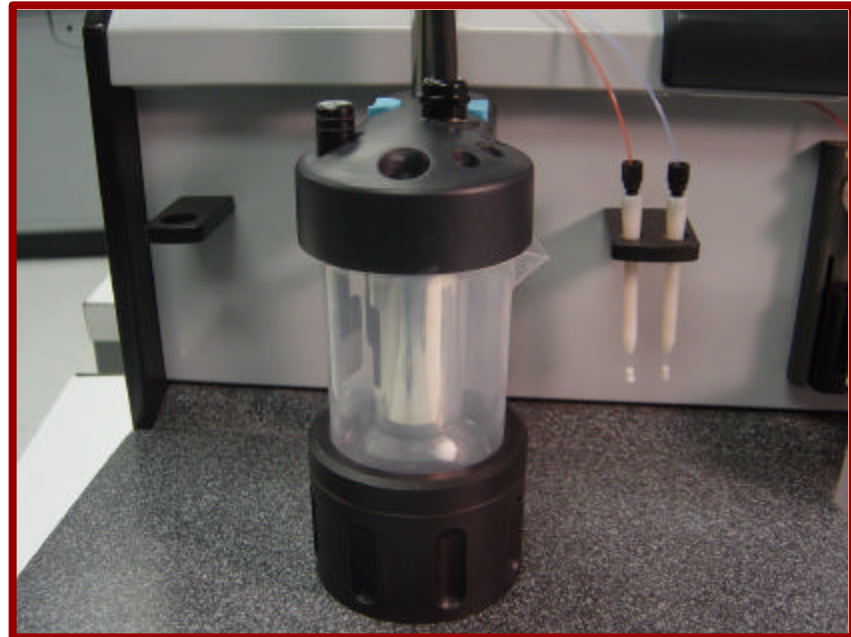
Threaded sample  
cup Pyrex glass  
sleeve

Polypropylene sample  
cup base with stainless  
steel stirrer

- **Sample cup disassembles easily for cleaning**
- **Large stainless steel propeller in cup base for stirring viscous slurries**
- **All Teflon sample cups are also available**
- **Water jacketed glass sleeve available for temperature control of sample**



# Magnetic Stirrer Option for ZetaProbe







# Temperature Control for Mag Stirrer Option





# Flow through Sensor Option for ZetaProbe



## Flow through sensor

- Titrate sample volumes down to 30 ml
- Pilot plant slip stream monitoring
- Overhead mixer for stirring difficult samples





# Stirred Reservoir with IKA Mixer Option

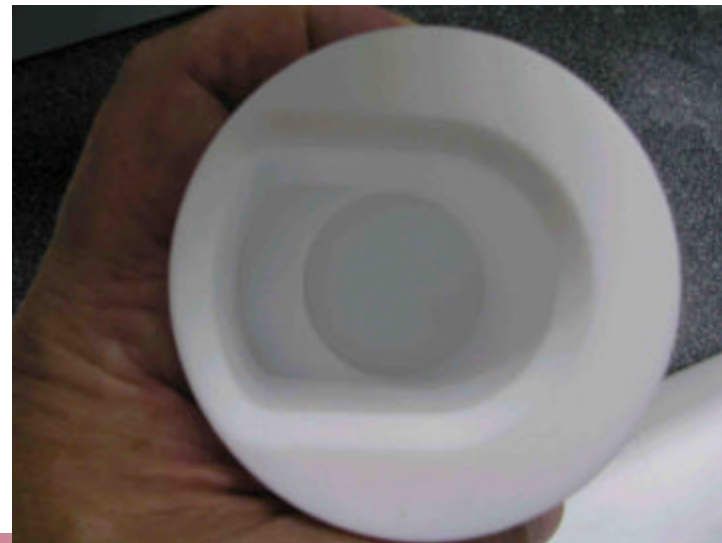
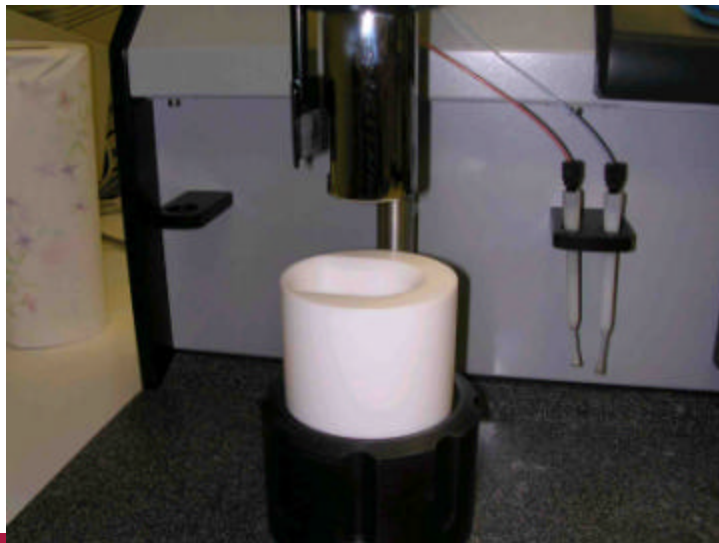


## Overhead Stirrer Option

- Recommended for titrating viscous slurries with difficult rheology
- Various paddle designs available for efficient mixing of titrant
- Minimum sample volume requirement ranges from 50 to 100 ml depending on tube diameter
- Both jacketed and un-jacketed reservoirs available
- Flow loop uses convenient industry standard GL-14 glass thread adapters for tubing connections



## ZetaProbe 30 ml small volume Teflon sample cup





# Flow through sensor for ZetaProbe







# Small sample volume tubing kit

**Kit allows titrations of sample volumes down to 30  $\mu$ l**

