



ZetaProbe Configurations and Options

Colloidal Dynamics



Colloidal Dynamics ZetaProbe



ZetaProbe Features & Benefits

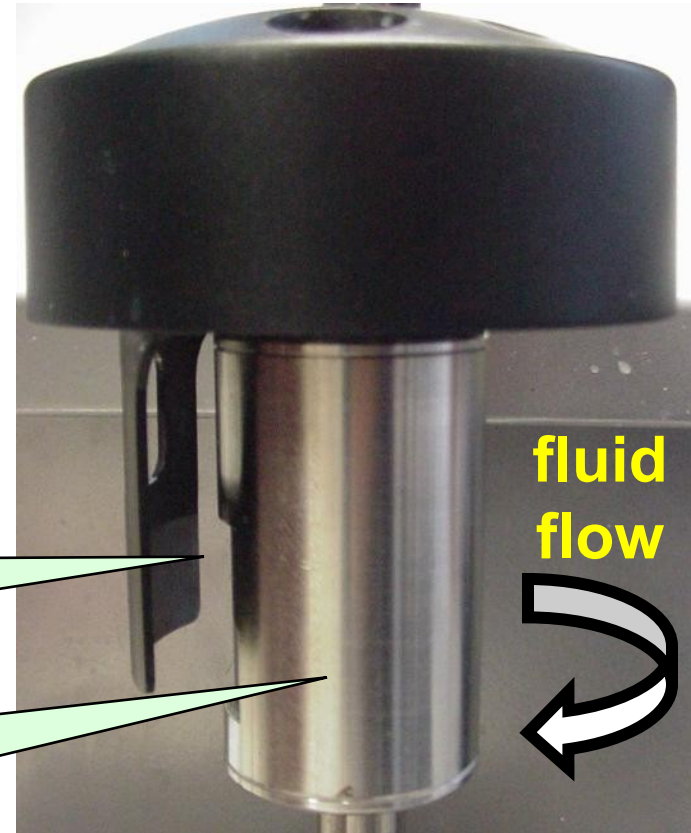
- No sample dilution
samples up to 60% volume
- Patented, multi-frequency
Electroacoustic technology
- Automatic titrations
- Fast, accurate IEP
determinations
- Rugged dip probe sensor
- Easy to clean
- Automatic correction for
particle size effects
- Bottom axial stirring
handles high viscosities

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

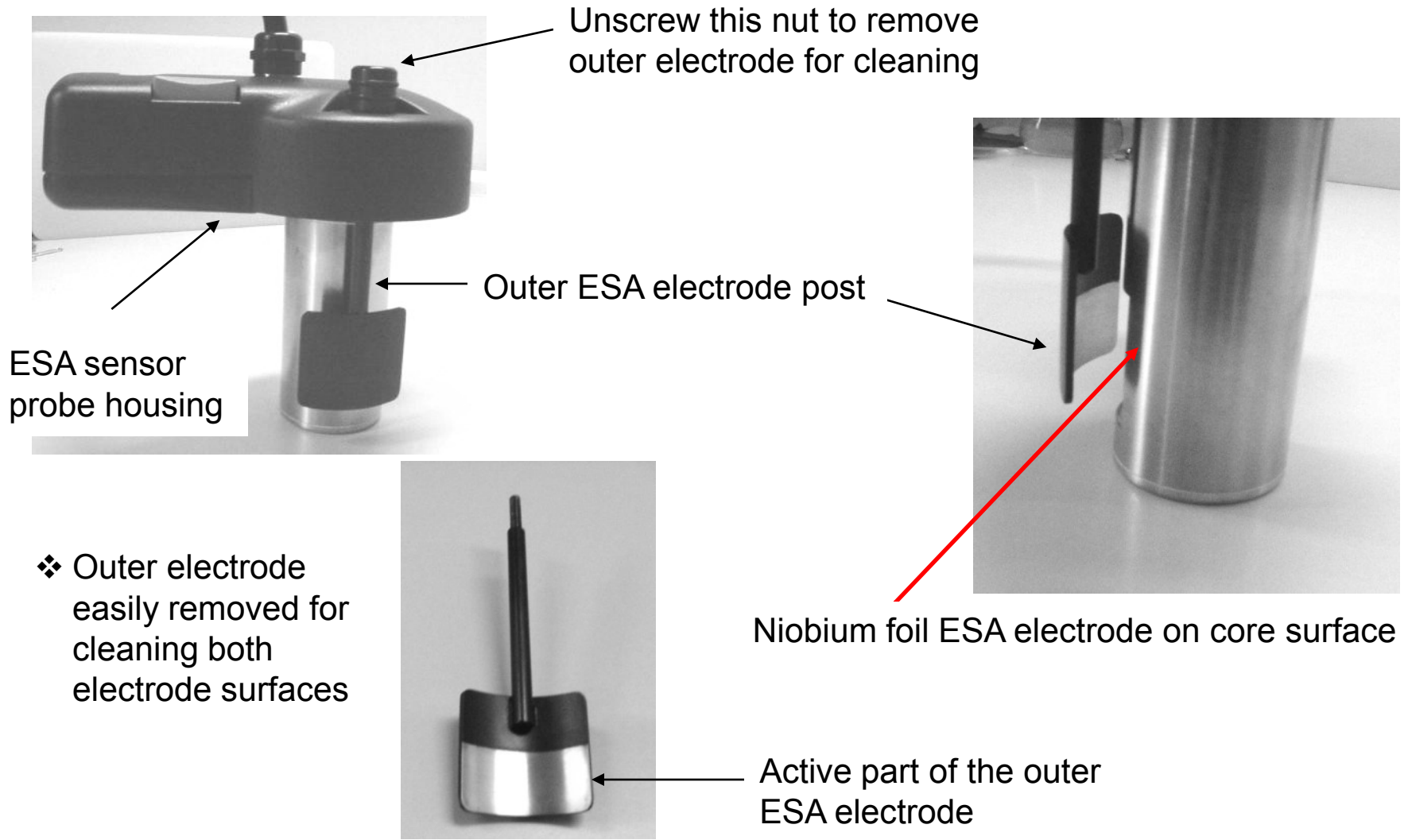
ESA signal measured on internal transducer inside cylindrical core



Probe sits in bottom-stirred cell



ZetaProbe sensor components





ZetaProbe sample cup



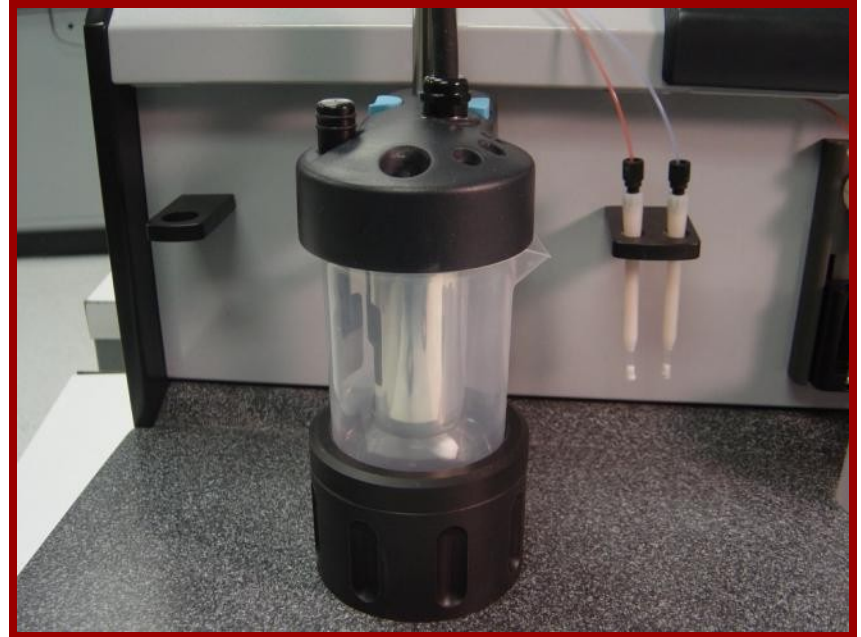
Threaded Teflon
PFA sample cup
sleeve

Polypropylene or Teflon
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
- Recommended for titrations at high particle concentrations



Stirred Reservoir with IKA Mixer Option



Overhead Stirrer Option

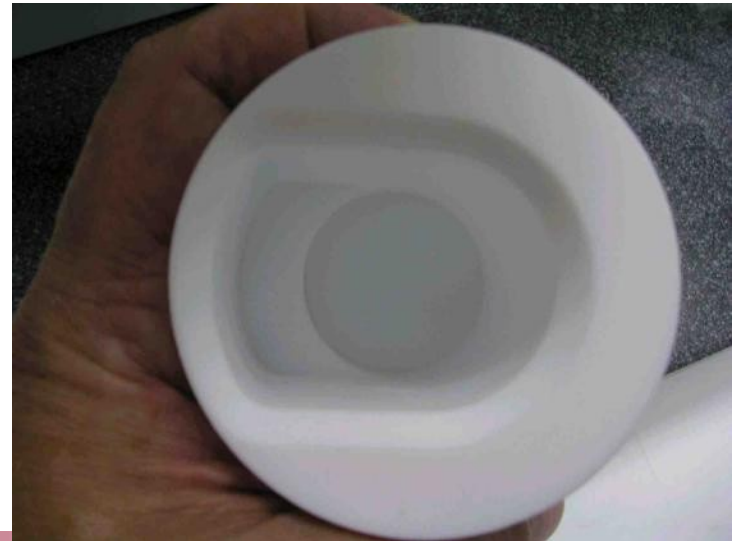
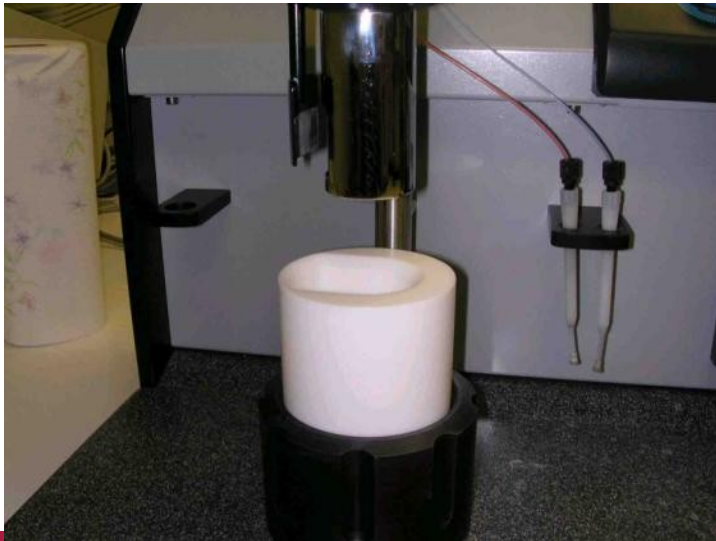
- Recommended for titrating viscous slurries with difficult rheology
- Various paddle designs available for efficient mixing of titrant
- Minimum sample volume requirement ranges from 50 to 100 ml depending on tube diameter
- Both jacketed and un-jacketed reservoirs available
- Flow loop uses convenient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



Flow through sensor for ZetaProbe



ZetaProbe 30 ml small volume Teflon sample cup





Small sample volume tubing kit

Kit allows titrations of sample volumes down to 30 μ l

