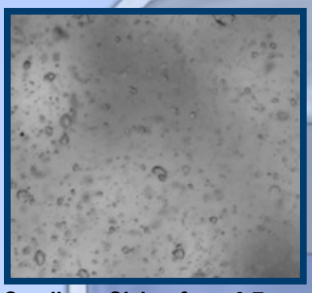
Crystallization

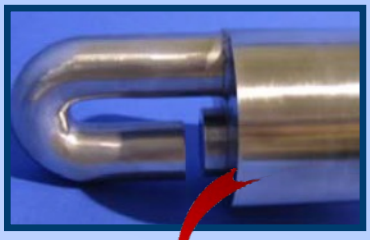
Control Crystal Size • Avoid Secondary Seeding • Avoid Spontaneous Seeding

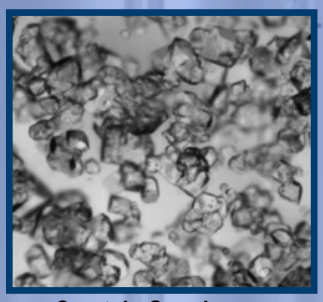
Control of Crystallization is one of the most important factors effecting product yield and quality. Image based particle size and concentration uses high speed imaging sensors with a resolution down to .7 micron to capture the particulate in real-time. Analysis can be accomplished in pipeline or in a crystallization reactor.

The Crystalscope (above) mounts to the head of the vessel, and features an insertion length based on the depth of the reactor. Light is guided via fibre optic to the tip of the insertion probe, where a microscopic camera is positioned to capture images of the crystals from the nucleation stage, through to growth completion

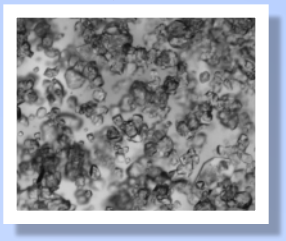


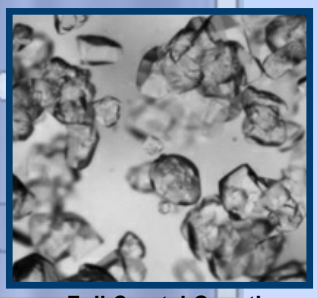
Seeding - Sizing from 0.7µm



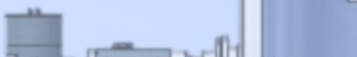


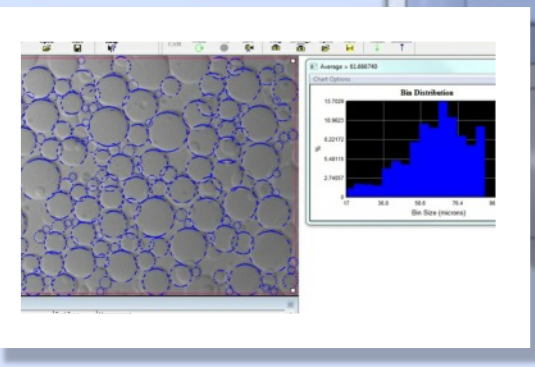
Crystals Growing





Full Crystal Growth





EPS / Bead Production

A vessel mount system can be used for real time image capture during the production of polymer beads. The captured images are analysed by CantyVision™ software, to provide a complete bead size distribution through the complete process, allowing for greater control over final product size. Applications include pentane injection and end bead size. Also see Solid Particle Sizing for dry bead sizing.

Glass Reactor Microscope

The Glass Reactor Microscope - GRM (right) allows for full visualization of smaller lab scale crystallization processes. It features a unique optical flat section for representative image capture. The reactor itself is jacketed reactor to allow for controlled heating & cooling, while the lid includes several spare ports for additional instrumentation that may be used during any tests or experiments.

CANTY CrystalScope™ Advantages:

- Real-time crystal size analysis
- Crystal distribution by major, minor diameter, area, perimeter, aspect ratio, circularity.
- Crystal size & shape
- Crystal count
- Density of crystals
- Detection of seeding problems
- Automated temperature & vacuum controls during crystal growth
- Increased