

**JM CANTY**

## **Bead Growth Monitoring in Process**

**Objective:**

The following test results describe simulated in-process particle size measurement of semi transparent particle growth out of solution.

**Test:**

Sample 1 and Sample 2 as tested are product cuts from two different points in the process where a known difference exists in the particle growth. This is evident visually and confirmed by software calculation.

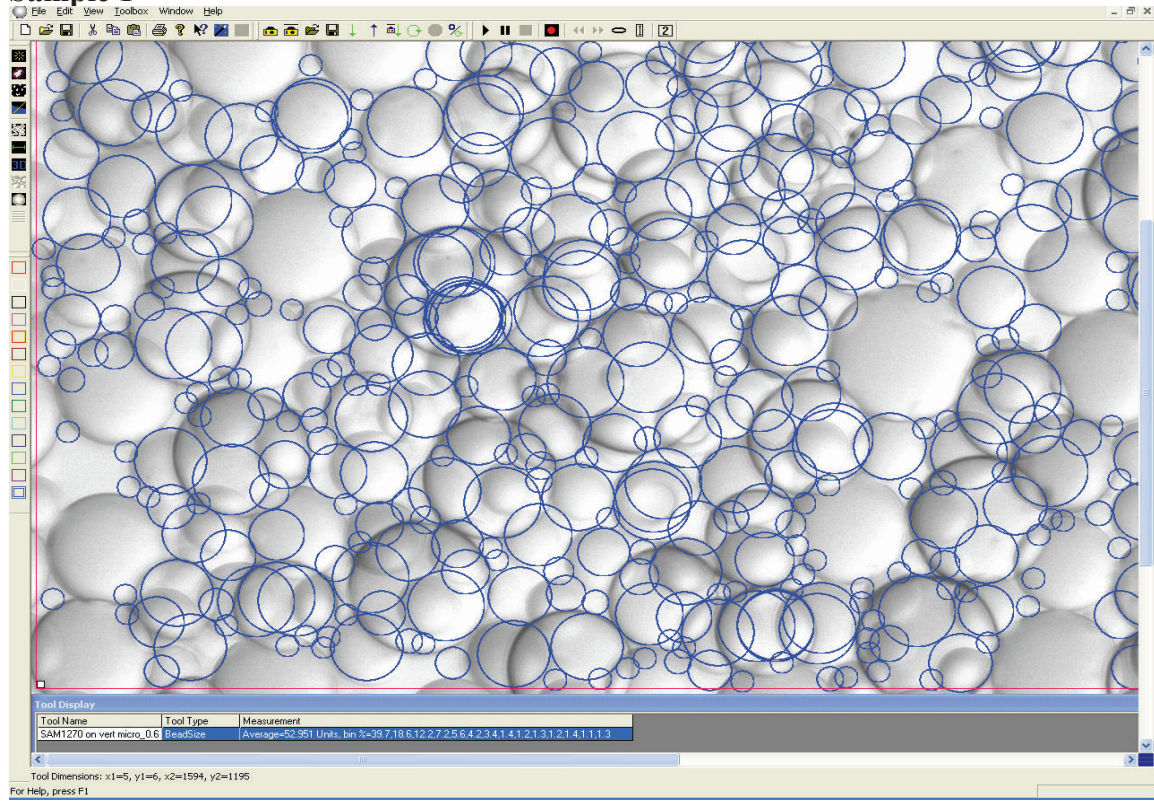
Testing was done using a Canty Micro Flo system. The Micro Flo creates the same particle presentation and illumination field as a Canty Process Microscope which would likely be the preferred instrument for in process use. The product sample flows through the cell and is backlit over a thin, adjustable gap which is set for approximately 2-3 times the size of the largest particle. The software used is a Canty developed algorithm that is able to pull out particle diameter information from “clean” and “murky” images. The images included in this report are quite good, however the Canty system can perform well even when analyzing semi transparent particles that are forming from an opaque liquor.

The noticeable differences between sample 1 and sample 2 are as follows:

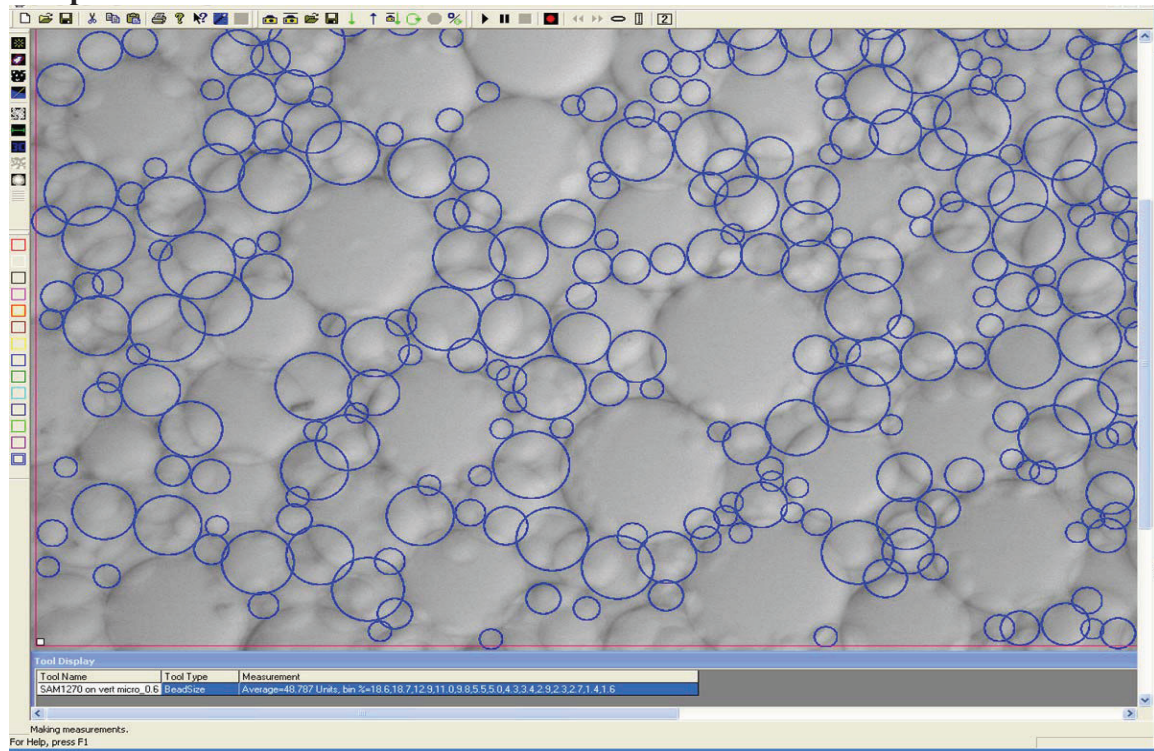
1. Sample 1 shows more detections in the smaller bead sizes.
2. Sample 2 shows more detections in the large bead sizes.

This is easily confirmed visually as well. Included below are some images of each sample. Based on the customer input and the resultant data obtained Canty is confident this is an excellent application for this specialized hardware/software system.

# Sample 1



# Sample 2



**Results:**

Sample	Sample 1	Sample 2	
Average Size	82.4	104.7	