



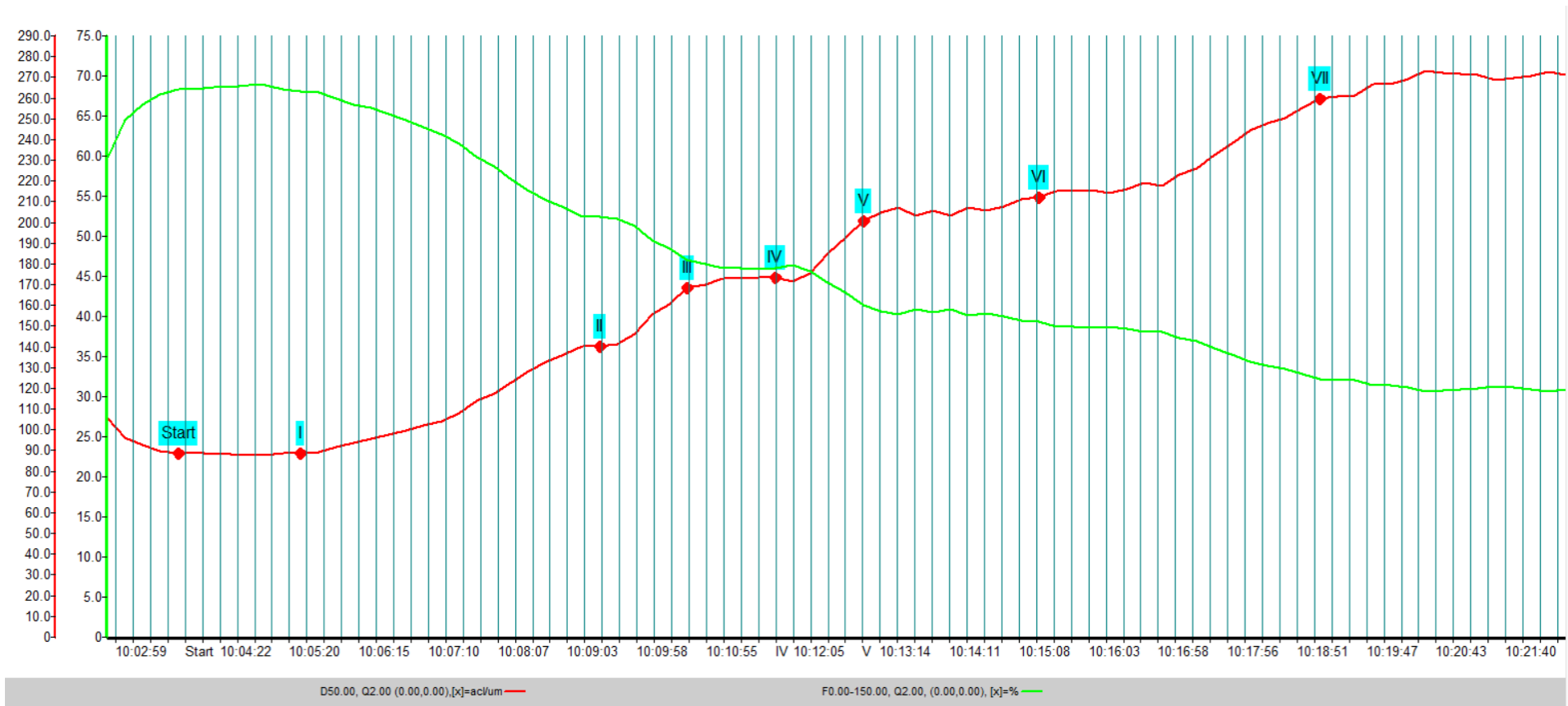
SEQUIP
IN PROCESS PARTICLE-SIZE POPULATION

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02.04.2020

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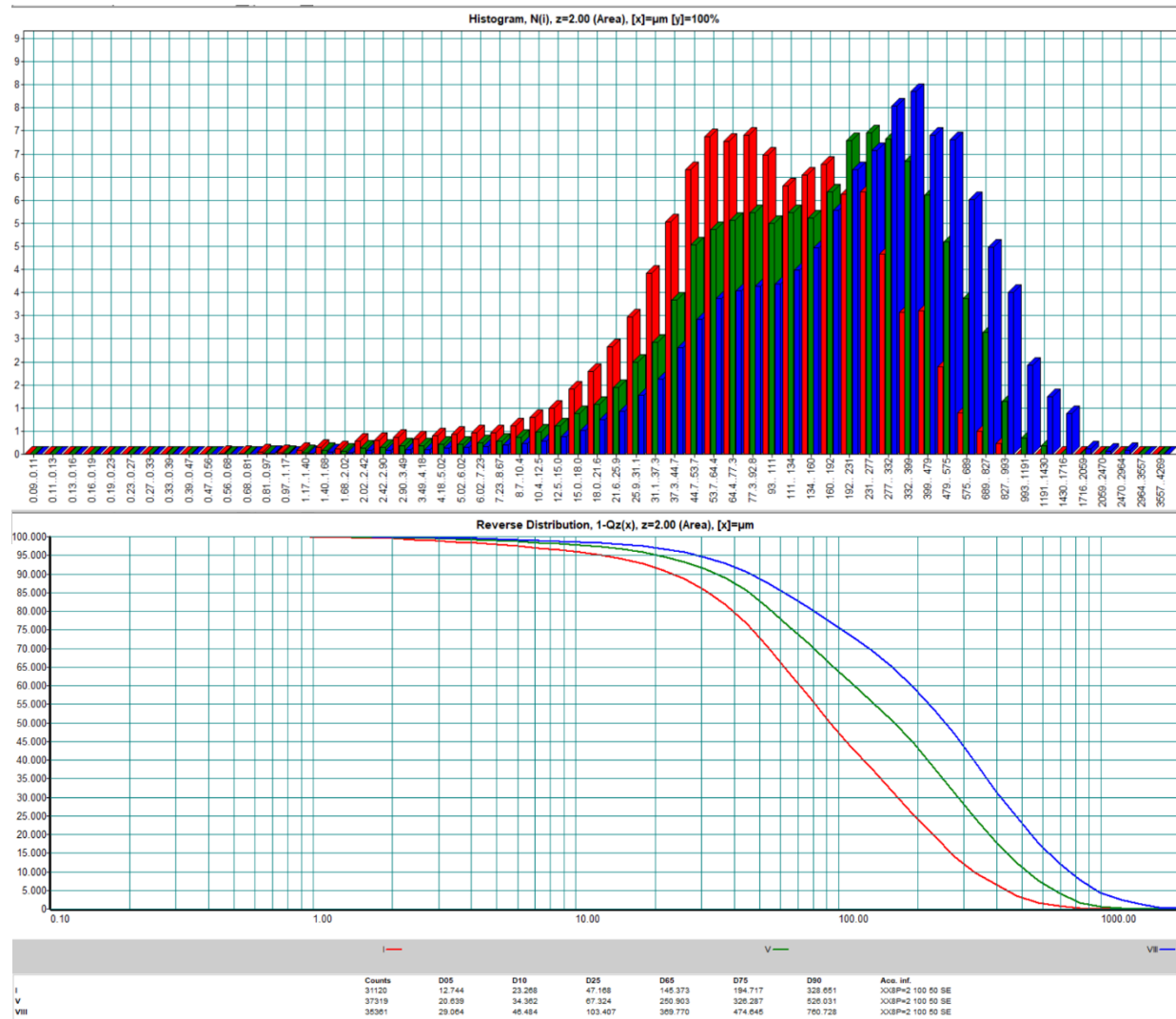
Flocculation



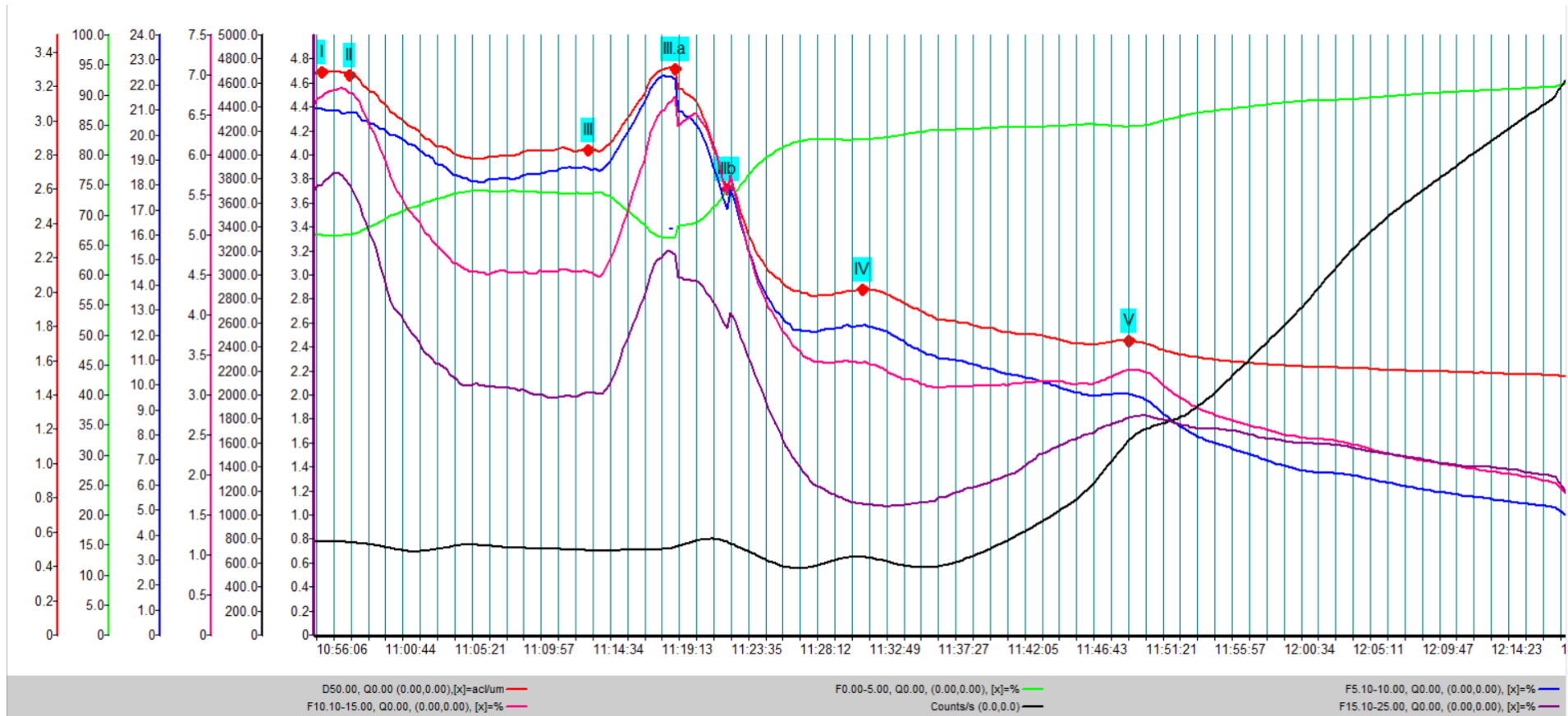
This trend only shows the most important fractions for the production. After the first measurements it turned out that the quality and quantity were ideal as long as both fractions are in the area between annotation III and V. The particle sizes between 0-150 µm are reduced from 70% down to 45% while the D50 rises from 90µm to 170µm. Besides, the customer expected the particle sizes from 2000µm – 3000µm to be critical.

Explanation of annotations

- I. Adding flocculant
- II. Adding flocculant
- III. Good & fast production
- IV. Adding flocculant
- V. Worse & slower production
- VI. Adding flocculant
- VII. Adding flocculant



Microcapsule



The challenge to control this process of microcapsule is the short amount of time. To adjust deviations from the specifications, by the speed of the mixer or the amount off added acid, there is only the small period between annotation III. and IV. It turned out that the condition of the mix, before the acid is added, almost determines the final quality of the product. Due to this testing the customer realized that the preparing process offers the highest potential for an optimization of the product quality.

Explanation of annotations

I. Basic Mixture estimated

II. Homogenisation by mixing. Mixing speed is continuously raised from 420 rpm to 490rpm until III.

III. Adding AS

III.a & III.b remarkable changes within the particle size distribution.

IV. Change of grow rates.

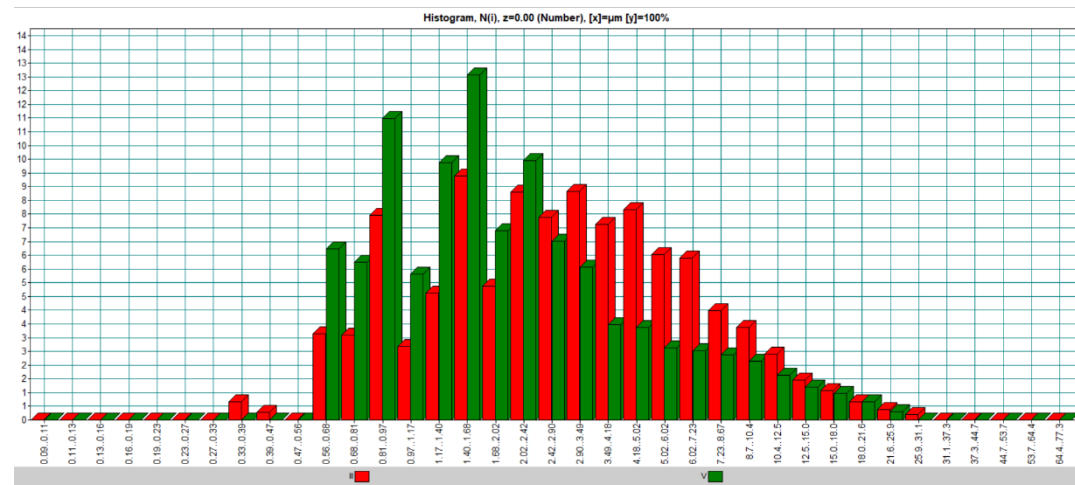
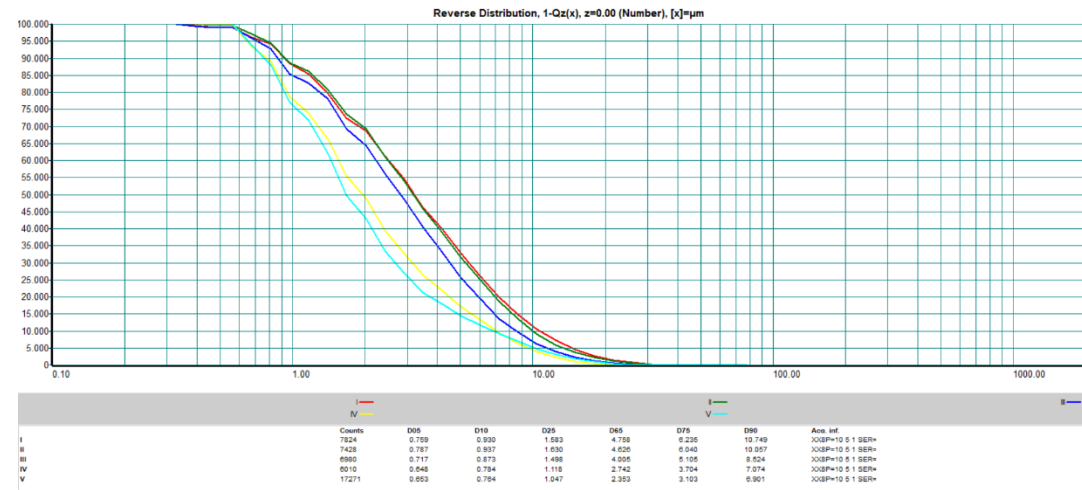
Strong growth of the count rate

The Fraction 15-25 μ m is growing faster than before, while the Fraction 10-15 stays on the same level.

Fraction 5-10 and the D50-Value start to drop.

Fraction 0-5 μ m slowly grows.

V. Stabilisation of the particle size distribution



Benefits

New insights of the characteristics of products and processes offer the possibility to

- Keep a constant high product quality
- Manage deviations from the specifications immediately
- Optimise the period of the production processes
- Optimise the setup time
- Optimise the feed of materials and additives
- Minimise waste and deficient products