SAC NEDERLAND B.V.OUDE
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2 hours 33 minutes dust collection on a sunny day without wind

Monday the 7th of June 2021was a nice day without wind. In the afternoon large amounts of bio material had gathered under some trees near my house. Only interesting day to see if we can catch some deposition.

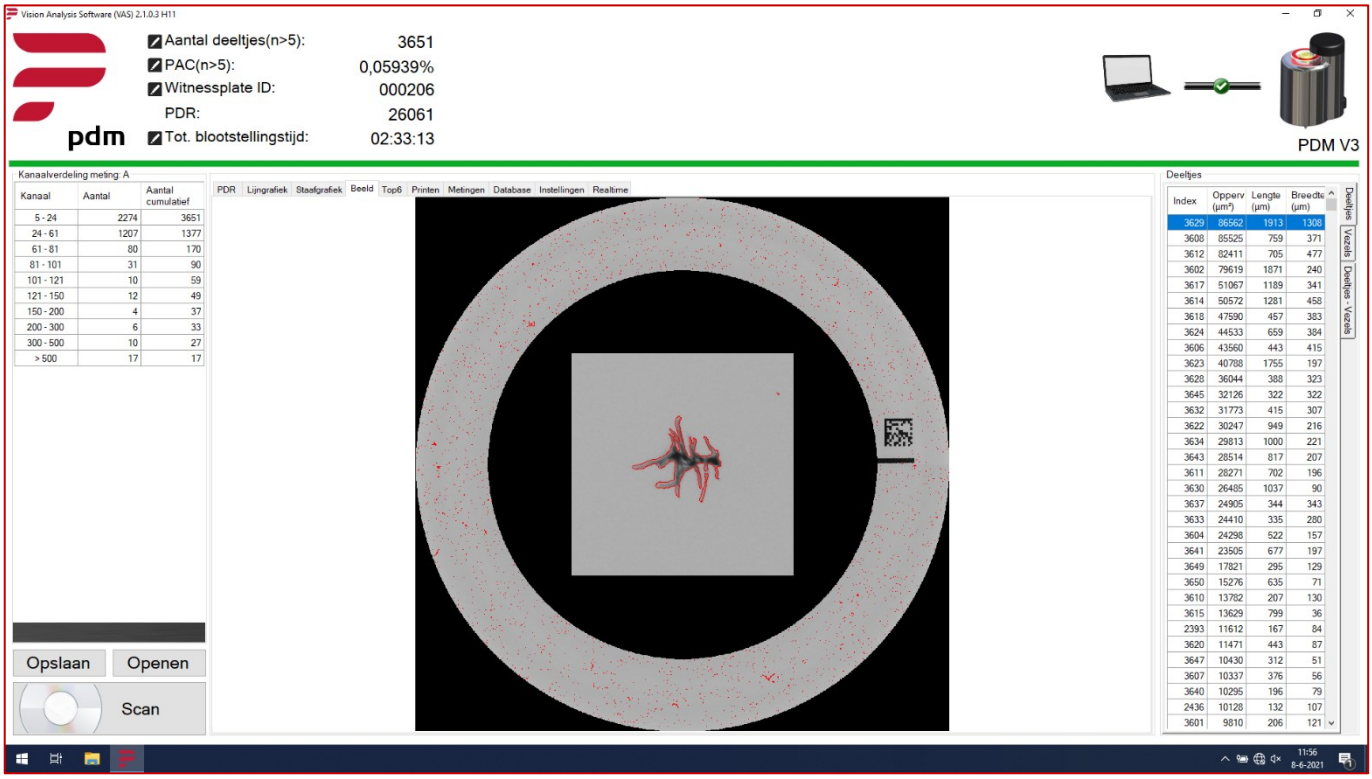
A witness plate in an exposure box was exposed just outside our office see what happens. The container

around he bottom part of the exposure box was used as Stokes Chamber.

The screenshot below is of a measurement carried out with the Mask method software and a PDM III. The Image tap is opened and the donut shaped exposure area is visible. Particles found are enhanced and visible as red items. The image in the middle is the largest particle found, longest diameter is 1.9 mm.

The total amount of particles is 3651 and 37% is in the range between 5 and 24 micrometer. Still 17 particles had a longest size of over 0.5 mm.

The small open square on the donut surface shows the position of the large particle in the middle. Any particle can be viewed, al 3651 just hover around.



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TOP 6 IMAGES

1	2	3
4	5	6

The numbering of the images is according the pattern to the left. The six images are chosen because of the area covered by the particle shown. If area is a parameter for the non-wanted property of the particle one can say that the above are the leaders in the horror list. All parts are scaled. Dimensional information has to be taken from the table on this page.

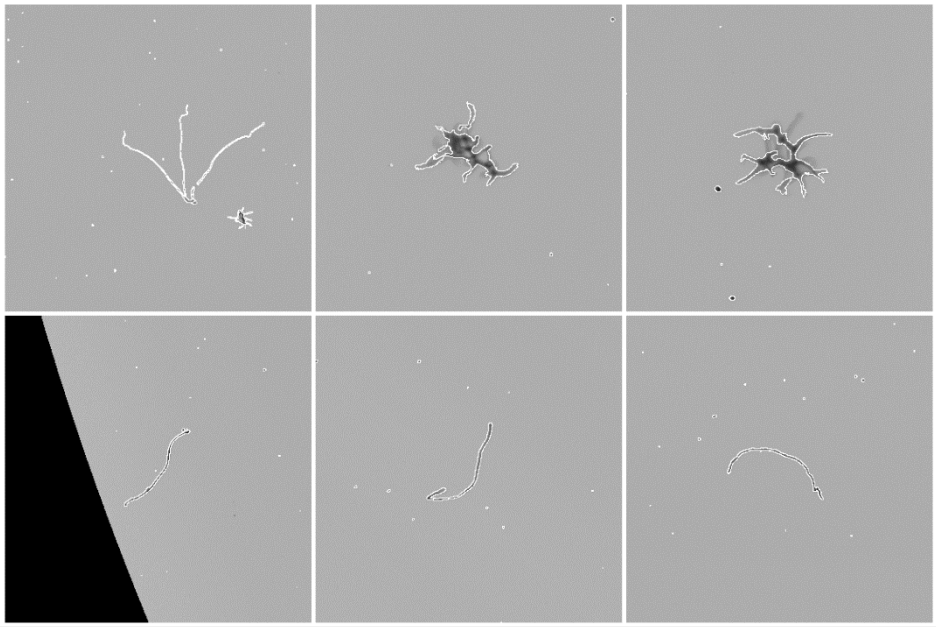

IMAGE 1
This image shows a fiber, looks like some helicopter blades for transporting seeds.

IMAGE 2
This is a typical image of a fiber curling in the air. The software does see this as one large particle in the segmentation engine. The fiber detection algorithm does detect that it is a fiber because of it's shape.

IMAGE 3
This is also a fiber. The non-enhanced parts indicate the fiber is even larger and has a 3D structure.

IMAGE 4-5-6
These images show fibers with a box width of 1.2 to 1.8mm.

TABLE
In the table information is shown about the particles. The list is sorted by surface. According to the definition of the size the "Dutch lengte" is the particle size.

GENERAL
In the tap Image (Dutch "Beeld") a viewer is available. By means of hovering over the particle list on the right hand side it is possible to see every single particle. The position of the particle on the disk will be indicated as well by a hook appearing on the donut image. Zoom in and zoom out works as well. Please note that an image of a 5 micrometer particle does not shown details as it covers not even a 3x3 pixels area.

The glass disk can be used for further microscopic inspection with a device capable of zooming in further. Overall the inspection is a nondestructive inspection.

Deeltjes

Index	Opperv (µm²)	Lengte (µm)	Breedte (µm)
3629	86562	1913	1308
3608	85525	759	371
3612	82411	705	477
3602	79619	1871	240
3617	51067	1189	341
3614	50572	1281	458
3618	47590	457	383
3624	44533	659	384
3606	43560	443	415

Deeltjes | Vezels | Deeltjes - Vezels

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