

## Measuring of Dry Pigments

SALD-7101with BC-71

### Alternative instruments and accessories leading to similar results:

- SALD-2300 with BC-23



### Measurement

A small amount of the pigment was suspended in 100ml of isopropanol. A few droplet of the suspension were dropet into the batch cell until a sufficient high light intensity at the detector could be seen.

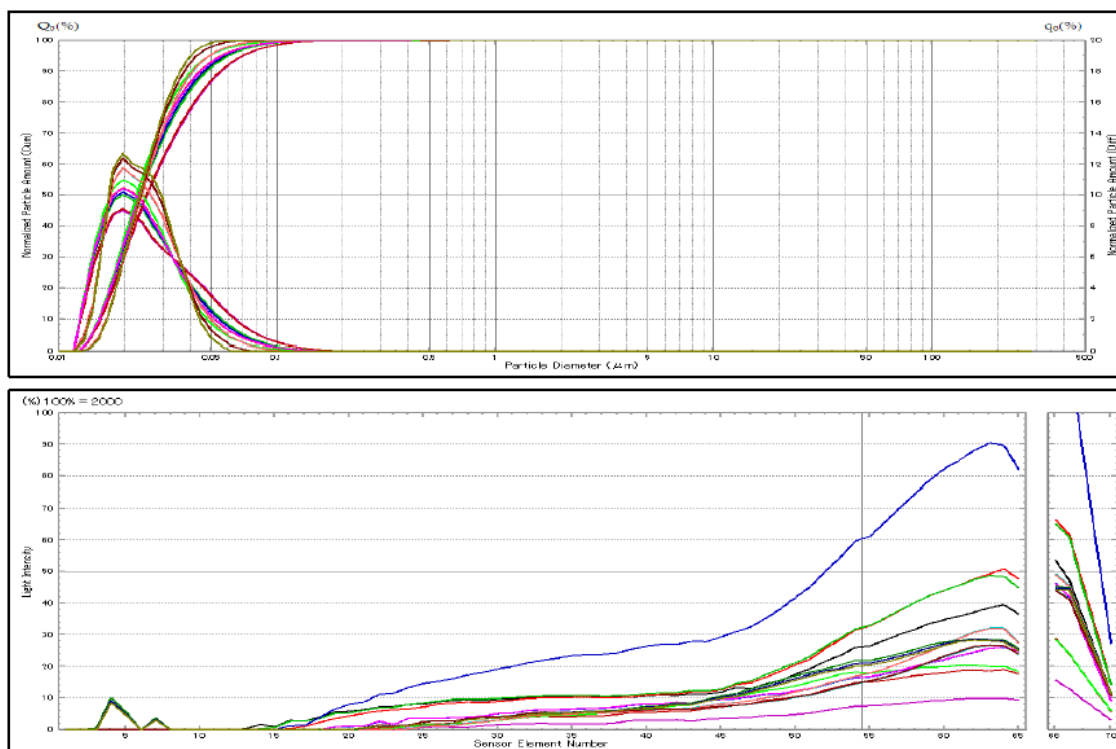
### Discussion

Even nanoparticles like pigments with an diameter of less than 50 nanometers can be measured successfully with Shimadzu SALD-7101.

### Background

For millenia, humans have beautified their world, adorned their bodies and clothing, decorated their dwellings, and expressed their thoughts by painting. Pigments are the basis of all paints, and have come from natural sources from the beginning of time through today.

## Results



	Median D (μm)	Modal D (μm)	Mean V (μm)	Std Dev	25%D (μm)	50%D (μm)	75%D (μm)	0%D (μm)	0%D (μm)	0%D (μm)	0%D (μm)	0%D (μm)	0%D (μm)
1	0.024	0.022	0.025	0.191	0.018	0.024	0.033	0.000	0.000	0.000	0.000	0.000	0.000
2	0.023	0.022	0.025	0.184	0.018	0.023	0.032	0.000	0.000	0.000	0.000	0.000	0.000
3	0.024	0.018	0.026	0.194	0.018	0.024	0.033	0.000	0.000	0.000	0.000	0.000	0.000
4	0.024	0.022	0.025	0.188	0.018	0.024	0.033	0.000	0.000	0.000	0.000	0.000	0.000
5	0.025	0.018	0.028	0.215	0.019	0.025	0.038	0.000	0.000	0.000	0.000	0.000	0.000
6	0.025	0.018	0.027	0.214	0.019	0.025	0.038	0.000	0.000	0.000	0.000	0.000	0.000

7	0.023	0.022	0.024	0.169	0.018	0.023	0.030	0.000	0.000	0.000	0.000	0.000	0.000
8	0.023	0.022	0.025	0.185	0.018	0.023	0.032	0.000	0.000	0.000	0.000	0.000	0.000
9	0.023	0.022	0.025	0.185	0.018	0.023	0.032	0.000	0.000	0.000	0.000	0.000	0.000
10	0.024	0.022	0.025	0.157	0.019	0.024	0.031	0.000	0.000	0.000	0.000	0.000	0.000
11	0.024	0.022	0.025	0.156	0.019	0.024	0.031	0.000	0.000	0.000	0.000	0.000	0.000
12	0.024	0.022	0.024	0.138	0.019	0.024	0.030	0.000	0.000	0.000	0.000	0.000	0.000
13	0.024	0.022	0.024	0.138	0.019	0.024	0.030	0.000	0.000	0.000	0.000	0.000	0.000
14	0.023	0.022	0.024	0.129	0.019	0.023	0.030	0.000	0.000	0.000	0.000	0.000	0.000
15	0.023	0.022	0.024	0.129	0.019	0.023	0.030	0.000	0.000	0.000	0.000	0.000	0.000
16	0.023	0.022	0.024	0.129	0.019	0.023	0.030	0.000	0.000	0.000	0.000	0.000	0.000

The graph above shows a volume based particle size distribution with a peak at ~24nm. The lower graph shows the light distribution spread over the single sensor elements. To check the reproducibility of the measurement the pigment was measured several times.