



The dilution of large droplets is significant when measuring highly concentrated droplet aerosols. Since large droplets are challenging to dilute, standard systems only work up to a size of 1 - 2 μm . The dilution system LDD 10 (dilution factor 10) is the first system to dilute almost loss-free large droplets up to 10 μm

OPERATION PRINCIPLE

DILUTION SYSTEM FOR LARGE DROPLETS UP TO 10 μm

The good dilution factor of large droplets was tested with monodisperse DEHS droplets (oil) of different sizes. The results for the sizes 5 μm and 7 μm are shown in Table 1.

Particle size	Number counts without dilution	Number counts with dilution	Dilution factor
5 μm	64475	6505	9.91
7 μm	32443	3063	10.59

Table 2: Dilution of monodisperse DEHS droplets with LDD 10

Chart 1: Dilution of monodisperse DEHS droplets with LDD 10

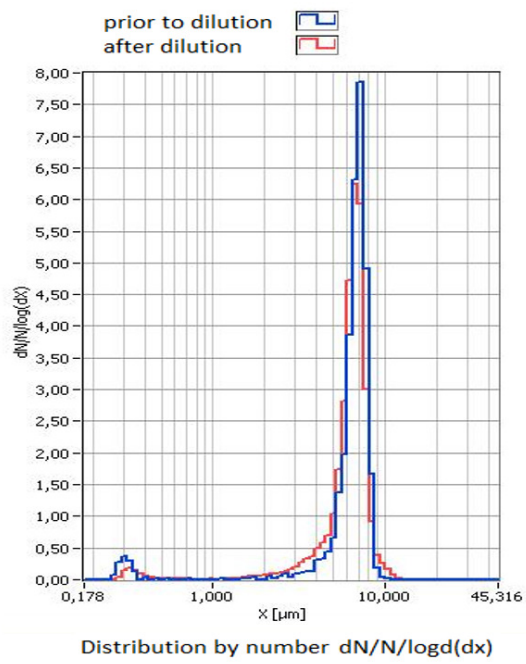


Fig. 1: Distribution of LDD 100 (7 μm)

BENEFITS

- Defined dilution of large droplets of factor 10
- Proven dilution factors 10 and 100 for droplet sizes up to 7 μm
- Easy connection with Promo® and welas® digital aerosol spectrometers
- Internal pump for on-site operation
- Insensitive to pressure fluctuations of ± 200 mbar
- Simple handling
- Robust, durable, low maintenance
- Cost effective

APPLICATIONS

- Measurement of blow-by aerosols according to ISO 17536
- Dilution of compressed air
- Measurement of cooling lubricant aerosols



Mehr Informationen:
<https://www.palas.de/product/ldd10>