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LSPG 16890

Aerosol generator for KCl and other salt particles up to 10 μm based on ISO 16890

Description

With the conversion of the test standards for the general room air filters from EN 779 to ISO 16890, an additional test aerosol (KCl) with particle sizes of up to 10 μm is required, which remains stable even at low flow rates. Palas® is the first manufacturer to produce such an aerosol for the testing of filter media. The LSPG 16890 enables stable and reproducible atomization of NaCl and other salt solutions. The new KCl aerosol generator meets the high Palas® quality standards and is already available as a generator in the test benches of the MFP system according to ISO 16890 of Palas® GmbH. Chart 1 shows the particle count distribution of the KCl aerosol measured with the Promo® aerosol spectrometer of the MFP 3000 G test stand. The requirements of the ISO 16890 guideline of at least 500 counts per size interval are met. Chart 1: Number measured with the

x in μm	Measured number
0,3 - 0,4	30130
0,4 - 0,55	22225
0,55 - 0,7	12739
0,7 - 1,0	12566
1,0 - 1,3	3386
1,3 - 1,6	5291
1,6 - 2,2	4278
2,2 - 3,0	3636
3,0 - 4,0	2703
4,0 - 5,5	1571
5,5 - 7,0	1020
7,0 - 10	618

Table 2: Number measured with the Promo® aerosol spectrometer

Promo® aerosol spectrometer Figure 1 shows the comparison of six different size distributions with respect to the number of particles dN measured with the Promo® aerosol spectrometer. The sampling time of each measurement is 55 seconds. As the figure shows, the LSPG 16890 provides extremely stable dosage constancy over the measurement period and can therefore be used as the basis for a reliable and fast filter test.

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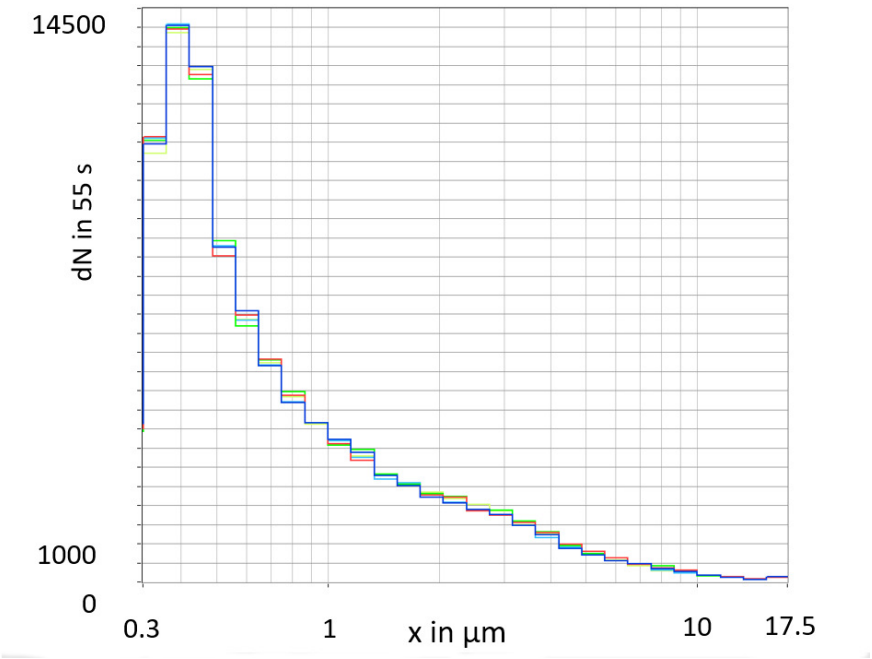

Fig. 1: Reproducible particle size distribution from KCl up to 10 μm in the MFP 3000

LSPG 16890 Benefits

- High number of **large salt particles** up to **10 μm** with KCl
- **Highest reproducibility** with regard to particle size and particle concentration
- Particle discharge with the bipolar discharge path CD 2000
- For **air volume flows** from **20 l/min** up to **600 l/min**
- No corrosion, as main components including dispersion nozzle are made of plastic (POM)
- Direct connection to MFP system
- Simple handling
- Robust, durable, low maintenance
- Cost effective

LSPG 16890 Applications

- Fraction separation efficiency determination for flat filter media in accordance to ISO 16890
- Production of a large quantity of coarse salt particles up to a size of 10 μm
- Laboratory equipment for the generation of salt aerosols