LSPG 16890



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 to test filter media. The LSPG 16890 enables stable and reproducible atomization of NaCl and other salt solutions.

Operation principle

Aerosol generator based on ISO 16890

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.

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

Chart 1: Number measured with the Promo® aerosol spectrometer

Figure 1 compares six different size distributions concerning 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 aerosols over the measurement period and can be used as the basis for a reliable and fast filter test.

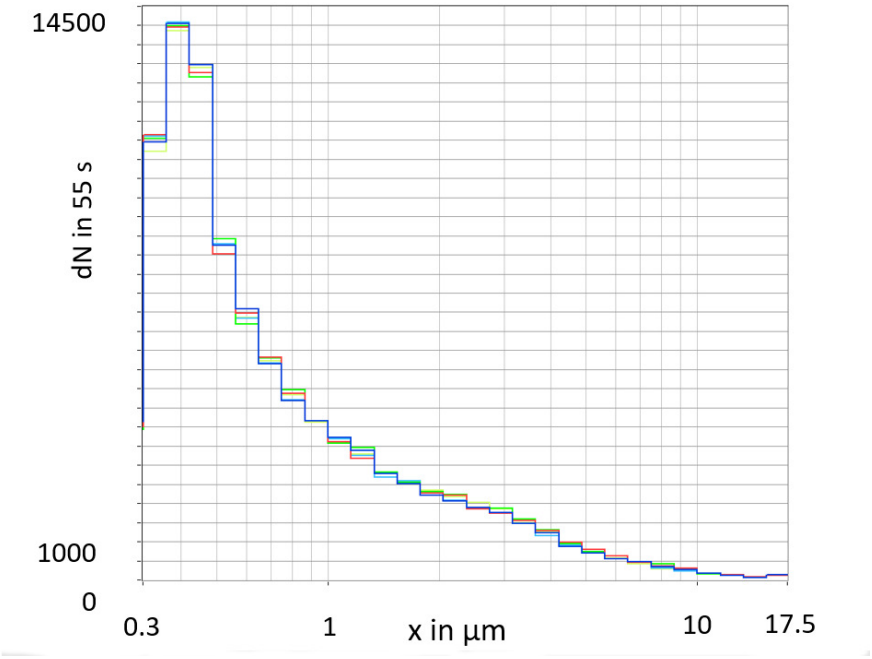


Fig. 1: Reproducible particle size distribution from KCl up to 10 μm in the MFP 3000

Extensions/Accessories

MassFlowControllers supply compressed air for the dispersion nozzle and the discharge section (not included in the scope of delivery).

BENEFITS

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

NORMS AND CERTIFICATES

ISO 16890

APPLICATIONS

- Fraction separation efficiency determination for flat filter media in accordance with 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

Mehr Informationen:
https://www.palas.de/en/product/lspg16890