

DIN EN ISO 28439:2011-07 (E)

Workplace atmospheres - Characterization of ultrafine aerosols/nanoaerosols - Determination of the size distribution and number concentration using differential electrical mobility analysing systems (ISO 28439:2011)

Contents		Page
Foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Symbols and abbreviated terms	6
4.1	Symbols	6
4.2	Abbreviated terms	7
5	Principle	7
6	Equipment	8
6.1	General	8
6.2	Sampling line	8
6.3	Pre-separator	9
6.4	Particle charge conditioner	9
6.5	DEMC	9
6.6	Aerosol particle detector	9
7	Measurement strategy	10
8	Measuring procedure	10
8.1	Preparation	10
8.2	Sampling	11
9	Presentation and evaluation of data	11
10	Check of DMAS performance	12
10.1	Check on particle classification	12
10.2	Check on particle number-counting efficiency	12
11	Problems and errors	12
11.1	CPC (CNC) counting efficiency	12
11.2	Particles with multiple charges	13
11.3	Sampling losses	13
11.4	Uncertainties	14
11.5	Overloading	15
11.6	Sampling of fibres	15
11.7	Humidity	15
11.8	Maintenance	15
Annex A (informative) Methods for determining exposure		16
Annex B (informative) List of manufacturers (non-comprehensive)		17
Bibliography		18