

ISO 13322-1:2014-05 (E)

Particle size analysis - Image analysis methods - Part 1: Static image analysis methods

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions and list of symbols	1
3.1	Terms and definitions	1
3.2	Symbols	4
4	Preparation for image capture	5
4.1	Introduction	5
4.2	Procedures	5
5	Sample preparation demands for method description	6
5.1	Sample splitting and reduction	6
5.2	Touching particles	6
5.3	Particle distribution	6
5.4	Number of particles to be counted	6
5.5	Particle suspending fluid	7
6	Quality of captured images	7
6.1	General	7
6.2	Pixels per particle	7
7	Image analysis	8
7.1	General	8
7.2	Size classes and magnification	8
8	Counting procedure	9
8.1	General	9
8.2	Particle image edges	9
8.3	Particles cut by the edge of the measurement frame	10
8.4	Touching particles	11
8.5	Measurements	12
9	Calculation of the particle size results	12
10	Calibration and traceability	12
10.1	General	12
10.2	Recommendations and requirements	13
11	Accuracy	14
11.1	General	14
11.2	Reference materials	14
11.3	Instrument preparation	14
11.4	Qualification test	15
11.5	Qualification acceptance	15

12	Test report	15
	Annex A (informative) Estimation of the number of particles to be counted for a given accuracy	17
	Annex B (informative) Common segmentation methods for particle edge detection	22
	Annex C (informative) Flow chart showing a typical image analysis method	23
	Bibliography	24