Particle Analysis System with Manual Stage Microscope

Particle Size Analyzers

21CFR PART 11 COMPLIANT
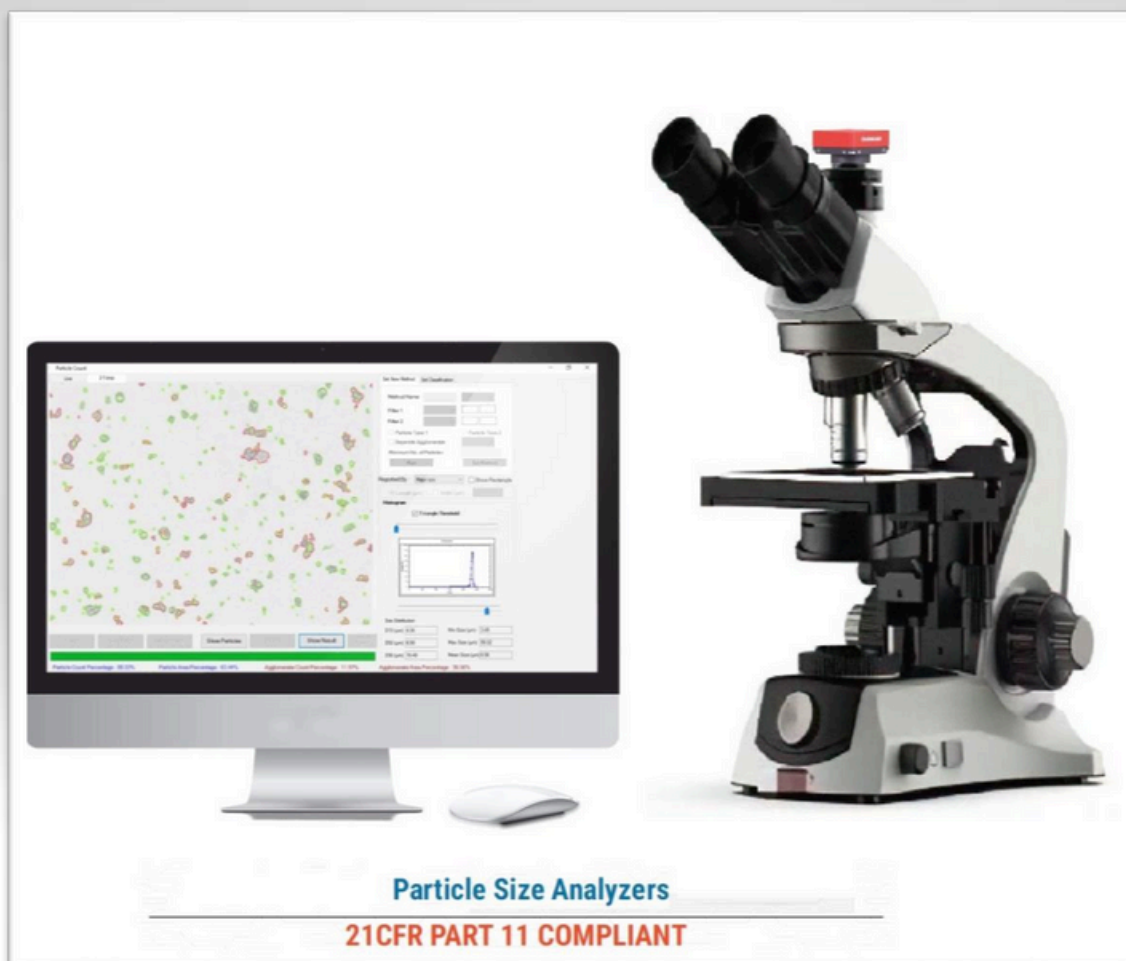
Code No.	Description
MIC-TR	**Mapple**-MIC-TR-E:
Stand and Viewing Body	Main Body Single mold Aluminum stand with hand rests for enhanced comfort and stability with quadruple nosepiece, coarse/fine focus knobs on both sides, mechanical rack less stage right handle, LED illuminator base.
Trinocular Tube	0.55X relay lens, Inclination: 30°, Pupillary distance: 48 - 75 mm
Eyepieces	Wide field 10x/22mm eye-pieces with rubber eyecups.
Objectives	DIN Plan Achromatic objectives 4x, 10x, 40x (spring loaded), 100x (spring loaded, oil). Antifungal and antireflection coated
Mechanical Stage	Rack less X axis, double plate stage size 200 x 140mm, X/Y travel range 90mm x 50mm. Low drive right hand movement controls. Hard coated surface for scratch resistance. Double specimen holder clip.
Condenser	Sub stage Abbe condenser NA 1.25 with aspheric lens. Iris diaphragm with blue daylight filter. Rack and pinion movements on stainless steel guides.
Focusing	Coaxial coarse and fine focusing on ball drive system for smooth operation
Illumination	Transmitted: Halogen 6V-20W or 3W LED illumination with variable illumination control. Up to 2,000 hours of Halogen (20W) lamp life and 100,000 hours of LED life.

Part II: Particle Size & Shape Analysis and Distribution System

A. Hardware A.1 Digital Color Camera (5 Mpixel)

Model: MPL-CAM

Features :

⬜ Automatic gain control (AGC)
⬜ Automatic exposure control (AEC)

Sr. No.	Description	Technical Specification
1	Image Sensor	1/2.5" type CMOS
2	Effective picture elements	2592 x 1944 (H x V)
3	Maximum Frame Rate	5.8 at high resolution
4	Pixel Size	2.2 X 2.2

A.2 Camera adapter specially designed Camera Adapter

B. Particle Analysis Software (Multi Field Analysis)

Package software for particle analysis dedicatedly developed for scientific applications. Software broadly has following features

B.1   Acquisition
Capturing of set of images in pre-defined folder with single clicks

B.2   Batch Run
Swift Batch Run (processing multiple images in one go) for effective and faster processing of large number of images captured

B.3   Particle Size Analysis (PSA)
⬜ Customized Method development as per standards
⬜ Identification and isolation of particles depending on size (0.3 µm and above), shape and color.
⬜ Measurement– Simultaneous Measurement of all the particles in set of images for their total count, length, width, area, perimeter etc.
⬜ Particle Size Distribution with customized size classes.
⬜ Individual particle morphological parameters like AED, CED, Aspect Ratio, Circularity, Roundness and Sphericity etc.
⬜ Intelligent Agglomerates (connected particle) Separation

D values – Software shall compute and report all D values from D1 to D100

B.4   Report
Reports shall be generated to offer all D values D1 to D100.