

COMMODITY DESCRIPTION

HS No.	Item No.	Commodity Description	Unit	Q'ty
9027.50.9000		Dispersion Stability Analyzer	Set	1

A. Features

1. Automatic measurement of concentrated liquid dispersions (emulsion, suspension, foam) stability without dilution using multiple light scattering technology
2. Vertical scanning via reading head consisting of pulsed near infrared light source and two synchronous transmission & backscattering detectors
3. Qualitative and quantitative monitoring capabilities of dispersions evolutions as the time elapses and temperature changes
4. Determination of the instability phenomena such as particle size variation (coalescence or flocculation) and particle migration (creaming or sedimentation)
5. Characterization of dispersions evolutions parameters:
Backscattered (BS) and transmitted (T) light flux, λ/λ^* (photon mean free path), Φ (volume fraction), s (specific surface), l (mean distance between particles)
6. Characterization of dispersions evolutions kinetics:
BS & T variations, phase thickness, particle migration velocity, hydrodynamic diameter, λ/λ^* , Φ , s , l versus time
7. A variety of applications from a simple stability control to a quantified analysis
8. One acquisition every 40 μ m along the whole sample height for high vertical resolution and fast measurement within 20 seconds per scan
9. Data acquisition in "scan" and "continuous" modes, and "fixed position" mode with multi-step programmable acquisition interval and duration of analyses
10. Easy sampling and preservation of the tubes to temperature up to 100°C, to centrifugation up to 2000G, and to autoclave
11. Automatic sample tube recognition with bar code reader
12. Global stability kinetics and stability index for easy comparison available
13. Wide temperature control range from RT to 60°C for test under severe conditions
14. For small volume of sample, 4mL measurement cell should be available

B. Specifications

1. Analysis method: multiple light scattering technology
2. Particle size measurement range: 0.05 to 1,000 μ m
3. Concentration range: up to 95 volume percent for emulsion

4. Temperature control range: RT to 60°C with accuracy $\pm 0.5^\circ\text{C}$
(with Optional cooler : $+4^\circ\text{C}$ to 60°C)
5. Measuring Unit:
Emission; pulsed near infrared light (880nm)
Detection; transmission & backscattering photodiodes
6. Sample requirement: maximal volume 22mL
7. Sample cell: flat bottomed glass cell, disposable
8. Measurement repeatability: $\pm 0.05\%$ or less for automatic measurements
9. Data acquisition:
Scan mode; up to 250 programmable scan or up to 50 continuous scan
Fixed position mode; frequency from 0.1 to 60 sec or up to 5 hours analysis with the fastest frequency

C. System Configurations

1. Analytical Unit (Model: Turbiscan LAb Expert) 1 set
Complete with standard accessories
1 x CD (software, application notes, publications, user guide)
1 x Power supply cable
1 x RS 232C cable
1 x Measurement cell assembly (100 pieces)
1 x Standard materials (Teflon and silicone oil)
1 x User guide (paper format)
1 x Sampling rack
2. Control/data management module (Local Supply) 1 set

D. Optional Accessories

1. Cooler for regulating temperature of Turbiscan LAb Expert down to 4°C 1 set

E. Remarks

1. Warranty period: One (1) year after installation
2. Installation and operation training shall be executed by certified engineer free of charge
3. Control/data management module shall be supplied here in Korea