Supply Of Sample Preparation Kit
(Millipore Contamination Analysis Kit)

VACUUM / PRESSURE PUMP

This Oil free pump is a portable AC powered source of vacuum for filtration of liquids.

HYDROSOL SST FILTER HOLDER, 47MM

Used for vacuum filtering of liquids. Consisting of Funnel, base and support screen which are made of SS, anodized locking ring, Teflon gaskets, grounding set and silicon stopper.

DISPENSING PRESSURE VESSEL

Dispensing pressure vessel is used to hold solvent fluids. It is connected to vaccum pressure pump which creates pressure to spray solvent fluids through the filter jet solvent dispenser.

VACUUM FILTERING FLASK, 1L

Used for vaccum filtration with filter holder. Side arm connects to vaccum source with vaccum hose. Also used as water trap to prevent (liquid/mist) entering the pump

FILTER JET SOLVENT DISPENSER

Used to spray concentrated jet of ultra cleansolvent on surfaces of components for cleaning.
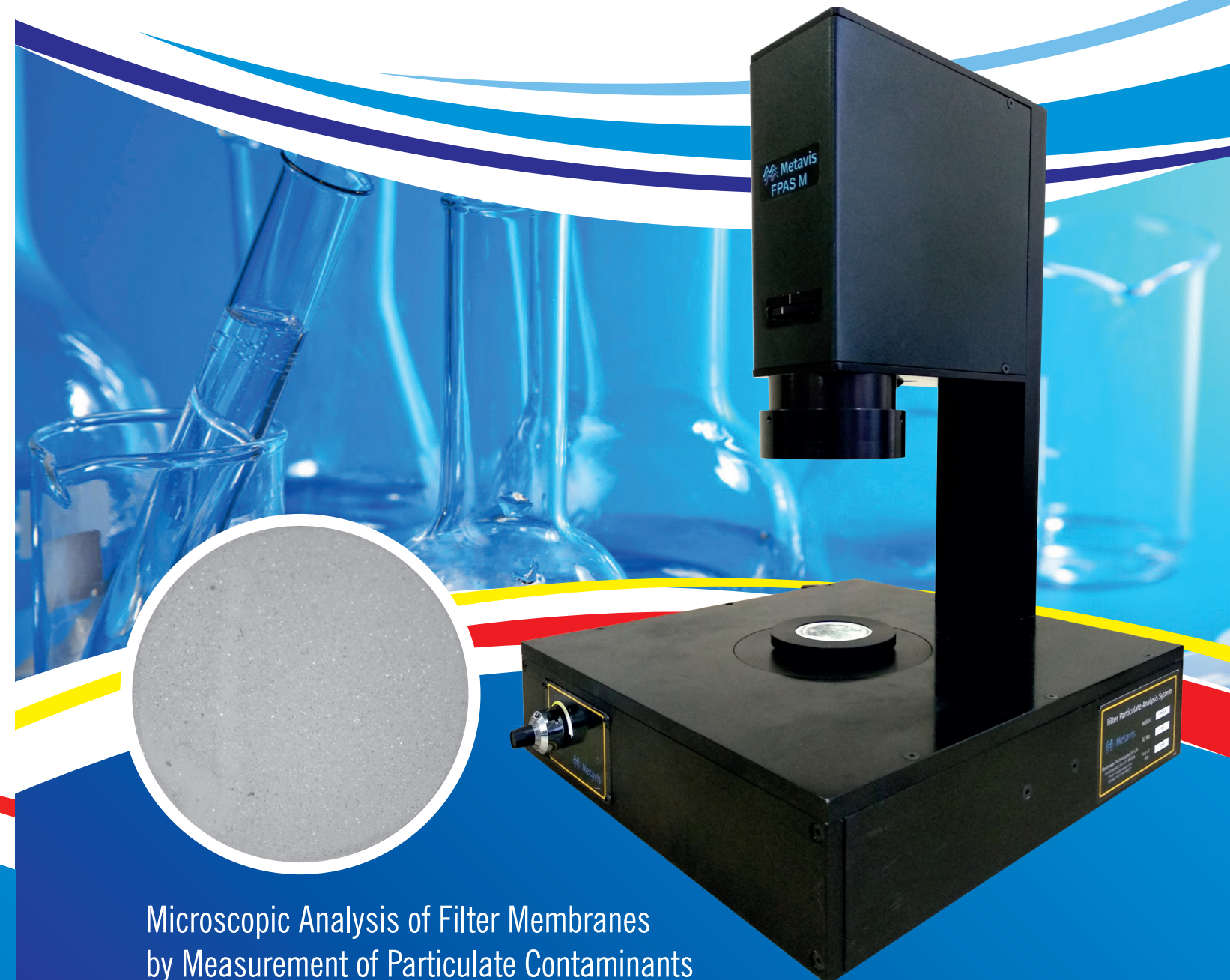
PETRI SLIDES

Recommended for storage of filter samples comes in packets of 100 above.

Metavis

FPAS-M
Filter Particulate Analysis System

Microscopic Analysis of Filter Membranes by Measurement of Particulate Contaminants in cleaning of automotive components

Introduction

The FPAS-M image analysis based particulate counting System is being offered to fulfil the requirements of automotive industry for measurement of cleanliness levels of the manufactured components.

The presence of particles residue from the manufacturing and assembly process will cause a substantial increase in wear rates of the system during initial run up and early life and may even cause catastrophic failures. Hence in order to achieve reliable performance of components & system, it is necessary to have control over the amount of particles introduced during the build phase.

The System

The consists of
- High resolution optics
- Precision engineered Stand
- High resolution microscopy camera
- Filter sample holder
- Latest high configuration computer
- Advanced proprietary software for particle counting & classification as per industry standards.

Particulate analysis sofware

The advanced particle analysis software detects, counts and measures all the particles present on the surface of the filter. The detected particles are automatically classified into metallic, non metallic and fiber types. Each type of particles are further divided into different size classes ranging from 100 to 1000μm & above

Methodology

The automotive component received after the manufacturing & cleaning process are taken to the lab where they are sprayed with a solvent fluid (IPA) using a high pressure spray gun.
The solvent fluid is collected in a pan and the same is passed through a membrane filter. The residual particles are collected on the filter.
The filter is dried in an oven. the dried filter is held in a special filter holder.
The ntire filter surface is imaged by the high resolution camera and optics.

Methodology

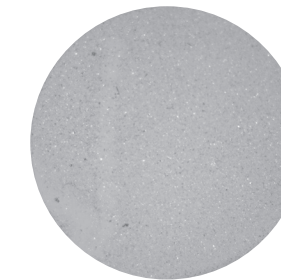|		
Particles Size	:	$\leq$ 25 μ
Time taken per filter	:	3-4 minutes Approx
Filter Holder	:	For holding standard Dia 47 Filters
Computer	:	Computer with 19" monitor
Software	:	Advanced user friendly softeare for Particulate Analysis

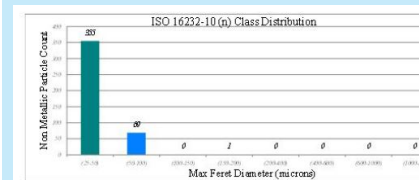# Professional reporting, Compliance with international standards

Sample No :	XYZ	Date :	04.04.18
Sample Type :	Filter Paper	Microscope :	FPAS-M S.No.XXX
Manufacturer :	ABC	Examiner :	METAVIS

Analyzed Area (mm2)	1017.9
Total Filter Area (mm2)	1296

Non Metallic Particle Classes

Metallic Particle Classes

SLNo	Feret Max Low (um)	Feret Max High (um)	Particle Count	Normalized count
1	25	50	0	#VALUE!
2	50	100	0	#VALUE!
3	100	150	0	#VALUE!
4	150	200	0	#VALUE!
5	200	400	0	#VALUE!
6	400	600	0	#VALUE!
7	600	1000	0	#VALUE!
8	Above 1000		0	#VALUE!
	Total Particle Count		0	#VALUE!

Metallic Particle Classes

Metallic Particle Classes

SLNo	Feret Max Low (um)	Feret Max High (um)	Particle Count	Normalized count
1	25	50	0	#VALUE!
2	50	100	0	#VALUE!
3	100	150	0	#VALUE!
4	150	200	0	#VALUE!
5	200	400	0	#VALUE!
6	400	600	0	#VALUE!
7	600	1000	0	#VALUE!
8	Above 1000		0	#VALUE!
	Total Particle Count		0	#VALUE!

Fiber Particle Classes

Fiber Particle Classes

SLNo	Feret Max Low (um)	Feret Max High (um)	Particle Count
1	100	150	0
2	150	200	2
3	200	400	0
4	400	600	0
5	600	1000	0
6	Above 1000		0
	Total Particle Count		2

Parameters of largest particles
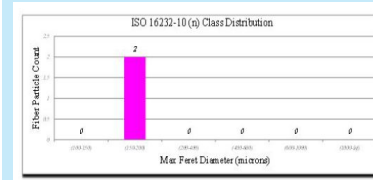
Parameters of largest particles

SLNo	Feret Max (um)	Area (um 2)	Perimeter (um)	ECD (um)	Particle Type
1	1,590.6	163,746	7,216	456.6	Fiber
2	1,234.5	124,215	6,071	397.7	Fiber
3	520.5	14,953	1,649	138.0	Fiber
4	462.0	43,805	2,031	236.2	Non Metallic
5	433.4	35,857	2,671	213.7	Non Metallic
6	368.5	37,388	1,654	218.2	Non Metallic
7	323.2	23,146	1,146	171.7	Non Metallic
8	269.5	8,756	1,109	105.6	Non Metallic
9	248.0	14,071	920	133.9	Non Metallic
10	228.1	11,414	748	120.5	Non Metallic