PAMAS
Partikelmess- und Analysesysteme

PAMAS FastPatch 2 GO digital image analysing system for membrane filter analysis

Picture: StockXchange

PAMAS S50DP online particle counter with integrated dilution system

PAMAS specific measuring devices for particle analysis of emulsions and highly contaminated liquids

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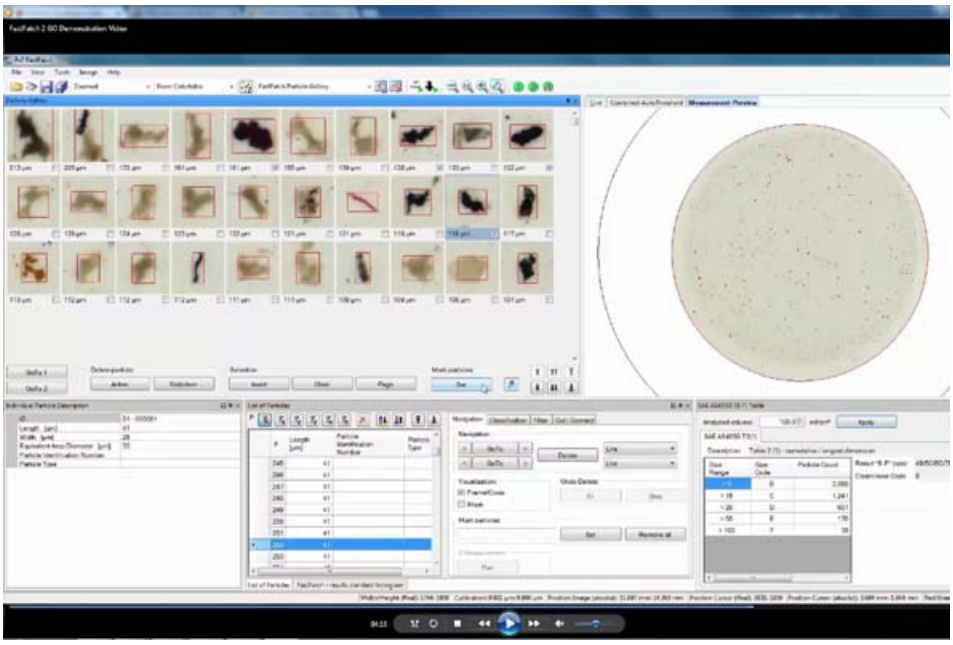
IN THE WORLD OF PARTICLES PAMAS COUNTS

PAMAS specific measuring devices
Particle analysis of emulsions and highly contaminated liquids

There are some fluids like e.g. emulsions, highly contaminated liquids or dark fluids, which are not easy to analyse using an automatic, laser-optical particle counter. If the sample liquid is too cloudy, too few particles are counted. In this case the laser light of the sensor is absorbed before it can reach the photo diode. So, the typical measurement results would be far too low; in very extreme cases, only one single particle would be measured in each size channel in cumulative particle counts. Due to lacking transparency, the sensor then cannot analyse the sample liquid at all.

To avoid erraneous measurements, PAMAS has developed two measuring instruments: The **PAMAS S50DP** online particle counter is equipped with an integrated dilution system that automatically dilutes the sample before measurement. Prior dilution increases the fluid's clarity and enables to analyse the sample using optical particle counting technology through laser light.

The sample dilution however is possible only up to a certain degree. Too much dilution modifies the particle concentration of the sample. As a consequence, the statistical relevance of the analysis is affected. Due to dilution, few larger particles would completely disappear from the measuring result.



The PAMAS FastPatch 2 GO image analysing system is the ideal instrument to measure dark and highly contaminated fluids. The automatic microscope system produces quick and accurate analytic results with the length and width of each particle recorded.

Before measurement with the PAMAS FastPatch 2 GO, the filter patch is framed into a holder.

For this reason, even after dilution, highly contaminated fluids with an extraordinarily high amount of contaminants cannot be analysed with an automatic particle counter, since the measuring result would not be statistically relevant. Optical particle counting technology also comes up against limiting factors when analysing emulsions, since it is impossible to distinguish the immiscible liquid droplets contained in emulsions from the solid particles, i.e. from the relevant particulate matter that is of interest in particle counting. For the analysis of emulsions, two phase liquids and highly contaminated liquids, PAMAS offers its own microscope system. The **PAMAS FastPatch 2 GO** system analyses particles trapped on the surface of the filter membrane and measures the length and width of each single particle. The user can capture images of any particles of interest on the filter membrane and add them to the end report with the dimensions of each particle displayed. The end report also includes an overview of the entire effective filtration area analysed depicting the chosen particles location on the filter patch. The PAMAS FastPatch 2 GO system provides results to international cleanliness standards including SAE AS 4059 F, NAS 1638, ISO 4406 and ISO 16232. If the user requires, the instrument is able to measure particles according to any user defined or customer specific standard.

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