

## Analytic Solutions for Pharma Industry

### TOC in Ultrapure Waters

Laboratory and on-line Sievers-Suez TOC analyzers are with a sensitivity from 0,03 ppb bench-mark for monitoring of organic pollution of ultrapure waters.



Thanks to a CO<sub>2</sub> permeable membrane separation of the measuring cell accuracy is not influenced by water conductivity caused by inorganic trace compounds.

TOC reading is not influenced by chemical composition of the organics.

### Monitoring of powder products in pharma production lines

On-line spectrometric analyzers help to maintain quality of Solid Dose Manufacturing processes. Several spectrometric probes can be connected to a common unit, or a battery powered, WIFI connected spectrometer can rotate with powder mixers to monitor homogenisation.



The main applications are Homogeneity, Binder addition, Granule growth, Moisture, Uniformity, Potency, Coating thickness and Process end point monitoring in Granulation, Drying, Blending, Encapsulation, Compression and Coating stages of the process.

### Monitoring of Clean Rooms in compliance with EU GMP Annex 1

Optical Particle Counters designated for clean rooms with possibility of a real time microbial detection



Portable OPC instruments with bar-code identification of the monitored location

Real time microbial activity analyzers allowing to monitor aseptic during manufacturing and “fill-finish” facilities



CPC instruments to monitor fine particles in compressed gases

Stationary OPC instruments which can be optionally equipped with built-in pump, or LoRa communication (for up to 100 m wireless connection in buildings)



FMS data systems with OPC UA Client/Server Protocol



### Innovative H<sub>2</sub>O<sub>2</sub> V-Phase Biodecontamination Solutions

6 log viable reduction in every cycle in controlled or classified environments with vapor phase hydrogen peroxide biodecontamination



Most compact H<sub>2</sub>O<sub>2</sub> up to 200 m<sup>3</sup>/h vapor generator



Mobile H<sub>2</sub>O<sub>2</sub> vapor generator to be applied inside or from outside of decontaminated area. Compliance to SW CFR 21 part 11



H<sub>2</sub>O<sub>2</sub> generator for OEM applications



### Clean Process Gases

Analytic equipment to monitor cleanness, or contamination of medical gases



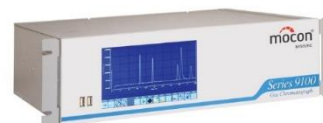
### TOC in Venting Systems

FID analyzers to monitor hydrocarbons in process area venting systems



### Working Area Monitoring

Monitoring of concentration of toxic gases in working area



### Waste Water Monitoring

Analytic solutions to monitor waste water from pharmaceutical production processes  
Protection and optimization of waste water treatment plants



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