# **Technical Information:**

Date:	May 18 <sup>th</sup> 2004
Subject:	New PAA Sensor Package
Product:	Dulcotest / Dulcometer
Category:	PAA Measurement
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From mid May the new measuring package for on-line measurement of PAA will be available. (PAA = Peracetic Acid ) This package consists of the D1C controller with identcode letter "A" for PAA and the new single PAA sensor.

If you have any questions or comments on this info or the information contained on the attached PowerPoint presentation, please contact Michael McNulty

New sensors available are :

PAA 1-mA-200ppm PAA 1-mA-2000ppm.

This measuring station will replace the existing Perox - PAA system. Spare parts for old Perox-PAA will still be available.

Together with this Technical Information, a **PowerPoint** presentation is also included. The presentation contains the following :

- Description of measuring package
- Installation, calibration, maintenance
- Features of Peracetic Acid
- Applications (including link list in www)
- Sales arguments
- Field test
- Competitors, competitive methods
- Marketing

The PM HD English equipment catalog 2004 already contains the information for sensors and controller. The following accessories however were not listed.

- Electrolyte for sensor type PAA 1: 1023896
- Membrane cap for sensor type PAA 1: 1023895
- Accessory set for sensor type PAA 1: 1024022

The manuals for the D1C controller (identcode for PAA: "A") and the sensors PAA 1-mA-200ppm and PAA 1-mA-200ppm can be downloaded from the service page.

### Comparison New Perox V's Old PEROX PAA System

The sensor has undergone the following modifications :

- The 4 20 mA transmitter of PEROX PAA was integrated into the sensor shaft
- The external reference electrode of PEROX PAA was integrated in the sensor shaft
- The external temperature sensor of PEROX PAA was integrated in the sensor shaft
- Shaft material, instead of stainless steel, now CPVC is used

We now have one single sensor, which replaces the 3 sensors previously used.

All in all these modifications greatly simplify the handling of the measuring station.

Additional improvements with this new sensor are :

Resistance against surfactants, this allows the measurement to be done with PAA products which contain cleaning agents (surfactants)

Max. operating temperature up to 45 °C (Old Perox-PAA: 35 °C) this allows the application at elevated temperatures as e.g. sometimes in aseptic filling

#### Description of the measuring station

The measuring station consists of: Sensor PAA 1-mA with 4-20 mA-output signal. Dependent on measuring range, the following types are available

PAA 1-mA-200 ppm : 10- 200mg/l Part no. 1021596 PAA1-mA-2000ppm : 100 - 2000mg/l Part no. 1021595

In-line probe housings type DGMa and DLG III are compatible

D1C Controller with identcode "A" for PAA, which is very similar in hardware and software features to that for other amperometric sensors e.g. Chlorine / Ozone

The important identcode feature for D1C is **D1CaXXA70XXXXXX.** The number **7** stands for the connection of the sensor of the new PAA system. The number **0** stands for no temperature correction ( since temperature correction is automatically done inside the PAA sensor ).

The preferable calibration method is the "two step titration" carried out by the customer in a laboratory. This method is described in the appendix of the operating manual.

An alternative possibility for calibration is to fill a standard solution with known PAA concentration in the cup of bypass housing DLG III and stirring with a magnetic stirrer (accessory).

## Sales Arguments

Online determination of the PAA concentration enables reliable measurement of the concentration of PAA and via controlling also process optimisation / safety is achieved.

Accurate and reliable measuring/controlling without cross sensitivity to Hydrogen Peroxide (always present) and surfactants (sometimes present) without interference by a coloured or turbid medium.

Compared to laboratory methods, on line measuring/controlling enables: Costs saving of investment and operation

Reduction of expenses for personnel by automated operation with less maintenance (only supervising necessary)

#### **Marketing**

The disinfectant Peracetic Acid is often used instead of Chlorine Dioxide. With a broad applicable measuring / control technology for PAA, it is possible to offer customised, complete solutions for both disinfectant methods, consisting of measuring / control and dosing equipment.

#### Target customers are

Manufacturers and dealers of Peracetic Acid Operators Plant engineers

## Target application are

Cleaning in place (CIP), in target branches (see below) Aseptic filling in target branches (see below) Cooling tower (no specific branches)

### Target branches are

Food & Beverage Pharmaceuticals Dairies