

# CINAC

A unique system  
to control acidification  
in dairy processes



**ALLIANCE**  
INSTRUMENTS  
an AMS Company Brand

AUTOMATED ANALYTICAL SOLUTIONS FOR ENVIRONMENTAL & FOOD INDUSTRIES

# → Cinac

A reference analyzer to control lactic bacteria acid forming activity

The Cinac system, developed in partnership with INRA (LGMPA, lab G. CORRIEU) as requested by the major dairy groups, allows continuous monitoring of lactic fermentation acid forming activity, through the simultaneous observation of pH and temperature evolution in several samples in order to:

- **determine the acid forming characteristics** specific to the phylum studied,
- **evaluate and anticipate its impact** on process development,
- **examine the influence of various parameters**, on acid forming capacity: different media, temperature, etc.
- **define adequate inocula** (mixing of phylum, complementary characteristics, ...).



Unique, Cinac is very useful in R&D, to test, control and validate selection of starters, used in more and more complex products. It is also widely used in Process control and Quality control in various dairy processes (yogurts, cheese, specialties...).

## INNOVATIVE AND UPGRADABLE SYSTEM

Sensors other than pH and temperature (redox...) can be connected to the Cinac for additional information. The very high level of modularity will allow you to upgrade your Cinac in the future by adding extra measuring or control modules.

Latest innovation in the Cinac range:

- Portable Cinac (including analog outputs)
- On-line Cinac (Stainless steel IP 65 waterproof box)
- Buffering capacity
- Individualized follow-up of calibration coefficient of pH probes

## A MODULAR SYSTEM

Cinac allows a large number of measurement channels (pH, temperature, redox, conductivity...) in real time, and in variable and multiple channel configuration: from 16 to 32 measurement channels up to 16 regulation channels. Each channel is controlled independently, thus allowing multiple processing, independent of the number of channels used and independent of the time of day. Cinac performs several tasks according to the desired configuration, at a user definable acquisition frequency ensuring calibration validity of each individual measurement channel.

There is also now a simplified version, with fewer measuring channels but the same analytical capability, the Mini Cinac.



Mini Cinac with 8 pH channels and 1 temperature channel





Cinac with 12 pH channels, 4 temperature channels and 4 outputs module

## PROCESS SIMULATION

By programming a thermal cycle, the operator will be able to reproduce or simulate any modification of his process condition (temperature or pH variation), and compare, using a graph and/or the descriptors, the potential effects on the phylum studied.

Thanks to its output module, Cinac will be able to monitor conditions of each run by controlling temperature, pH, redox... versus time, temperature or pH of the sample...

## A TOTAL DESCRIPTION OF STUDIED STRAIN

In addition to the 3 available curves (evolution, speed and acceleration), Cinac software calculates in real time all feature points characterizing the studied strain, such as: pH at 4H, pH at 6H, time required to obtain pH 5, maximum speed, time span during which the speed exceeded the maximum speed by 50 %.

Each operator can define his own set of feature points, giving him a perfect characterization of each individual run.

All Cinac equipment installed are calibrated, standardized and compared to the reference unit, to ensure perfect reproducibility of the measurements and an optimum comparison from one Cinac system to another. Consequently, Cinac users speak the same language and even consider some descriptors as reference values.

Run	Temp	pH	Time	Speed	Acceleration
run 1	0.10	0.10	0.10	0.10	0.10
run 2	0.10	0.10	0.10	0.10	0.10
run 3	0.10	0.10	0.10	0.10	0.10
run 4	0.10	0.10	0.10	0.10	0.10
run 5	0.10	0.10	0.10	0.10	0.10
run 6	0.10	0.10	0.10	0.10	0.10
run 7	0.10	0.10	0.10	0.10	0.10
run 8	0.10	0.10	0.10	0.10	0.10
run 9	0.10	0.10	0.10	0.10	0.10
run 10	0.10	0.10	0.10	0.10	0.10
run 11	0.10	0.10	0.10	0.10	0.10
run 12	0.10	0.10	0.10	0.10	0.10
run 13	0.10	0.10	0.10	0.10	0.10
run 14	0.10	0.10	0.10	0.10	0.10
run 15	0.10	0.10	0.10	0.10	0.10
run 16	0.10	0.10	0.10	0.10	0.10

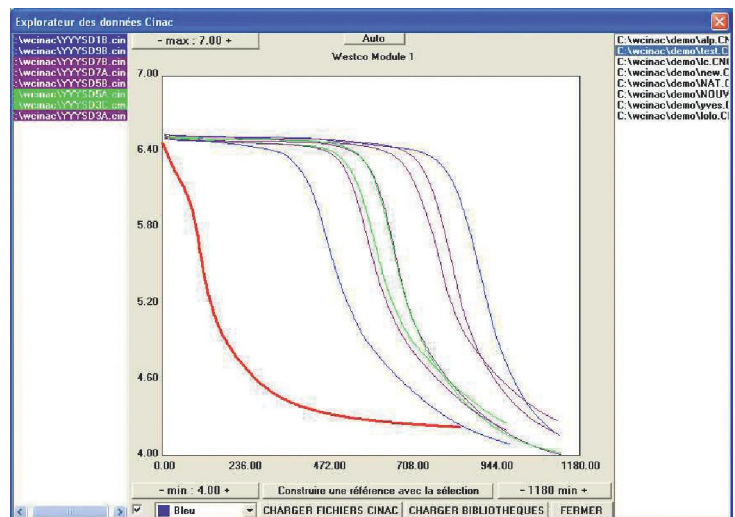
## A SPECIFIC WINDOWS BASED SOFTWARE

Don't waste time any longer on your datasheet, the Cinac software version 4 should give you, in real time, all the information you are looking for automatically:

- Manage the **temperature compensation**
- **Follow-up any set point** (Temperature, pH, Time...)
- **Drive** your water-bath (using the Outputs module)
- **Calculate all your feature points**
- **Save all data** in real time
- Draw all type of curves
- **Follow up the calibration** of your pH probes
- Create and manage your libraries (average curves, standard deviation...)

Compatible with all Windows versions, CINAC 4 software will work with all generation interfaces.

Run	Temp	pH	Time	Speed	Acceleration	...
run 1	0.10	0.10	0.10	0.10	0.10	...
run 2	0.10	0.10	0.10	0.10	0.10	...
run 3	0.10	0.10	0.10	0.10	0.10	...
run 4	0.10	0.10	0.10	0.10	0.10	...
run 5	0.10	0.10	0.10	0.10	0.10	...
run 6	0.10	0.10	0.10	0.10	0.10	...
run 7	0.10	0.10	0.10	0.10	0.10	...
run 8	0.10	0.10	0.10	0.10	0.10	...
run 9	0.10	0.10	0.10	0.10	0.10	...
run 10	0.10	0.10	0.10	0.10	0.10	...
run 11	0.10	0.10	0.10	0.10	0.10	...
run 12	0.10	0.10	0.10	0.10	0.10	...
run 13	0.10	0.10	0.10	0.10	0.10	...
run 14	0.10	0.10	0.10	0.10	0.10	...
run 15	0.10	0.10	0.10	0.10	0.10	...
run 16	0.10	0.10	0.10	0.10	0.10	...



# → Cinac

## Accessories available for your system

### ■ Output modules

4 or 8 logic outputs module, or 4 channel analog output board (installed inside a measuring module).



### ■ pH and redox probe

pH probe reliability is an essential factor of your Cinac system's proper operation. ALLIANCE Instruments offers you a complete range of pH probes famous for their quality and validated life time.



### ■ Temperature probe

A complete range of probes selected by ALLIANCE Instruments for their quality.



### ■ Other sensors on demand (conductivity...)



### ■ Cinac dimensions:

35 x 26 x 15 cm (L x W x H)

### ■ Cinac weight:

3,5 kg

### ■ Cables

In connecting the probes to the analytical system, the cables are essential for optimum signal transmission (mV for pH values). ALLIANCE Instruments offers you the best suited and most reliable cables.



### ■ Cleaning solution and buffers

A complete range of solutions for the perfect use of your pH probes and a perfect calibration prior to each run to reduce replacement frequency of your probes.



### ■ Water bath

According to your lab setup, various models are available. ALLIANCE Instruments will advise you or offer custom configurations.



AUTHORIZED DEALER

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