

Géminis[®]

INTEGRAL QUALITY APPLIED
TO FOOD INDUSTRY

Validation, HACCP,
Food Safety y Quality Systems Auditing



Géminis[®]

Procesos Alimentarios, S.L.

Services of Implementation, validation and standardized quality audit for food industry

(Applied Trustworthy quality – GÉMINA Procesos Alimentarios)



Gémina Calidad Integral is the Gémina Procesos Alimentarios consultancy department. It has 25 years of experience in the food sector, implementing processes and making food industrial processing equipment. This department has a high qualified staff which is committed to achieve the quality objectives completely and a firm dedication to the customer service.

Our wide experience shows that after implanting a qualified system, our customers get results such as an increase in productivity, fewer cost, bigger benefits, higher efficiency in the internal work and an increase in their customers satisfaction due to the quality and safety of their products.

However, implanting and adapting the standards required for costumers results very difficult for both, new creation companies and the established ones.

Big food chains demand that their suppliers are certified with a national standard that assures the food safety. One of the main aims of Gémina Calidad Integral is guiding our customers in their management and company adaptation and advising them in the process of adaptation to the main food security standards such as BRC, IFS or FSS; providing assistance in the implementation of the food safety management system, which is compounded by HACCP (HACCP), pre-requisites and control of the main processes. We offer advice and integral management



“Implementation of food safety management systems and validations of equipments and processes through validation protocols”



in the processed food quality area to small and medium-size companies just as to other major producers.

Besides, we give services of validation and process control to help our customers to provide themselves with objective and update evidences, maintaining successfully their certifications in international quality standards. In this way, our customers foresee possible disagreements regarding their production system and final product and, therefore, they can solve this problematic in advance, saving money and improving the quality in their products and processes.

The integral offer in quality is complemented offering to our customers the possibility of training their production and quality staff in self-monitoring systems based in Hazard Analysis and Critical Control Points, as well as in analytical techniques for processes control and quality assurance.

Our closeness, technical competence, wide experience and self-confident are some of the main features why our costumers place their trust into our equipments and services. .



#1 Global objectives

Some of our main objectives are offering to food production industries consulting services for implementation, maintenance and improvement of quality, including the management of procedures

To Carry out a systematic review of the food production activity of the company to evaluate the compliance of the required criteria by the main sector standards, BRC, IFS, FSSC through internal or first part audits.

Optimization, development and validation of process and packing equipment, besides of food processing processes.

#2 Provision of external services to food production companies



2.1 Implementation of international standards of quality assurance and food safety

One of our main aims is facilitate to small and medium size companies the establishment of quality and safety systems and complying with the basic requirements and those founded in standards such as BRC, IFS, FSSC ,etc. This procedure is carried out through:

Procedures to obtain food certifications

- Procedures with the health service to obtain health registry – (NRGSA) General Sanitary Register of Food for registration and modifications.
- Procedures of audits requests for international standards accreditation.

Counselling for the first establishment of auditable quality standards or expansion of productive activity

- **Initial diagnosis for implementation**

Establishment of deviations regarding to the requirements of accreditation standards of food quality and food safety.

Detection of breach of safety requirements in standards BRC, IFS, ISO2200, FSSC22000...

- **Implementation of safety standards (BRC, IFS, ISO2200, FSSC22000, ...)**

Efficient contribution to implementate the quality assurance standards in a safe way and in a short period of time (few than 6-8 months) through:

- **Development of previous requirements plans**

We carry out the execution of the HACCP general prerequisites in collaboration with the quality and production department of the company, considering the dangers coming from the work area and those in cross-contamination:

- Cleaning and disinfection plan
- Water monitoring plan
- Traceability plan
- Training of the staff in food safety area
- Equipment maintenance plan
- Allergens control plan
- Other plans such as: hygienic requirements for staff, suppliers control plan, cross contamination prevention plan or pest control plan.

- **Development of operational prerequisites plans**

Development of the operational requirements in HACCP (Hazard Analysis and Critical Control Point) and summary table for monitoring the CCP's (Critical Control Points) in collaboration with the Quality and Production departments of the company.

- **Critical Control Points Validation**

Validation of control measures in every Critical Point for assuring their efficacy and continuity according the HACCP plan in collaboration with the Quality and Production departments of the company.

- **Verifications and validations of production processes**

Realization of the internal audit prior to the certification process

Realization of Internal first party audits prior to those carried out by the accredited entity with multidisciplinary audit team. Execution of general internal audits for applying HACCP system prior to the official audit for certifying the standard "in order to obtain success in the final accreditation auditory", which deals with carrying out successfully the accreditation audit.

- Work checking according to The General Principles of Food Hygiene of Codex Alimentarius.
- Check on the use of codes of good practice of the Codex Alimentarius specific to the production activity of each company.
- Follow-up checking of the food safety area in food legislation.



2.2 Maintenance of the production facilities

Regular verifications of the operation of production equipment. Verification and calibration of equipment and measuring instruments used in food production processes. Assistance in the maintenance of quality accreditation. Previous first part audits for the maintenance of quality accreditations.

Monitoring of audits and deadlines for renewing and correcting the non-compliances.

2.3 Improvement of the quality in the food producer companies

Contribution to the continuous improvement of the quality of the making processes and the food safety for the food got through the PDCA cycle (Plan - Do - Check _Act):

- a)** Realization of audits to companies for checking the correct working of their HACCP plan. Detection/ Confirmation of the manufacturing processes which can be improved. Determination of the technical- economical objectives after the intervention of the **planned** activities and processes of improvement.
- b)** Counseling for the **realization** of changes to implement improvements.
- c) Verification** of the correct operation of the introduced improvements and fulfillment of the required objectives collecting objective data
- d) Act** analyzing the introduced improvements through the obtained objective data and comparing with the results of the operation of the processes before implanting modifications.

2.4 Implementation of quality statistical control programs for HACCP and Production

According to the principle n° 3 in the HACCP standard (establishing limits for each CCP) and the HACCP principle n° 4 (establish monitoring procedures), an analysis of controlling trends is required.

Prevention of non-compliances in the final product can be achieved acting over the monitoring of the processes through monitoring tables and capacity indicators. Detection in advance of non-compliances affecting in the cost reduction. Readjustments in the processes before these get out of control.

In order to validate new processes or those in which a modification has been introduced. Research on the minimization of the common causes of variation and on the capacity of new processes or those in which the assignable causes of variability have not been identified yet to get food with quality parameters within the specification limits.

In order to provide sampling plans to measure the quality levels which are acceptable in a process, a product or a set of this one, besides of the acceptance of raw material sets, selection of raw materials suppliers, etc.

2.5 Specialized technical training

Training in the implementation of self-control systems based on HACCP.

Training in analytical techniques in the quality control laboratory, design of experiments and statistical analysis of results.



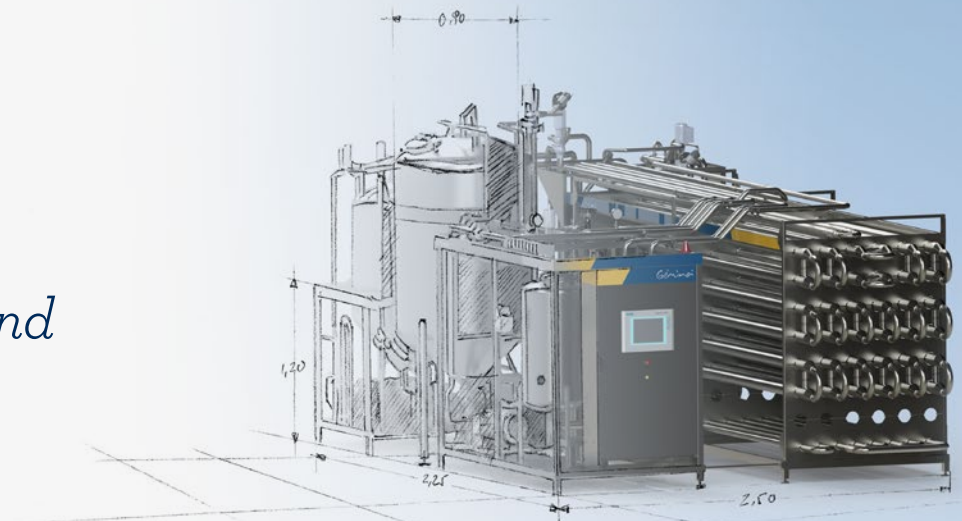
Our Company



GÉMINA Procesos Alimentarios, S.L. is located in Jumilla, Murcia, a spanish autonomous region which is a model in food production.

GÉMINA has 25 years of experience in designing, making and integration of systems which offer innovative solutions for the food sector industry.

You imagine and
we do it.



Business lines

Design and manufacture of machinery

- Design, manufacturing and integration of process equipment and food aseptic packing.
- The Manufacture is completely carried out in our installations.
- All our machinery has CE safety certificate and complies with the most exigent standards.
- I+D+i: We bet on technology innovation.

Engineering and design of processes: Projects management

In Gémina, we love our work and, therefore, our engineering department includes from the design, the calculation, the manufacture, the assembly, the automation and the start up of machines and installations. Therefore, we include a global and integral management of all our projects.

We care of every detail of the process and we advise our clients to optimize their product elaboration procedure. Gémina designs every process adapting it to the customers' requirements and standing out our customers' products among their competitors.

- Versatility and flexibility: we can plan from a plant, a simple line expansion to the installation of an equipment in a process.
- Ability of adaptation to different places and circumstances.
- Our engineering department has a big technical capacity and a long experience in this area.
- Gémina guarantees your success because we manage the whole project, reducing risks, costs and deadlines

Services Provided

1 - Technical assistance service: Alfa-Laval official technical and distributor service

- Maintenance service.
- Installation service.
- Calibrations.
- Replacement parts services.
- "Training" service.
- Online monitoring of production process and breakdown resolution.

2 - Automation and Robotics

- Automation of custom-made processes: integral solutions.
- Total Control of the process: SCADA systems, record and control of data.
- Custom-made robotics applications: different solutions for different necessities.

3 - Food Quality

- Optimization, development and validation of processing and packing equipment, besides of food elaboration processes.
- Consultancy for implantation of standards such as: BRC, IFS: ISO 22.000, FSSC...
- Product development [process + formula].

Customer Service

Gémína is characterized by its exclusive and permanent customer service. Our vocation is to become part in an operational way of the companies which we work.

Our closeness, technical competence, wide experience and self-confident are some of the main features why our costumers place their trust into our equipments and services.



Industries

Industrial sectors where GEMINA develops its projects:

- Dairy industry
- Tomato industry
- Juice and drink industry
- Vegetables and fruits industry
- Citrus fruits industry

Products catalogue

Aseptic fillings

Aseptic machine which fills metal drums with pre-sterilised bags which have pressurised cap. Besides, it also fills carton containers

Bag in box

Aseptic filling automatic feeding of pre-sterilized bags which have pressurized cap and a low volume (1-20 liters)

Extractors

Processing of a wide variety of products to get a puree free of seeds and peels.

Different methods of using: extractor or refiner

Heat exchanger

We offer all kind of models and designs, from single-tube to partial ones or rough surface exchangers.

Forced circulation evaporators

Concentrators which have great capacity and performance for products having great viscosity and a high content in solid matter.

Multiple stages which are adapted to the process and needs.

Hot/cold break units

These units process tomato puree and tomato paste guaranteeing the total or partial deactivation of the pectolitic enzymes and allowing the preservation of the pectine.

Laboratory pilot plants

Pasteurization and aseptic packing in the laboratory of small product samples, such as juices, soda drinks, vegetable creams, soups, etc.

Tubular pasteurizer

Project and constructive development of pasteurization plants adapted to different needs.

UHT

Low- acid liquid products ($\text{pH} > 4.5$ for milk $\text{pH} > 6.5$) are treated at 135-150°C for a few seconds with indirect heating or direct steam injection.

Heaters and coolers

Heating of products before getting through treatments such as refining or mixing. Cooling previous pasteurization treatments.

Cream extraction plants

Cream extractions of all types of fruits and vegetables, in both cold and hot extraction processes.

Aseptic Monoblock

Integration of an aseptic filling in a pasteurization plant, creating a compact, functional and versatile machine which is adaptable to a wide range of products.

Crusher

Defrosting of stored products such as fruit juices, fruit and vegetables pastes, creams, sauces and so on.

Piston Pump

It is conceived to pump viscous products, big particles of products (fruit in cubes or in pieces) or product which are sensible to shear stress.

Inverse osmosis equipment

Reduction of salinity of salty waters and sea waters.

Blending room / blending

Blending by recipes from database and transference of process parameters to pasteurizers.

Emptying of cans by aspiration

Unloading of metal cans and aseptic bags in blending rooms through emptying techniques in very few seconds.

Cip systems

Cip systems are used to carry out the chemical cleaning of food installations in a completely automatic way.

Processing tanks

Storage in aseptic packing tanks for high and low pH products, in liquid or viscous products.

Blending tanks

We have a wide range of vertical and horizontal tanks with different types of shaking and volumes. They are adapted to process needs.

Storage tanks

Storage rooms in stainless steel tanks having standard volumes or custom-made volumes.

Finisher or pulping machine

It refines crushed product to remove peels, stems and seeds.

Hammer mill

It is a grinder of pitted food (vegetables among others) for processing raw material.

Robotics

Robotic applications in proportion to palletized/ depalletized for the start and the end of processing and packing lines.



Gémina® at your service

Gémina®

Procesos Alimentarios, S.L.

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