



ORDESA LAB SOLUTIONS

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- ≡ **ORDESA LAB SOLUTIONS** is a **Testing Laboratory** that collaborates with **National and International pharmaceutical and food companies** by giving the **best service and advice on Food & Drink Analysis**.
 - ≡ The team is formed by **Highly Qualified & Trained Staff**: Phd, Pharmacists, Chemists, Biologists, with important analytical skills.
 - ≡ Our professionals support clients throughout their Research & Development, Quality and Food Safety Control and Manufacturing process.
 - ≡ **ORDESA LAB SOLUTIONS** delivers over 120.000 physical-chemical and 110.000 microbiological analysis per year. We analyze more than 200 parameters.

ORDESA LAB SOLUTIONS

OUR STANDARDS

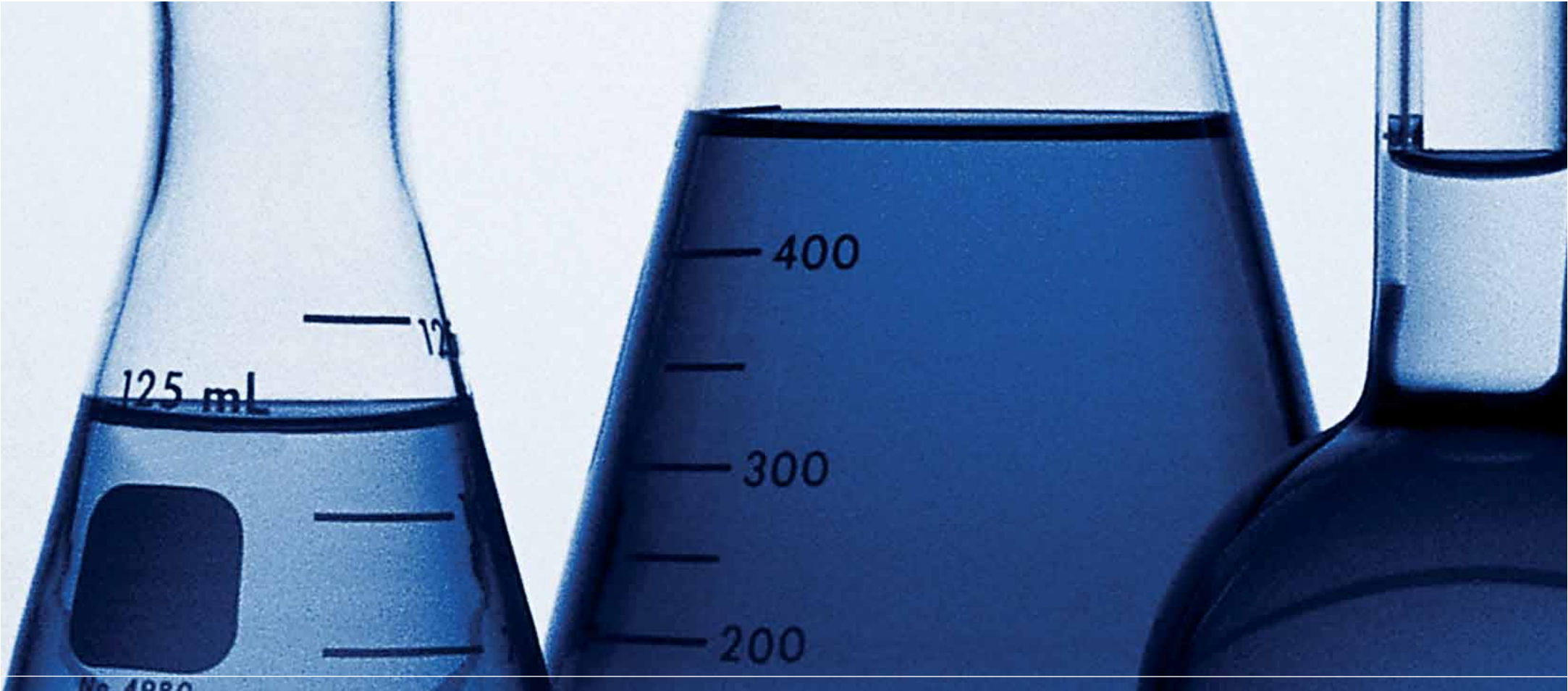
- ≡ Company Quality & Food Safety Policy.
- ≡ ISO 17025 ACCREDITATION.
- ≡ ISO 9001:2008 & ISO 22000:2005 CERTIFICATION.

NORMATIZATION

- ≡ Registered Food Laboratory (No. 429) listed in the relation of Certified Agri-Food Laboratories.
- ≡ **Pfizer Ireland Pharmaceuticals** Qualification: Quality Testing Lab in Europe.
- ≡ Validated Methods, following G.M.P's, G.L.P's. Interlaboratory Studies.

OUR MISSION

- ≡ Our laboratory is **adaptable to our client's needs**. This flexibility allows us to collaborate at any stage of product development, no matter the infrastructure of our client.
- ≡ We develop and validate methods proposed by our clients.
- ≡ **In house development**: our team develops and implements analytical methods required by customers according to their needs.
- ≡ Our methods validated and internationally recognized, offer quality assurance.



ORDESA LAB SOLUTIONS
SERVICES

OUR SERVICES

≡ **ORDESA LAB SOLUTIONS** services are addressed to Pharmaceutical and Food Companies manufacturers of:

LIQUID AND POWDER INFANT FORMULAS	MILK SEMI-ELABORATED PRODUCTS
NUTRITIONAL PRODUCTS	MILK POWDERS
CEREALS	INFUSIONS, JAMS...
RAWS MATERIALS (MALTODEXTRINS)	OILS AND FATS

≡ **PHYSICAL-CHEMISTRY LAB:** Tests food and drink for nutritional labeling (macro & micronutritionals), vitamins and minerals tests, performs sensory analysis of foods and drinks.

≡ **MICROBIOLOGY LAB:** Analyzes food and raw materials detecting pathogens and hygienic indicators.



PHYSICAL CHEMISTRY



METHODOLOGY

Methods are verified and/or validated according to the guideline Q2(R1) validation of analytical procedures: Text and Methodology, ICH (International Conference on Harmonization).

PARAMETERS	TYPE OF METHODS
Ashes	AOAC
Fat	Gerber, Teichert, Soxhlet, Free fat
Humidity	FIL-IDF, AOAC
Viscosity	Eur.Ph.
Proteins	Kjeldahl A.A.C. , FIL-IDF
Gluten	AOAC
Lactose	AOAC
Inositol	GC
L- carnitine	J. AOAC Int 78, 1(1995)
Nucleotides	HPLC
Water activity	Aw Labmaster



01.



02.



03.

01. Sample preparation for Kjeldahl testing

02. Fat extraction process

03. Automated valuation of several parameters



01.



02.



03.

METHODOLOGY

PARAMETERS	TYPE OF METHODS
Carbohydrates	HPLC
Fatty acids profile Linoleic, linolenic acids, LCPUFA's (AA/DHA)	GC
Lutein	HPLC
Vitamins	BIACORE® (Folic Acid, Vit. B12, Ca Pantothenate, Biotin)
	AOAC (Vitamin C) HPLC (A, E, Beta carotene, B1, B2, B6, Niacin, D3, K1)
Minerals	AAS Graphite furnace (Trace elements)
	ICP (Macro and Trace elements)

01. Fume hoods area

02. Soxhlet testing and Fat Extraction area

03. Inositol sample preparation in the fume hoods

MOST RELEVANT TESTING DEVICES

ORDESA LAB SOLUTIONS facilities are equipped with the most modern and specific instruments for each parameter to analyze. A brief description of some of the most relevant testing devices:

BIACORE Q[®]. VITAMINS B₅, B₉, B₁₂
and BIOTINE TESTING

Rapid , reliable and automated analysis.

Acceptance with regulatory bodies:
DG SANCO (Europe), AOAC (USA), LGS,
UKAS (UK), MUVA (Germany).

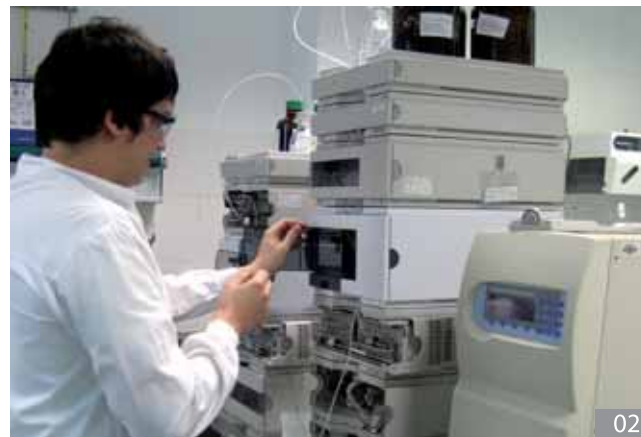


H.P.L.C. - VITAMINS, NUCLEOTIDES,
NUCLEOSIDES, CARBOHYDRATES, ETC...

Several H.P.L.C. dedicated to specific
compounds.

Inert H.P.L.C : α -Lactalbumin

Infra-red, Light scattering, Diode array,
fluorescence and UV detectors.



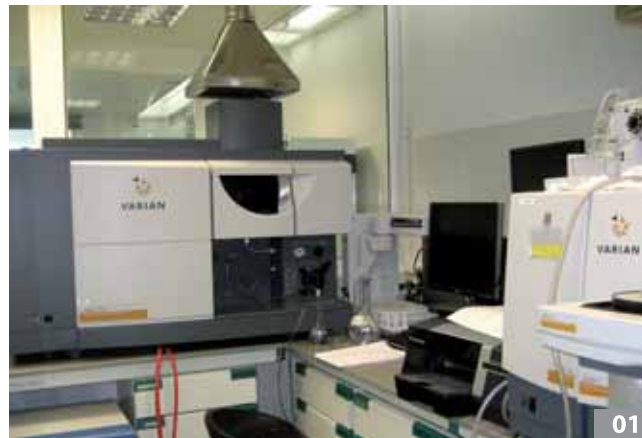
01. BIACORE[®]
conditioning
for testing
02. Light scattering
detector checking

MOST RELEVANT TESTING DEVICES

I.C.P. MINERALS TESTING

Determination of minerals in the range of ppm/ppb.

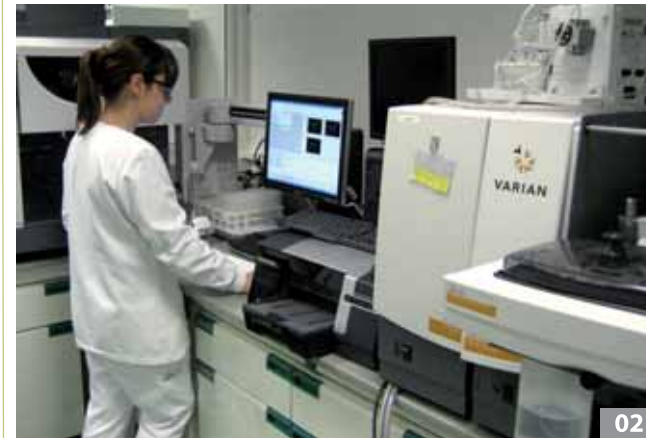
Maximum sensibility and accuracy for trace and minerals analysis.



A.A.S. GRAPHITE FURNACE. MINERALS TESTING

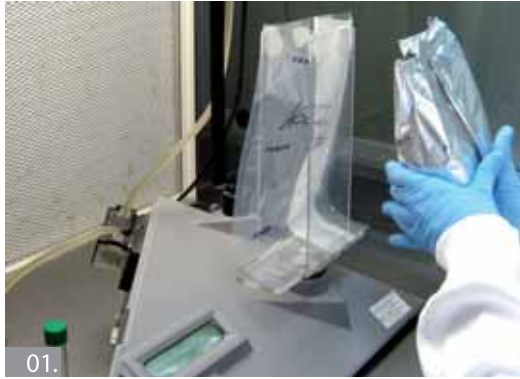
Determination of minerals in the range of ppb.

With samples of 10 µl it detects minerals and trace elements in quantities as low as 10⁻¹²g.



01. General view of minerals testing area
02. Graphite Furnace testing in progress

MICROBIOLOGY



METHODOLOGY

Methods are internationally recognized and validated in our facilities for each parameter and product.

PARAMETERS	TYPE OF METHODS
Aerobic total count	ISO, Tempo® AFNOR
Coliforms	ISO, Tempo® AFNOR
E. coli	Most Probable Number, chromogenic media ISO
C. sakazakii	ISO
Yeast and moulds	ISO
A.S.R.	ISO
C.sulphite-reducing	ISO

01. PCR sample preparation
 02. PCR Plate charge previous to analysis
 03. TEMPO® cards charge previous analysis

METHODOLOGY

PARAMETERS	TYPE OF METHODS
C. perfringens	ISO
Salmonella sp.	PCRrt, ISO, Vidas® AFNOR
S. aureus coag. +	ISO
Listeria monocytogenes	Vidas® AFNOR
B. cereus	ISO
Probiotics	ISO
Enterobacteriaceae	ISO, Tempo® AFNOR



01. Samples preparation in specific PCR cabin
02. Incubation heaters

MOST RELEVANT TESTING DEVICES

Traditional methods have been replaced by highly specific and fast methods to obtain results in shorter time frames. A brief description of some of our the most relevant testing devices:

POLYMERASE CHAIN REACTION (PCR).
DETECTION OF SALMONELLA, AT MOLECULAR
BIOLOGY LEVEL

Unequivocal identification.

More sensitive and specific than any other
established technique.

After the pre-enrichment, results in **24h**.



01.

01. Analysis of
samples by PCR system

MOST RELEVANT TESTING DEVICES

TEMPO®. AUTOMATED DETECTION AND COUNTING OF AEROBIC MESOPHILIC FLORA AND COLIFORMS

Avoiding human error.

Coliforms in **24h.**

Aerobic mesophiles in **48h.**



VIDAS®. AUTOMATIC MULTIPARAMETRIC ANALYZER FOR PATHOGENS DETERMINATION

Fast and reliable: 24h.
Traditional methods: 7 days.



01. Analysis of results by TEMPO®
02. Analysis of samples for the analysis by VIDAS®



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