

INDUSTRIAL DIVISION

# ND Pharma & Biotech



A COLOURFUL  
EXPERIENCE

# ND P&B

## ND Pharma & Biotech

ND Pharma & Biotech is an European biotechnology company focused on developing and commercialization of technologies and products with applications in diverse fields, from therapy to the food industry, with emphasis on the use of products and organic elements and the production of less toxic and dangerous to provide multiple solutions to emerging problems in the industrialized world today, from the massive overuse of toxic components - chemicals that pose a serious risk threatening our health and our lives.



TRUST

We are leading suppliers of fine chemicals and biochemicals and we stand at the forefront of this constantly changing industry.

ND Pharma & Biotech is different - we specialise in hard-to-source chemicals using produc-

tion laboratories across the world with a diligence and tenacity that sets us apart from any other chemical supply company.

Search our listing of +150,000 products, competitive prices and prompt delivery

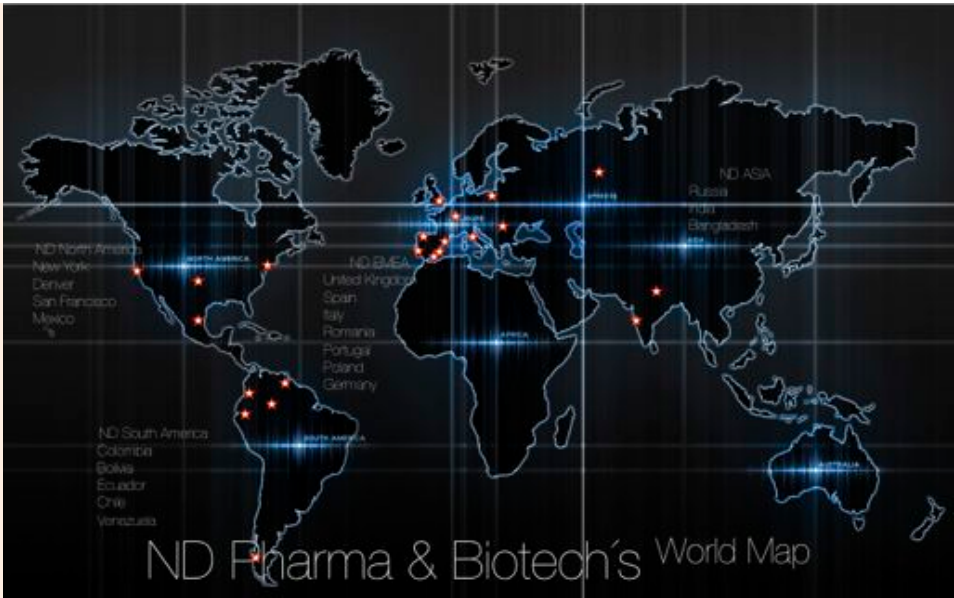
**ND Pharma & Biotech** is a biopharmaceutical company focused on the rapid development of industry solutions for diverse fields and sectors from healthcare, medicine, food & nutrition, agriculture and other resources. As a leading company we have developed an immense portfolio of innovative solutions from our high-profile/high-evolved Research + Development + Innovation section, well balanced with our diverse portfolio of commercialized products and services.

The Group’s industrial and marketing activities is supported by a global network of sales representatives with international presence in different continents and countries. Our operations comprise production, marketing and commercialization worldwide with a strong focus in new developments.

**ND Pharma & Biotech**

ND Innovation  
ND Trading  
Glaice Water

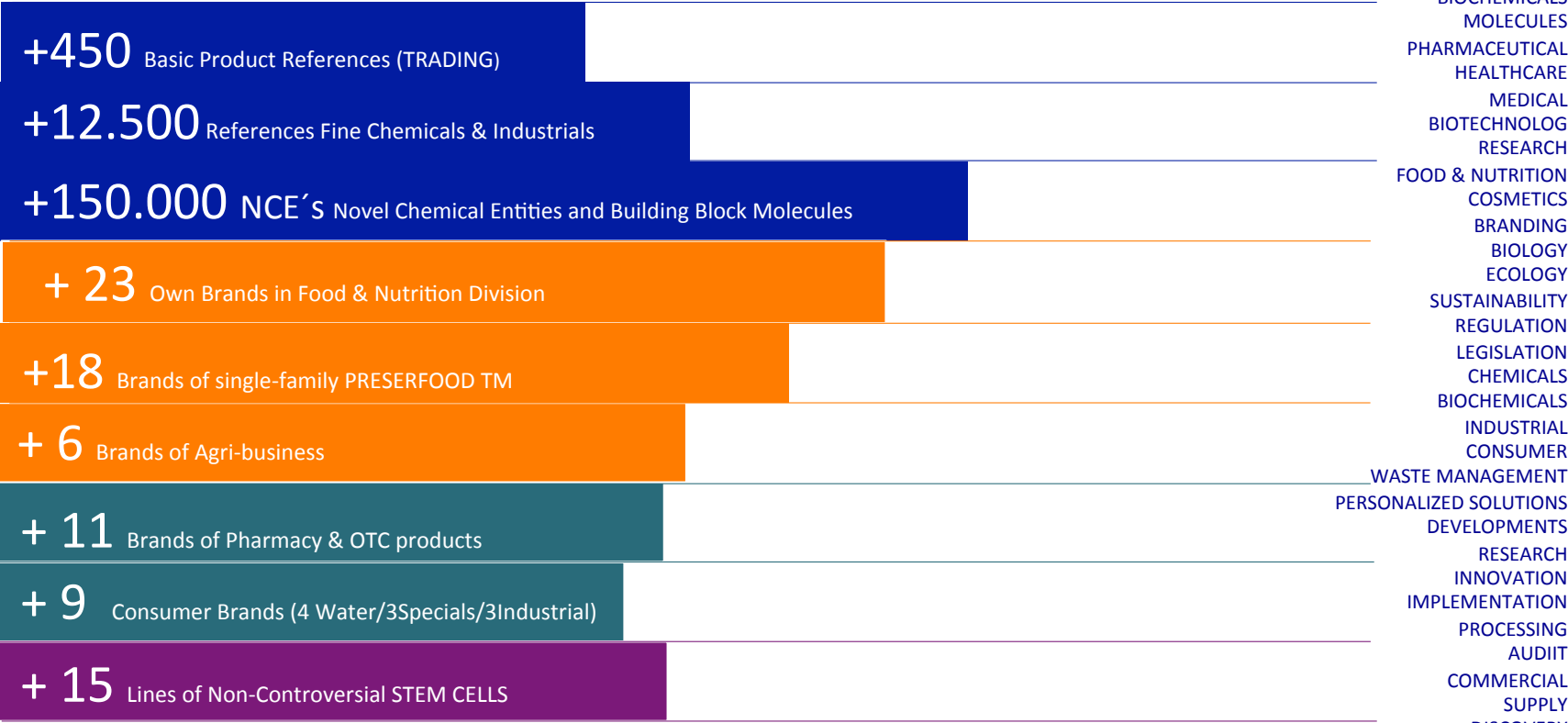
Global presence



Pro forma – key numbers

€258M  
Capital  
€0  
Debt with creditors/financial  
300%  
Net sustained sales growth 2012  
€750M  
Estimated value R+D Portfolio  
500%  
Average planned growth by sectors

Our products in society



+ 450 Key commodities and basic products references from COCONUT OIL (A1) to ZEOLITES (Z1)

+12.500 Fine Chemicals & Industrials fom Aminopicolinic Acid (Ref.00001) to Hexametyldisylazane (Ref.12.561)

+ 150.000 Novel Chemical Entities and Building Block Molecules (in a complete repository and molecules library)

+23 Own Brands in Food & Nutrition; ACARISIN, ACEK 250, AQUALIFE TM/ REACT, ACQUALIFE TM/JUICE, LACTOLIDE, ALKIOW, ANISAKILL, CHIKNSAFE, COCQWA, INOFISH, STERILFOOD, FRUITFRESH, M.A.R.S., MOLDSTOP, MOLDSTOP BAKERY, PUREMEAT, PUREMEAT 100, MEATSAFE, VEGAFRESH, FRUITFRESH, ZOELTAR, AMINOPROT 1000

+18 Brands of Single-Family PRESERFOOD TM: BASE FORMULA, ANTIOX, CARNOSOL, CURED, MEAT, DAIRY, FLAVOR, MEAT MIX, BLENDED, OLIVE, SHELFISH, SWEET, SWEET FORTE, WINE, WINE PLUS, WINE FORTE, UOVO, MARINE FORMULA,

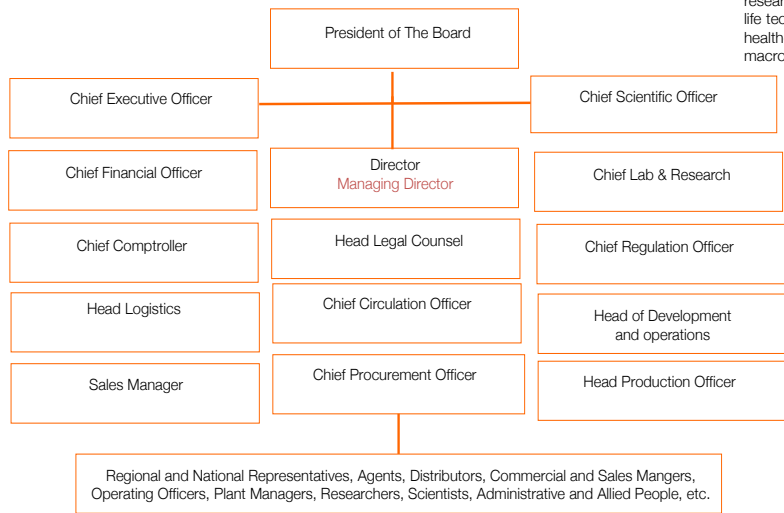
+6 Brands AGIBUSINESS: ACARISIN, ACARISIN TM GARDEN, OXALISILK, OXALIPLUS I, OXALIPLUS II, FRUITFRESH TM

+11 Brands of Pharmacy & OTC: ACNIFOL, BACTERSKIN, BACTER 5000 DBX TM, GLICOSPART, NOOPEPTIL, NOOGLUTIL, ND 507 LIFESAVER, PSORICREAM, TANCREAM, ZELITEM, KARICREM,

+9 CONSUMER BRANDS: GLAICE, GLAICE Sport, GLAICE Deep Sea Water, GLAICE Xeos, ALKIOW Home, ALKIOW, Specials, ALKIOW Industrials.

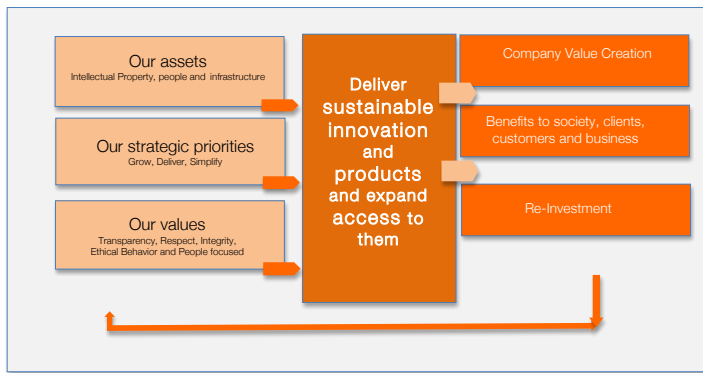


## Group Structure



We see both opportunities and challenges in our operating environment. Scientific research is continuously uncovering new understandings about diseases processes and life technologies. Meanwhile, the world's population continues to grow, as do pressures on healthcare costs, with a notable intensification in developed markets following the recent macro-economic downturn.

How we create value  
Delivering sustainable innovation and expanding access to our products we create value for society and our clients, their business and the company



## Our business

When we started to implement and defining our strategy for success in business, we set out a model of performance to increase growth, reduce risks and improve our financial situation in the mid and long term due to the constrictions existing, specially when you're coming of a long period of R+D without commercial activity or produce, and when your capitalization is relatively low in comparison with the expenditures made or incurred to achieve a number of intellectual property ownership and the exclusive developments protected by our industrial secrets.

The truth is that we made an outstanding progress since we open widely operation thanks to the cutting edge positioning and the sharp skills and intelligence of our management team from one to one responsibilities to the collective performance, that can be marked as said, outstanding.

During the next years we expect an increase in operations exceeding the 500% to the total sales made till 2012, sectoring such growth within different spaces from emerging markets and development countries to Asia-Pacific, Middle-East and Africa, to other well established as Europe, The Americas and Russia.

We are pushing for an investment within those markets, and establishing a platform to growth on the R+D productivity, simplifying or just changing our business to make it more flexible and adaptable to the actual factual situation over the world changes, taking care of the complexities of global trading and using different tool and technologies to keep it simple transforming our weak points into strong so onto those areas where we can rely and improve our processes including the manufacturing, commerce and distribution.

We strengthen our core business to continue the excellent progress our people is having within the principal areas of development, increasing focus on our own portfolio, improving our offer on healthcare and developing a wider strategy to access to APIs and Biochemical molecules, having account that we have syntheses and unique processes developed that are on the major satisfaction of our main clients worldwide, including some of the most exigent manufacturers within the cosmetic, pharmaceutical and nutrition areas. We operate with responsibility and making further advances on our agenda to ensure our behavior an actions meeting or exceeding the expectations of society on a company with a mission like ours. Transparency, ethics and CSR, will preside our all our actions, involving our central values as people not only as a company.

### CEO's review

We have diversified our sources of growth, our R+D productivity has significantly improved and our processes are simpler and more efficient. Our strategy is delivering.



### Grow A diversified global business

We have created a balanced business and product portfolio, capable of delivering sustainable sales growth. This is centered on our main core business areas, Pharma Business (including Cosmetics, food & Nutrition and Agri-Business, which provide us with significant competitive advantages and opportunities for synergy.

We have increased our investment in higher growth areas such as emerging markets and Pacific Asia Region, with a boom ahead for our operations within Latin American Countries including Brazil.

We are developing and exploring forward looking associations with major national, European and Multinational companies to open new markets and products creating important synergies to an open wide new category of products and brands from broad wide distribution to luxury cosmetics and sales organizations interested in partnership, joint venture and or licensing of our products and technologies, IP protected.

### Deliver More products of value

We have changed our R+D organization and partnerships so that it is now better able to offer and sustain a complete pipeline of research and innovation products, even with a range of flexible options to offer sustainable innovation opportunities of growing and improvement to our existing clients, their problems and certain situations that rise up constantly as industry evolves.

We have increased externalization of our research, allowing us to access to new areas of science and to share the risks associated to the development with some of our partners. We changed also our decision-making processes so actually we confer continuity and further development only to those realistic projects which may mean a significant different with existing therapies and solutions.

We have broken the traditional endogamy and hierarchical business model (in relation to R+D) creating smaller, better oriented, drive and motivated scientists working groups that are accountable for their own projects.

All this supervised by a dynamic scientific department headed by experts in their fields, with a minimum experience of 25 years in the sector.

### Simplify The way we operate

As our business is an evolving and ever-changing model adopting different shapes, we are in a process of transformation how we operate so that we can reduce the complexities associated to this industry sectors to become more efficient.

A global restructuring we implemented is designed to deliver significant savings and cost contention to be able to support investment in our priority growth business area as well as offset pressures on the company margin results from changes in de developing business model.

Such savings must to be generated across the business, to let us to verify efficiency and continue to development and design of more advanced ways of efficacy and competency within our logistics and the associations with retailers and other industry operators in difficult areas and territories where most variables and obstacles for growing came from legislations, regulators and competitors monopolistic behavior settled within such territories.

### Financial Architecture

Our financial architecture is designed to support the delivery and execution of the Company's strategy, and drive sustainable growth in core earnings per share and free cash flow in order to maximize total returns to invest, re-invest and satisfy our shareholders.

This architecture is based on four key financial priorities: sustainable sales growth, improving our operating leverage, improving our financial efficiency and converting more of our earnings into cash.

By applying this framework we can drive better and more consistent decision-making processes across the company and improve delivery of our key financial objectives of earnings per share growth and free cash flow generation. This can be returned to company and society by different ways as investing in acquisitions and licenses, re-invested in more efficient and advanced R+D and planning future directions for the company towards the uncertainties existing in the markets, countries and world in general.

We are improving also our data gathering and reporting systems to let the financial people to exercise more control over the progress and alignment of our results and our designed architecture, making us more efficient within simplicity.

### What we do

We are a science-led global healthcare and biotech company that reseraches and develops a broad range of innovative products.

We are leading providers in fine chemicals, biochemicals, organics, API's, nutrition, ingredients and a broad range of own developed product's portfolio.

We have three primary areas of business; Pharma-Business, Food & Nutrition and Agri-Business. Other areas include our TRADING department for fine chemicals and some commodities, (250 references) API's, (12.500 references) and building block molecules where we have a reference catalog of 150.000 different references.

We provide top quality and safe chemicals, with a broad selection of products and a strong quality assurance performance methodology to verify and test that every product delivered is comply with most exigent and rigorous requirements, exceeding in most cases the quality specifications and conformational standards set out by our competitors.

We provide ingredients and molecules to some of the Top<sup>ten</sup> Pharmaceutical companies worldwide, and the principal Cosmetic Industry manufactures within Europe and The United States of America.

We maintain an own product's portfolio and own brands, that are reaching unexpected quote of success worldwide, remarking some of our food and nutrition star brand *PreserFood<sup>TM</sup>* achieving advances as being the first substitute to sulphites within meat products or the revolutionizing milk market *PreserFood TM/Dairy<sup>®</sup>*, that is repositioning the standards within the industry of milk and milk-derived products worldwide.

Our product's pipeline is always increasing its value, as we are progressing towards new and unexpected progresses within different areas of health and disease from Trigeminal Neuralgia to VIH, and our ever growing *NeuroScience Research Lab* that is also progressing towards a treatment and/or cure of several threatening diseases as refractory schizophrenia and memory disorders, as well as others like Treatment-Resistant Depressive Disorders (TRDD).

We are developing a novel vaccine to Herpes Simplex and a novel approach to 3<sup>rd</sup> Generation *Inhaled Ergotamines* for the treatment of Adult Persistent Migraine, and other interesting approaches to healthcare problems, unmet or unresolved till now.

Our commercial business and branches are structured around regional units and/or focusing areas. We have an outsourcing team that is developing every business region and attending worldwide necessities and demands in an evolved business model developed specifically to attend such demand with a maximum efficiency and capacity on a contention cost and risk reduction policy that we're sure will be our key for future success. The management team is leaded in every regional area by one of our team leaders, surrounded by a sounded and experiential group of knowledgeable and concerned people.

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## Disclaimer

This fact sheet has been prepared as at July, 1<sup>st</sup>, 2013. This document should not create any implication that there has not been any change to the business or affairs of ND Pharma & Biotech Co., or that the information contained herein is correct as at any time subsequent to its date. The Pro-Forma and financial information has been extracted from our records and existing reports from our bankers, investment operators and financial advisors, including the application of The Valuation Guidelines for Technological & Scientific Companies.

Any issue regarding information contained herein, please refer in write to:  
cfo@ndpharmabiotech.com

# Industrial Solutions·Professional Service



Our company offers different advanced and imaginative solutions for industrial, professional and artisan varied sectors from food, feed, pharma, biotech or novel chemical entities development to special molecules, all within an impressive array and product's portfolio that is over 150.000 products nowadays.

From most classic raw materials to the most advanced ones, our developments and brand products are specially and spe-

cifically designed and engineered to help in the solve of any individual problem planted by our partners, clients, and collaborative industry in general.

We follow researching and growing up to offer to you every day the best within us, always. We observe permanently our goals and mission as company and of course our strict values, far more than just a business philosophy.

Deserving your trust and confidence.





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## **ND Pharma & Biotech**

Storage Premises in Southern Europe. General Manager Mr. I. Rodríguez (on picture) within the full-IT-equipped storage and logistics center.

**ND Pharma & Biotech** is in constant growing and expansion. Our catalogue of products offer more than 450 Trading Products, about 12.568 API's and Fine Chemicals, and more than 150.000 molecules classified with a pre-minent sales of about 60.000 different products from where 6.500 are pre-packed and ready-to go from our storage premises with capacity to more than 22.000Tm in preservation atmosphere.

We follow a continued profitable growth strategy targeting selected customer industries and focusing on taking over activities from chemical producers seeking outsourcing options. In addition the company constantly seeks acquisition opportunities with a focus on the world developing areas as Asia, Latin America and Eastern Europe, to capture the expected strong growth in demand for chemicals in these regions. Thereby ND Pharma & Biotech's is continuously expanding the geographic coverage and reinforcing its position as market leader.



**MILK**  
IS CREATED BY NATURE  
SO LET'S GIVE IT  
NATURAL PROTECTION

**PRESERFOOD™/DAIRY**

\*1 WORLDWIDE TOXIC-FREE SHELF-LIFE EXTENSION, ANTI-MICROBIAL PROTECTION, NUTRITIONAL ENHANCEMENT AND FLAVOR MAINTENANCE INNOVATION FOR MILK AND MILK-DERIVED (DAIRY) PRODUCTS.

# Management

*Our dedicated board of management is comprised by a high-profile board of professionals running the Industrial Division from our Chief Operating Officer to the Sales Manager.*

*Our business model is based on complete geographic coverage and high diversity across customers, products and suppliers. This is made in order to benefit our company from industry trends and builds in a demonstrable measure of resilience. Linking chemical producers and customers the distributor focuses on providing B2B distribution solutions to customers and suppliers rather than just products. ND Pharma & Biotech's provides one-stop shop solutions including value-added services such as just-in-time delivery, product mixing, formulation, repackaging, inventory management, return handling as well as extensive technical support.*

*By purchasing large scale quantities of industrial and specialty chemicals from suppliers and repackaging them into smaller quantities ND Pharma & Biotech's Industrial Division, provides a full-line of chemicals in less-than-truckload quantities to customers worldwide.*

*The broad range of products in combination with the full-service offerings makes ND Pharma & Biotech independent from any specific market segment. The company manages its business regionally and currently expands its presence in the marketplace. ND Pharma & Biotech focuses on continued profitable growth, pursuing a dedicated growth strategy and showing a proven track record of organic growth as well as partnership and joint-venture associations with partners.*

*The systematic implementation of our strategy is based on global and regional initiatives. We seek to effectively leverage our capabilities through accelerated and targeted growth in the particularly attractive industries: water treatment, personal care, pharmaceuticals, food & beverages, oil & gas as well as adhesives, coatings, elastomers and sealants. We are also focusing on further expanding business with regional, panregional and global key accounts, sectors where our broad product offering and far-reaching geographic network provide unrivalled service capabilities.*

*Thank you for being part of our business. We want to be part of yours too.*



# We Do Make Science For You

## ND Pharma & Biotech Innovative Minds

**Our Industrial Division is comprised by different sections from Project Management to the provision of product's and services at very different scales. To evaluate the possibilities and options that we can offer to help your business to grow, please contact us in write to the following e-mail address. One of our personal attendants will contact you back.**

**ND Pharma & Biotech's Industrial Division**

**[industrial@ndpharmabiotech.com](mailto:industrial@ndpharmabiotech.com)**



# PRODUCTS

- PHARMACEUTICAL·
- BIOPESTICIDES·
- HEALTHCARE·API'S·
- FINE CHEMICALS·
- ETC·

# ND Pharma & Biotech

## Regulation Department



### REACH-Timeline

June 1, 2007 *Reach came into force*

June 1 - Dec. 1, 2008 *Pre-registration*

Jan 1, 2009 *Publication of pre-registered substances by ECHA*

Dec. 1, 2010 *Registration deadline for substances  $\geq 1.000$  t pa, R5o/R53 substances  $\geq 100$  t pa, CMR substances of categories 1&2  $\geq 1$  t pa*

June 1, 2013 *Registration deadline for substances  $\geq 100$  t pa*

June 1, 2018 *Registration deadline for substances  $\geq 1$  t pa*



## **REACH and Obligations**

*REACH is the EU chemicals legislation dealing with the Registration, Evaluation, Authorization and Restriction of Chemicals which entered into force on 1st June 2007. REACH covers chemical substances as such, in preparations or in articles intended to be released. The regulation replaces numerous EU laws and is complementary to other environmental and safety legislation.*

### **What are the objectives?**

Ensure a high level of protection from exposure to chemicals in order to safeguard human health and the environment

Provide improved risk management

Stimulate innovation and competitiveness of the EU chemicals industry

Shift responsibilities from authorities to industry

### **Which substances are subject to registration?**

All substances which are manufactured in or imported into the EU in a quantity above 1 ton per year will have to be registered according to specific deadlines. However there are exemptions from certain parts of the legislation, for example, chemicals used as ingredients in food, feed and medicinal products do not need a REACH registration since their safe use is covered by other EU laws.

### **Who is affected?**

Virtually everyone in the supply chain dealing with chemical substances will have certain obligations.

Manufacturers or importers of chemical substances or mixtures of chemical substances located in the EU (our suppliers)

Downstream users processing chemicals, formulating preparations (mixtures) for end-use or using formulated products as part of their business (our customers)

### **What are the consequences?**

‘No Registration – No Market’ meaning that non-registered substances and non-registered uses will become illegal!

## **How does REACH affect our customers?**

As our customer you are a downstream user and as such you are affected in different ways by REACH. To be compliant you have to fulfill certain obligations.

Upon receipt of the Exposure Scenario, check whether your uses are covered. ND Pharma & Bio-tech is expecting the SDS extended by Exposure Scenarios (extSDS) not to be available before April 2011.

In case your use is not covered, follow recommendations

Verify that operational conditions and risk management measures communicated via Safety Data Sheet are met

Communicate all Exposure Scenarios to your industrial or professional customers via Safety Data Sheets

Important: any use of a dangerous substance on its own or in preparation not covered in Exposure Scenario is illegal. Further information can be found [here](#).

## **Service to our customers:**

REACH-trained sales team supports you in all REACH aspects

Ensure REACH compliant supply

Ensure communication in supply chain

Assistance in understanding Exposure Scenarios

Assistance regarding imported substances

## **How does REACH affect our suppliers?**

### **Duties as a EU manufacturer**

Register substances manufactured in Europe at ECHA according to deadlines

Identify all uses in all stages of the life-cycle of the chemical substance

Create Exposure Scenarios and recommendations of risk management measures

Communicate the Exposure Scenarios and the Registration Number down the supply chain as extension of Safety Data Sheets

### **Duties as a Non-EU manufacturer**

Provide each importer of your substances located in the EU with the data and information necessary for (pre-)registration

Alternatively appoint an 'Only Representative' established in the EU to fulfill the obligations of the importers

### **Service to our suppliers**

REACH-trained product managers support you in all REACH aspects

Assistance regarding downstream uses

Ensure communication in supply chain

Assistance regarding imported substances for Non-EU suppliers

### **ND Pharma & Biotech is at your service**

ND Pharma & Biotech as a full-line distributor covers various roles in the chemical supply chain and therefore is involved by REACH within several aspects. As a Distributor in the sense of REACH ND Pharma & Biotech has to fulfill its obligations with regards to communication; as a formulator ND Pharma & Biotech is a Downstream User and has to comply with the obligations under REACH (make sure own uses are covered in registration, apply recommended risk management measures) and finally ND Pharma & Biotech is a manufacturer and a direct Importer of substances and therefore it has to fulfill obligations as a registrant.



To appropriately cover these tasks requires REACH involvement on all operational levels (HSE, Sales and Procurement) and a strong internal interaction and alignment. ND Pharma & Biotech looks at REACH as an opportunity to serve own customers and suppliers.

## **REACH-trained sales team and product managers in every country**

Central REACH implementation team sponsored by top management

Experienced network of highly skilled HSE experts and state-of-the-art central HSE database

Active participation and standing contacts to stakeholder organizations (FECC, Cefic, Directors Contact Group)

Longstanding experience with regards to the handling of chemicals as the link between manufacturers and downstream users

## **Service to our customers**

REACH-trained sales team supports you in all REACH aspects

Ensure REACH compliant supply

Assistance in understanding Exposure Scenarios

Ensure communication in supply chain

Assistance regarding imported substances

## **Service to our suppliers**

REACH-trained product managers support you in all REACH aspects

Assistance regarding downstream uses

Ensure communication in supply chain

Assistance regarding imported substances for Non-EU suppliers

# Exposure Scenarios

## Introduction

REACH is based on the principle that it is the obligation of the industry to ensure that the substances they manufacture, place on the market or use do not adversely affect human health and the environment.

The Chemical Safety Assessment (CSA) identifies and describes the conditions under which the manufacturing and use of a substance can be regarded to be safe. A CSA has to be carried out if the substance is subject to registration under REACH and manufactured or imported at quantities of 10 tons or more per year and registrant.

If as a result of the CSA the substance meets criteria that classifies it as dangerous or as PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative), then an exposure assessment will be needed.

The final result of the exposure assessment is the Exposure Scenario (ES) which is the set of information that describe the conditions under which the risks associated with the manufacturing and the identified uses of a substance can be controlled. The ES defines the operational conditions and risk management measures that need to be applied to ensure the safe use of the substance during all life stages. The ES is communicated as an attachment to the Safety Data Sheet (SDS). Together SDS and the ES form a new document, the “extended SDS” (extSDS), which is the legal REACH document communicated down the supply chain. There is no standard format for the ES.

## Timing: Communication of ES later than Deadline

Although the first registration deadline is December 1st, 2010, the extSDS for a substance registered will most likely be communicated with some time lag only. The deadline concerns the successful submission of the dossier. The registrant receives his registration number from ECHA after payment of the registration fee. As there will be several steps in the supply chain between the Registrant and the Downstream User there will be unavoidable delays in the communication of Registration Number and ext SDS. In the industry it is widely expected that most extSDS will not appear before March 2011. Please refer also to the [Cefic Newsletter](#) on communication in the supply chain.

## Obligations for Downstream Users

As a Downstream User you will receive an ES attached to the SDS (extSDS) when the substance that has been registered is classified as dangerous, PBT or vPvB. If you purchase a preparation that contains such substance(s) the SDS will also be extended by Exposure Scenario(s) per respective substance (depending on the registration deadline of the substance).

If you receive an SDS with an Exposure Scenario, it is your obligation and responsibility to check and to ensure that your conditions of use are covered by that Exposure Scenario and to apply the recommended risk management measures. This means that, in a first step, you have to compare the conditions described in the Exposure Scenario with your own practices. There are three possible outcomes:

Your use is covered – no further action to take

Your use differs from the ES – more detailed compliance check is needed

Your use is not covered by ES – you have to take action by choosing among 4 options:

- a. Change your conditions of use in order to be compliant
- b. Inform suppliers about the missing use / conditions of use
- c. Select alternative supplier which has covered missing use / conditions of use in his registration
- d. Special uses / conditions of use for which no registrant can be found may need a Downstream User Chemical Safety Report. If you decide to do so, you have to inform ECHA within 6 months after receipt of the extSDS that you will carry out an assessment yourself.

Exemption: If you use less than 1 ton per year you do not have to do a CSR, but you need to notify ECHA at the latest 6 months after receipt of the extSDS.

## **General timing:**

If any of your uses / conditions of use appears not to be covered in the extSDS you have a certain time to make the missing use REACH compliant. According to Article 39-1 you may continue to apply this use / conditions of use during a 12-month period which starts at the date you receive the registration number communicated via the extSDS.

**Reasons for not receiving an ES:** There might be several reasons for not receiving an ES:

The substance is exempt

The substance is manufactured/imported in volumes less than 10t/y

The substance is not classified as dangerous (non-hazardous substance)

The substance will be registered at later deadline

The substance in formulation will be registered at later deadline



## **Supply Chain Communication**

### **Safe Use for all Identified Uses**

The REACH regulation sets a number of new requirements with respect to the use of chemical substances and the associated communication between suppliers and customers. One of the new requirements is the demonstration of “safe use”. This implies that all actual uses of all substances that need registration must be identified by or reported to the registrant (Manufacturer/Importer). This is done during the Use Alignment Process. After this process the registrant has to investigate whether the identified uses can be considered as safe. This analysis is made in the Chemical Safety Assessment.

In the Chemical Safety Assessment the Manufacturer/Importer has to demonstrate safe use of the substance throughout the whole lifecycle (manufacture, formulation, end-use, waste). The outcome of the assessment is a set of Operational Conditions and Risk Management Measures which help to achieve safe use. This information is laid down in the Exposure Scenario, which will be communicated after the registration via the extended Safety Data Sheet (extSDS). It will be the legal duty of Downstream Users to follow the instructions stipulated in the Exposure Scenario.

### **Exposure and Safe Use**

The “use” of a chemical substance conceived by REACH as any activity (e.g. processing, formulation, mixing, filling, and production of an article) which is carried out with a substance as such or in a preparation could lead to some form of “exposure” of humans or the environment. Exposure infers some form of contact of humans and/or the environment with chemical substances whereas the contact can occur short term, long term, once or more often, in low or high concentrations.

For industrial safety and for protection of humans (workers and consumers) and the environment, the way, the duration and the concentration at which substances with hazardous characteristics are applied is crucial. In this context “safe use” means that the Downstream User can demonstrate that exposures are so small or not existent that no harmful effects to humans and the environment are to be expected to occur.

The “safe use of chemicals” is the fundamental aim of the REACH Regulation. One important step to achieve safe use is to assess all potential exposures. Manufacturers and Importers as well as their customers in the role of Downstream Users have their obligation in this regard. Safe use is dependent on several preconditions: good knowledge of substance properties, of conditions of use, of any exposure as well as the development and implementation of appropriate risk management measures to adequately control the risks. While the Chemical Safety Assessment (CSA) evaluates whether the intended uses of a substance are “safe”, it is the Exposure Scenario (ES) that describes the conditions for safe use of a substance, in particular the conditions of safe use and the risk management measures.

## Use Descriptors

To structure the large number of different uses of substances and preparations present in the different industry sectors ECHA has developed a system to describe uses in a standard and structured way. This so called “Use Descriptor System” is based on five separate categories. Each category has pre-defined descriptors which in combination with each other form a brief description of use. The five categories are: sector of use (SU), chemical product category (PC), process category (PROC), article category (AC) and environmental release category (ERC).

### Sector of Use [SU]

In a supply chain a chemical substance passes different industry and trade sectors before it reaches its final destination. Under REACH each sector represents an identified use. Often the life cycle includes one or more formulation stages in the chemical industry, and one or more distribution stages in the trade sector. ECHA determined five main user groups which play a role along the life cycle of a substance: manufacturers of chemical substances (i.e. transforming substances into other substances) [SU8/9], companies (formulators) that mix and blend chemicals (without transforming into other substance) [SU10], industrial end-users that use the chemical in their manufacturing processes [SU3], professional end-users [SU22] and private households [SU21] that apply substances or preparations.

### Chemical Product Category [PC]

The Chemical Product Category characterizes the use of a substance by the type of end-use preparation (e.g. lubricant, cleaner, adhesive) in which the substance is known to be used. This is based on the consideration that the use of a preparation is closely related to exposure potential.

### Process Category [PROC]

Process category groups the way a substance is used or converted into a subsequent product (preparation or article). Application techniques or process types have a direct impact on the exposure to be expected and hence on the risk management measures needed.

### Article Categories [AC]

For dangerous substances processed into articles, the manufacturer or importer of the substance may find it necessary to specify which types of articles are covered in the CSA and the ESs. It will, for example, make a difference in terms of exposure whether a substance is used in textile-finishing of clothes (dermal contact, frequent washing) or as a component in insulation sheets for construction purposes.

## Environmental Release Categories [ERC]

Release estimation is the process whereby releases to the environment are quantified during the life cycle stages of a chemical, taking into account the different types of uses during these life cycle stages, the different emission pathways and receiving environmental compartments and the spatial scale of the emissions. To streamline the release estimation and make it accessible for data collection in the supply chain, environmental release categories (ERCs) have been developed. ERCs label the characteristics of a use based on different aspects relevant from environmental perspective.

**R.E.A.C.H./E.C.H.A.**

**COMPLIANCE**



**ND Pharma & Biotech**

**Industrial Division**



ND Pharma & Biotech

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## **FAQ**

### **What are my obligations as a customer of ND Pharma & Biotech under REACH?**

As a customer of ND Pharma & Biotech you are, in terms of REACH, a Downstream User and as such you should follow the risk management advice and the operational conditions of use described in the extended safety data sheet (extSDS) received from the supplier. If applicable, forward the advice to actors further down the supply chain. If you as a Downstream User produce a preparation (you are a formulator), you must ensure that the extSDS for that preparation includes all relevant information received from the suppliers of the individual components. Please note: This was already a duty of downstream users under previous legislation. The new element under REACH is the receiving and forwarding of use-specific risk management advice and risk management measures relating to exposure to humans or the environment.

### **Under what conditions do I receive an extSDS?**

A SDS extended by an Exposure Scenario is obligatory when the substance is classified dangerous and manufactured at a quantity of 10 tons or more or is assessed to be a PBT or vPvB. Depending on the registration deadline according to the manufacturer's production volume of the dangerous substance the extSDS will be provided a few months after the respective registration deadline. If a substance is exempt, not classified as dangerous or produced at a volume below 10 tons, an extSDS will not be provided.

### **When do I receive a Registration Number and an Exposure Scenario?**

The deadline of December 1st, 2010 is related to the submission of the registration dossier and is not connected to the communication of the registration number. It might from that point in time take a few months before the registrant receives its registration number and only after he has received the registration number the registrant will send the extSDS to his customers. As in many cases there are several steps in the supply chain between the Registrant and the Downstream User delays in the communication of the Registration Number and extSDS to the final Downstream User will be unavoidable. ND Pharma & Biotech expects receiving the majority of the extSDS from April 2011 onwards. For substances to be registered by later deadlines, the provision of Registration Number and Exposure Scenario is expected according to respective registration deadlines

with similar administrative delays. Please refer also to the Cefic Newsletter on communication in the supply chain.

### **What – in a few words - is an Exposure Scenario?**

By performing a Chemical Safety Assessment of a substance the registrant may conclude that the substance is dangerous and in that case the additional steps exposure assessment and risk characterization have to be made. The Exposure Scenario documents the result of the exposure assessment and risk characterization and describes under what conditions the chemical substance is manufactured or used safely in the areas environment, workplace and consumer during its life-cycle. The Exposure Scenario shall address all identified uses. The Exposure Scenario is attached to the SDS as extension. Please see also section Exposure Scenarios in this website.

### **What will be the format of extSDS?**

The format of the so called body is regulated in Annex II of the Regulation “Guide to the Compilation of Safety Data Sheets”. ND Pharma & Biotech will of course follow the regulation. Unfortunately no official format for shape and format of the Exposure Scenario has been developed. The Guidance from May 2008 “Guidance on information requirements and chemical safety assessment – Part D: Exposure Scenario Building” suggests a 9-chapter format. In the meantime, both Industry and ECHA are working with a 4-chapter format. Additionally there is currently no standard for electronic communication of extSDS.

### **Will my uses be supported in the registration dossier?**

We have communicated the information about uses which we received from our customers to our respective suppliers in accordance with Article 37. We believe that most of the common uses which have been identified by the various industry associations will be covered in the registration dossiers. Since ND Pharma & Biotech for the vast majority of its product portfolio will not register any of the substances ND Pharma & Biotech is not in the position to make any statements on which uses will or will not be included in the respective dossiers submit by our suppliers. The supported uses and conditions of use will be communicated via the SDS extended by Exposure Scenarios, the so called extended SDS (extSDS). Downstream Users are well advised to check their uses and conditions of use related to the substance soon upon receipt of the extSDS. Please no-

te: if the substance is non-hazardous no Exposure Scenario is required and, apart from consideration of work-safety obligations, no further action for the Downstream User is necessary. For further information please see also section Exposure Scenarios in this website.

### **What is meant by “conditions of use”?**

Conditions of use are determined on one hand by the physical properties of the substance on the other hand it is the frequency and duration of use, applied risk management measures and operational conditions that determine the conditions of use.

### **What if any of my uses is not covered in the registration dossier?**

If any of your uses / conditions of use appears not to be covered in the extSDS you have 12 months to make the missing use REACH compliant. According to Article 39-1 you may continue to apply this use / conditions of use during a 12 month period which starts at the date you receive the registration number communicated via the extSDS. For further information please see also section Exposure Scenarios.

### **What options do I have, if my use is not covered?**

During 12 months upon receipt of extSDS you may choose among several options to make your operations REACH compliant:

- Change conditions of use in order to be compliant

- Contact your supplier and inform about the missing use / conditions of use

- Select an alternative supplier which has covered missing use / conditions of use in his registration

Special uses / conditions of use for which no registrant can be found may have to be assessed and reported to ECHA by the Downstream User himself (Articles 37-4, 38-1 and 39-2)

For further information please see also section Exposure Scenarios.

Within this context we recommend also to refer to our customer information or to the document “Downstream users: are your uses covered?” provided by the European industry association for small and medium sized companies (UEAPME).

## **Will my substance be registered in 2010?**

Only substances manufactured or imported at a volume of 1,000 tons or above as well as CMR substances need registration by 1st December 2010. ECHA has issued a list containing the substances for which at least one pre-registrant has confirmed to register in 2010. We advise our customers to refer to this list in order to check whether a substance will be registered in 2010. This list is the outcome of a survey conducted by ECHA earlier this year and is based on the legally not binding statements of pre-registrants. Please note substances not on this list could still have a later registration deadline (2013 or 2018) or could be registered in 2010 after all. You can find the list [here](#).

## **Can I continue to use substances supplied before registration deadline and that are not registered?**

Pre-registered substances that are manufactured or imported before the relevant registration deadline can still be used and placed on the market after this date by any downstream user, distributor or supplier in the supply chain even if the manufacturer did not submit a registration. If you are a Manufacturer or an Importer of that substance you must have ceased such activities before the relevant deadline to benefit from this rule. However any actor down the supply chain who is not subject to the registration obligation may continue to use and/or supply quantities of the substance that were supplied to them before the registration deadline.

## **About CLP**

## **About GHS**

As chemicals can have adverse effects to humans and the environment a regulated classification and labeling according to international standards is of high importance. Several regions around the world have regulated the classification and labeling of chemicals in their own system. In 2003 the United Nation initiated the “Globally Harmonized System of Classification and Labelling of Chemicals”, the GHS, in order to minimize differences between systems of different jurisdictions for classification and labelling of substances and mixtures.

The aim of GHS is to enhance the protection of human health and the environment by globally harmonizing:

The criteria of classification of chemicals

The labeling i.e. the communication of hazards by means of labels and Safety Data Sheets (SDS) towards workers and consumers



As a result GHS provides an internationally comprehensible system for hazard communication and facilitates international trade in chemicals whose hazards have been properly assessed and identified on an international basis.

While the GHS is not legally binding, the GHS document is a guidance document that establishes criteria and methods for hazard classification and communication. Based on the GHS the EU Commission launched the CLP Regulation.

## **About CLP**

The CLP Regulation is the new European Regulation on Classification, Labelling and Packaging of chemical substances and mixtures implementing the provisions of GHS and introducing a new system for classifying and labelling chemicals. The CLP Regulation entered into force on 20 January 2009. It is the task of industry to establish what are the hazards of substances and mixtures before these are placed on the market (classification) and to inform workers and consumers by means of labels (labelling) and Safety Data Sheets (SDS) about these hazards. The provisions of CLP will replace Council Directive 67/548/EEC (Dangerous Substances Directive, DSD) and Directive 1999/45/EC (Dangerous Preparations Directive, DPD) in a stepwise approach.

## **Roles and Obligations**

The obligations placed on a supplier of substances or mixtures under CLP will mostly depend upon their role towards a substance or mixture in the supply chain. It is therefore most important that any actor identifies his role under CLP. Similar to the definitions under REACH CLP distinguishes between Manufacturers of substances, Importers of substances and mixtures, Downstream Users (including formulators and re-importers) and Distributors (including retailers). It should be noted that suppliers of substances or mixtures may have more than one role under CLP.

CLP places a general obligation for all suppliers in the supply chain to co-operate, so as to meet the requirements for classification, labelling and packaging set out in this Regulation. As a Manufacturer, Importer or Downstream User you will have to classify, label and package substances and mixtures according to CLP before placing them on the market. A consequence of this Regulation is that you will have to change current labels and Safety Data Sheets. Additionally you should update the label following any change to the classification and labelling of that substance or mixture, in certain cases without undue delay. A concise overview on the obligations can be found in the introductory document of CLP by ECHA, page 10 ff.

## **Impacts on your company**

Although CLP has been kept as close to the former EU classification as possible, there are some differences and in some cases chemicals will be classified more severely than now, or chemicals which were formerly not considered as hazardous will be classified as hazardous. This could have a major impact on your warehouse organization.

ND Pharma & Biotech

PHARMACEUTICALS

BIOPHARMACEUTICALS

HEALTHCARE

BIOPESTICIDES

API's

FINE CHEMICALS

INDUSTRY SECTORS

FOOD & NUTRITION

AGRIBUSINESS

ANIMAL NUTRITION

BRAND PRODUCTS

CONSUMER PRODUCTS

BULK QUANTITIES

PRE-PACKED SMALL

# PRODUCT'S LISTINGS



# A COLOURFUL WORLD



At ND Pharma & Biotech we are working hard to transform other's lives, making a difference throughout research and innovation. We create opportunities to expand other's horizon. We embrace diversity as a way to expand and share our culture, because ideas are as diverse as people behind them. When talking about advanced solutions only the imagination can trigger science advancement effort.

## **GIVING COLOR TO A MORE EXCITING FUTURE**

ND Pharma & Biotech is conducting advanced research in novel molecules and advanced therapies for unmet medical and health necessities. Through action we dare to advocate uncharted paths in science and research. We engage and execute a vision, collaborating with the medical and health community to deliver personalized and measurable outcomes that may improve and extend lives. We strive to advance the battle against disease applying research to clinical practice and targeting the individual needs of people living with certain diseases.

### **ND Pharma & Biotech**

People·Purpose·Action·Progress·Impact

# Categories

- |                              |                         |
|------------------------------|-------------------------|
| 1. Amino Acids               | 20. Furans              |
| 2. Analytical Reagents       | 21. HPLC Reagents       |
| 3. Antibacterials            | 22. Hydrazines          |
| 4. Antibiotics               | 23. Hydroquinones       |
| 5. APIs                      | 24. Imidazoles          |
| 6. Aroma Chemicals           | 25. Indazoles           |
| 7. Biochemicals              | 26. Indoles             |
| 8. Boronic Acids             | 27. Inorganic Chemicals |
| 9. Brominated Products       | 28. Iodinated Products  |
| 10. Buffers                  | 29. Linkers             |
| 11. Carbohydrates            | 30. Naphthalenes        |
| 12. Chiral Compounds         | 31. Oxazoles            |
| 13. Chlorinated Products     | 32. Peptide Reagents    |
| 14. Coumarins                | 33. Phenols             |
| 15. Coupling Reagents        | 34. Picolines           |
| 16. Crown Ethers             | 35. Piperazines         |
| 17. Detergents               | 36. Pyrans              |
| 18. Diagnostic Raw Materials | 37. Pyrazines           |
| 19. Fluorinated Products     | 38. Pyrazoles           |



- 39. Pyridines
- 40. Pyrimidines
- 41. Pyrroles
- 42. Quaternary Ammonium salts
- 43. Quinines
- 44. Quinolines
- 45. Research Organics & Inorganics
- 46. Stains & Indicators
- 47. Sugars
- 48. Tetralones
- 49. Tetrazoles
- 50. Thiadiazoles
- 51. Thiazoles
- 52. Thiophenes
- 53. Triazines
- 54. Triazoles
- 55. Water Analysis

Within these categories, ND Pharma & Biotech offer + 50.000 products, so please ask for more information or just query about desired product and/or compound sending an e-mail to our Industrial Division:

[industrial@ndpharmabiotech.com](mailto:industrial@ndpharmabiotech.com)

Look for Us at:



Google

ND Pharma & Biotech

# Pharmaceutical

- 1-Chloroethyl cyclohexyl carbonate 99464-83-2 Purity (GC) : 99.0%min Candesartan cilexetil, cefotiam hexetil intermediate Commercial
- Tenofovir [PMPA] 147127-20-6 In-house. FDA;USDMF Antivirus, Anti-HIV Commercial
- Tenofovir dipivoxil fumarate (TDF) 202138-50-9 USP, IP Antivirus, Anti-HIV Pilot
- (R)-(+)-9-(2-Hydroxypropyl)adenine (HPA) 14047-28-0 Assay:97%min Tenofovir Intermediate Commercial
- Chloromethyl Isopropyl Carbonate (JMC-1) 35180-01-9 Assay: 99%min Tenofovir Intermediate Commercial
- DESMP (DMESP/TSDEP) 31618-90-3 Assay: 99%min Tenofovir Intermediate Commercial
- Lercanidipine hydrochloride 132866-11-6 In-house Antihypertension Commercial
- Lercanidipine mainring 74936-72-4 Assay: 99%min Lercanidipine Intermediate Commercial
- Lercanidipine side chain 100442-33-9 Assay: 99%min Lercanidipine Intermediate Commercial
- Rosuvastatin calcium 147098-20-2 In-house Antihyperlipidemia Commercial
- 4-(4-Fluorophenyl)-6-isopropyl-2-[(N-methyl-N-methylsulfonyl)amino]pyrimidinyl-5-yl-formyl 147118-37-4 Assay: 98%min Rosuvastatin Intermediates Commercial
- 4-(4-Fluorophenyl)-6-isopropyl-2-[(N-methyl-n-methylsulfonyl)amino]pyrimidine-5-yl-methanol 147118-36-3 Assay: 99%min Rosuvastatin Intermediates Commercial
- 4R-Cis)-6-Hydroxymethyl -2,2-Dimethyl-1,3-Dioxane-4- Acetic Acid,1,1-Dimethylethyl Ester 124665-09-0 Assay: 98%min Rosuvastatin Intermediates Commercial

14. tert-Butyl  
(4R-cis)-6-[(acetyloxy)methyl]-2,2-dimethyl-1,3-dioxane-4-acetate 154026-95-6 Assay: 99%min Rosuvastatin Intermediates Commercial

15. Rosuvastatin calcium intermediate-D7  
124752-23-4 Assay: 97%min Rosuvastatin calcium Intermediate Commercial

16. Capecitabine 154361-50-9 USP32 Anti-cancer Pilot

17. 1,2,3-Triacetyl-5-deoxy-D-ribose 62211-93-2 Assay (GC): 99%min Capecitabine Intermediate Commercial

18. 2',3'-di-O-acetyl-5'-deoxy-5-fluorocytidine 161599-46-8 Assay: 98%min Capecitabine Intermediate Commercial

19. 5-Fluorocytosine 2022-85-7 Assay: 99%min Capecitabine Intermediate Commercial

20. Tasocitinib (CP 690550) 477600-75-2 99%, ee99% Rheumatoid Arthritis Pilot

21. Tofacitinib citrate 540737-29-9 99%, ee99% Rheumatoid Arthritis Pilot

22. (3R,4R)-N,4-Dimethyl-1-(phenylmethyl)-3-piperidine hydrochloride 1062580-52-2 99.73%, ee100% Tasocitinib Intermediate Commercial

23. (3R,4R)-1-Benzyl-N,4-dimethylpiperidin-3-amine 477600-70-7 Assay: 98%min Tasocitinib Intermediate Pilot

24. 2,4-Dichloro-1H-pyrrolo[2,3-d]pyrimidine 90213-66-4 Assay: 98%min Tasocitinib Intermediate Pilot

25. 4-Chloropyrrolo[2,3-d]pyrimidine 3680-69-1 Assay: 98%min Tasocitinib Intermediate Pilot

26. N-Methyl-N-((3R,4R)-4-methylpiperidin-3-yl)-7H-pyrrolo[2,3-d]pyrimidin-4-amine 477600-74-1 Assay: 98%min Tasocitinib Intermediate Pilot

27. 4-Chloro-7-tosyl-7H-pyrrolo[2,3-d]pyrimidine 479633-63-1 Assay: 98%min Tasocitinib Intermediate Pilot



28. 2,4-Dichloro-7-tosyl-7H-pyrrolo[2,3-d]pyrimidine  
934524-10-4 Assay: 98%min Tasocitinib Intermediate Pilot
29. Azilsartan 147403-03-0 Assay: 99%min Azilsartan medoxomil Intermediate Lab
30. Methyl  
1-[(2'-cyanobiphenyl-4-yl)methyl]-2-ethoxy-1H-benzimidazole-7-carboxylate 139481-44-0 Assay: 98%min Azilsartan medoxomil Intermediate Lab
31. Methyl  
2-ethoxy-1-((2'-(5-oxo-2,5-dihydro-1,2,4-oxadiazol-3-yl)biphenyl-4-yl)methyl)-1H-benzo[d]imidazole 147403-52-9 Assay: 98%min Azilsartan medoxomil Intermediate Lab
32. Linagliptin 668270-12-0 In-house Antidiabetic Lab
33. 1-Bromo-2-butyne 3355-28-0 Assay: 97%min Linagliptin Intermediate Commercial
34. Valrubicin 56124-62-0 Assay: 98%min Anticancer Commercial
35. Epirubicin hydrochloride 56390-09-1 USP Anticancer Commercial
36. Daunorubicin hydrochloride 23541-50-6 USP Anticancer Commercial
37. Doxorubicin hydrochloride 25316-40-9 USP Anticancer Commercial
38. Aprepitant 170729-80-3 In-house Antiemetic Lab
39. Actovegin 63748-11-8 200mg/5ml Antihypertensive  
Rivaroxaban 366789-02-8 In-house Anticoagulant Pilot
40. oxyc Commercial
41. Rivaroxaban 366789-02-8 In-house Anticoagulant Pilot
42. Quifenadine 10447-39-9 In-house Antihistamine Commercial
43. Vilazodone 163521-12-8 In-house Antidepressant Pilot

44. Ropinirole hydrochloride 91374-20-8 In-house Antiparkinsonism Lab
45. Fasudil hydrochloride 105628-07-7 Assay: 99%min Cardiovascular Pilot
46. Peramivir(BCX-1812) 330600-85-6 Assay: 99%min H1N1 Influenza Pilot
47. Ciproxifan maleate (FUB-359) 184025-19-2 In-house Antagonist Lab
48. Ivabradine hydrochloride 148849-67-6 In-house Cardiovascular Pilot
49. 3-Aminoadamantan-1-ol 702-82-9 Assay: 98%min Vildagliptin Intermediate Commercial
50. Hexachlorophene 70-30-4 USP31 For gram positive bacteria inhibition Commercial
51. 3-Amino-2,2-dimethylpropanamide 324763-51-1 Assay: 98%min Aliskiren Intermediate Commercial
52. 1,3-Dihydro-4-(2-hydroxyethyl)-2H-indole-2-one 139122-19-3 Assay: 98%min Ropinirole Intermediate Pilot
53. Nestoron (ST-1435) 7759-35-5 Assay: 98%min Pilot

*"At least 23 kids die in India after eating insecticide tainted rice within school meal, other 27 reached hospital with severe toxicity symptoms..."*

*June, 2013, (N.Y. Post)  
July, 2013 (Daily Mirror)*

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# Biopesticides

1. 2E, 4Z-Heptadiene-1-ol 70979-88-3 Assay: 95%min Intermediate of Pheromones Commercial
2. (E,E)-2,4-Hexadien-1-ol 17102-64-6 Assay: 97%min Biological pesticide intermediates Commercial
3. GrandlureIII 26532-25-2 Insect Pheromone
4. LYCOPERSILURE 72269-48-8 Insect Pheromone
5. 3,3-DIMETHYLCYCLOHEXYLIDENEACETALDEHYDE 26532-24-1 Insect Pheromone
6. TRANS-5-DECEN-1-OL 56578-18-8 Insect Pheromone
7. (E)-5-DECEN-1-YL ACETATE 38421-90-8 Insect Pheromone
8. Citral 5392-40-5 Insect Pheromone
9. Z-5-TETRADECEN-1-YL ACETATE 35153-13-0 Insect Pheromone
10. Z,E-9,11-TETRADECADIENYL ACETATE 50767-79-8 Insect Pheromone
11. (E,E)-tetradeca-9,11-dienyl acetate 54664-98-1 Insect Pheromone
12. Z-7-TETRADECENAL 65128-96-3 Insect Pheromone
13. Z-9-TETRADECENAL 53939-27-8 Insect Pheromone
14. (Z)-7-Tetradecen-2-one 146955-45-5 Insect Pheromone
15. cis-8-Tetradecen-1-olacetate 35835-80-4 Insect Pheromone

16. (S)-CIS-VERBENOL 18881-04-4 Insect Pheromone
17. E-11-TETRADECEN-1-OL 35153-18-5 Insect Pheromone
18. Z-11-TETRADECENAL 35237-64-0 Insect Pheromone
19. Z,E-9,12-TETRADECADIEN-1-OL 51937-00-9 Insect Pheromone
20. cis-9-Tricosene 27519-02-4 Insect Pheromone
21. Z-4-TRIDECEN-1-YL ACETATE 65954-19-0 Insect Pheromone
22. (Z)-7-TETRADECEN-1-YL ACETATE 16974-10-0 Insect Pheromone
23. CIS-9-TETRADECENYL ACETATE 16725-53-4 Insect Pheromone
24. 9-Tetradecen-1-ol 35153-15-2 Insect Pheromone
25. (E)-9-Tetradecen-1-olacetate 23192-82-7 Insect Pheromone
26. (Z)-11-TETRADECEN-1-YL ACETATE 20711-10-8 Insect Pheromone
27. CIS-11-TETRADECEN-1-OL 34010-15-6 Insect Pheromone
28. TRANS-11-TETRADECENYL ACETATE 33189-72-9 Insect Pheromone
29. 2-methyl-6-methyleneocta-2,7-dien-4-ol 14434-41-4 Insect Pheromone
30. (±)-2-methyl-6-methyleneoct-7-en-4-ol 60894-96-4 Insect Pheromone
31. (Z,Z)-11,13-Hexadecadienal 71317-73-2 Insect Pheromone
32. (Z)-hexadec-9-enal 56219-04-6 Insect Pheromone



33. (Z)-14-METHYL-8-HEXADECEN-1-AL  
60609-53-2 Insect Pheromone

34. 4-METHYL-5-NONANOL 154170-44-2 In-  
sect Pheromone

35. 4-METHYL-5-NONANONE 35900-26-6  
Insect Pheromone

36. Z-13-OCTADECEN-1-AL 58594-45-9 In-  
sect Pheromone

37. Z-13-OCTADECEN-1-YL ACETATE  
60037-58-3 Insect Pheromone

38. Cyclobutaneethanol,1-methyl-2-(1-methylethenyl)-,  
(1R,2S)-rel- (Related Reference) 30820-22-5 Insect  
Pheromone

39. (E)-2-(3,3-Dimethylcyclohexylidene)-ethanol 30346-  
27-1 Insect Pheromone

40. (Z)-3,3-DIMETHYLCYCLOHEXYLIDENEETHANOL  
26532-23-0 Insect Pheromone

41. (Z)-6-HENICOSEN-11-ONE 54844-65-4  
Insect Pheromone

42. CIS-11-HEXADECENAL 53939-28-9 In-  
sect Pheromone

43. (Z)-11-HEXADECEN-1-YL ACETATE  
34010-21-4 Insect Pheromone

44. (Z)-hexadec-11-en-1-ol 56683-54-6 In-  
sect Pheromone

45. (E)-11-Hexadecen-1-ol acetate 56218-72-  
5 Insect Pheromone

46. CIS-7-DODECENYL ACETATE 14959-86-  
5 Insect Pheromone

47. trans-7-dodecenylacetate 16695-41-3 In-  
sect Pheromone

48. Z-9-DODECEN-1-YL ACETATE 16974-11-  
1 Insect Pheromone

49. TRANS-9-DODECEN-1-YL ACETATE  
35148-19-7

50. Z-9-DODECEN-1-OL 35148-18-6 Insect  
Pheromone

51. 11-DODECEN-1-YL ACETATE 35153-10-7  
Insect Pheromone

52. (E)-8-DODECEN-1-YL ACETATE 38363-  
29-0 Insect Pheromone

53. (Z)-8-DODECEN-1-YL ACETATE 28079-  
04-1 Insect Pheromone

54. Z-8-DODECEN-1-OL 40642-40-8 Insect  
Pheromone

55. (E)-BETA-FARNESENE 18794-84-8 Insect  
Pheromone

56. 6-Acetoxy-5-Hexadecanolide 81792-36-1  
Insect Pheromone

57. Z-3-DECEN-1-YL ACETATE 81634-99-3  
Insect Pheromone

58. Z-7-DECEN-1-YL ACETATE 13857-03-9  
Insect Pheromone

59. Z-5-DECEN-1-OL 51652-47-2 Insect Phe-  
romone

60. Z-5-DECEN-1-YL ACETATE 67446-07-5  
Insect Pheromone

61. E,E-8,10-DODECADIEN-1-YL ACETATE  
53880-51-6 Insect Pheromone

62. 8,10-DODECADIEN-1-OL 33956-49-9 In-  
sect Pheromone

63. ORIENTAL FRUIT MOTH PHEROMONE  
(OFM) 28079-04-1, 38363-29-0, 40642-40-8  
96%min, 90%min Insect Pheromone Commercial

64. Pyribenzoxim 168088-61-7 97% HPLC  
Herbicide Commercial

65. Metamifop 256412-89-2 97%, 95% ee.  
Herbicide Commercial

# More hope for tomorrow

ND Pharma & Biotech has made a commitment to give more hope to the life of today and tomorrow. Bringing ingredients, active principles and novel molecules to the "Big Pharma" industry and sharing with most of them, (our clients) such commitment, to let themselves to create, manufacture, and deliver the most advanced solutions to worldwide patients and let them to treat and fight against their aggressive conditions and diseases, specifically in the case of cancer. (Oncology).

We help them to create really innovative solutions that will make the difference, improving genuinely their lives and the life of affected people. To get these things possible we are involved in a number of high-profile / top-class investigations and research, focusing on the discovery of novel molecules and therapies designed and engineered for unmet medical and health demands and conditions, including but not limited to certain types of cancer and oncological diseases as solid tumours, like pancreatic cancer, breast cancer and advanced renal cell carcinoma, as well as other neurobiological-oncological conditions.

But our mission, do not appear only when the disease is small and clinically evolved. We are going further back to the point of participate throughout our Food & Nutrition Division, on the most extensive detoxification programs and products (based consumption), at the point of making possible our vision of "Removal the chemical - toxic elements and cellular waste deposits present within our body, and coming up from the food and alimentary chain, mean, ingested within foods. In this effort we are trying to get every producer, processor or seller involved with this idea, that are for us the true reason for being and doing what we do, and every other effort that we should have to do. By such means we are promoting and cultivating the meaningful spirit of making life better, just making things much better than any others are doing it now. That is the hope for tomorrow that challenges us.

[www.ndpharmabiotech.com](http://www.ndpharmabiotech.com)

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WORLDWIDE HEALTHY  
PHARMACEUTICALS  
BIOPHARMACEUTICALS  
BIOTECHNOLOGY  
FOOD-NUTRITION  
AGRICULTURE  
INDUSTRY SOLUTIONS  
LEADING SCIENCE



ND Pharma & Biotech

MAKING LIFE BETTER

# Healthcare

1. Oxiracetam 62613-82-5 Assay: 99%min  
API, Nutritions Commercial
2. Tauroursodeoxycholic acid Sodium Salt  
(TUDCA Sodium Salt) 35807-85-3 Assay: 98%min  
Nutrition Commercial
3. Tauroursodeoxycholic acid (TUDCA) 14605-  
22-2 Assay: 98%min Nutrition Commercial
4. Phenylpiracetam 77472-70-9 Assay:99%min  
Nootropic Commercial



Milk is the primary food we take in life!  
We give more life to milk!



Introducing

LACTOLIFE™

100% NATURAL MINERAL MILK & DAIRY PROTECTION FORMULA

ND Pharma & Biotech

# Fine Chemicals (excerpt from General Catalog) +60.000 products

1. 1,4-Phthalaldehyde 623-27-8 Assay: 98%min Used for dye spices medical plastic fluorescent whitening agent manufacturing Commercial
2. Ethyl N-(diphenylmethylene)glycinate 69555-14-2 Assay: 98%min Intermediate Commercial
3. Methyl vinyl ketone 78-94-4 Assay: 97%min
4. 4-CHLORO-2-BUTANONE 6322-49-2 Assay: 98%min Pilot
5. Pyrrole 109-97-7 Assay(GC): 99%min Pharmaceutical intermediate Commercial
6. D-(-)-PANTOLACTONE 599-04-2 Assay: 97%min Intermediate Commercial
7. (S)-1,2-Hexanediol 87760-48-3 Assay(GC): 98%min Pharmaceutical intermediate Commercial
8. Borane-methyl sulfide complex 13292-87-0 2M or 10M Montelukast Sodium and Entecavir intermediates, reducing agent Pilot
9. 4-Hydroxy-2-Butanone 590-90-9 Assay: 95%min Pharmaceutical, agrochemical, fragrance intermediate Commercial
10. Ethyl 2-methylpyrrole-3-carboxylate 936-12-9 Assay: 98%min Drug intermediate Commercial
11. Heavy-oxygen water;Oxygen-18 water 14314-42-2 Assay: 97%min Non-radioactive isotopic tracer; Synthesis of PET compounds Commercial
12. (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)trimethoxy-Silane 83048-65-1 In-house Organic silane coupling agent Commercial
13. 3-Cyclohexenyl 3-cyclohexene 1-carboxylate 2611-00-9 Assay: 98%min Polymerization and copolymerization polyethylene production , Organic synthetic reagent Commercial
14. Ethyl propenyl ether 928-55-2 Assay: 98%min Painting, Auxiliaries, Plasticizer Commercial

15. 1,1,3,3-Tetramethoxypropane 102-52-3 Assay: 98%min Organic synthetic reagent Commercial
16. Ethyl vinyl ether 109-92-2 Assay: 95%min Anesthetics, Pain-killer, Organic synthetic reagent Commercial
17. Pentanediol 111-30-8 Assay: 25%min or Assay: 50%min Germicide and disinfectant, Tanning extracts, Preservative, Organic synthetic reagent Commercial
18. Pyridineborane 110-51-0 Assay: 97%min Reactant for reduction and hydroboration Pilot
19. 2-Picolineborane 3999-38-0 Assay: 99%min Reactant for reductive amination Pilot
20. Pinacolborane 25015-63-8 Assay: 96%min Boric acid ester, Coupling agent, Organic synthetic reagent Commercial
21. 4-Amino-3-phenylbutyric acid hydrochloride (PHENIBUT) 1078-21-3 Assay: 99%min Dietary supplement, Nootropics Commercial
22. Pterostilbene 537-42-8 Assay: 99%min Nutrition, Anti-cancer, Anti-hypercholesterolemia, Anti-hypertriglyceridemia Commercial
23. (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)trimethoxy-Silane 83048-65-1 Assay: 98%min Organic silane coupling agent Commercial
24. Melamine Polyphosphate (MP) 20208-95-1 Assay: 98%min Flame-retardant Commercial
25. Bitolylene Diisocyanate (TODI) 91-97-4 Assay: 99%min Raw material of polyurethane elastomer. Giving the elastomer high elasticity, high heat oil resistance, and other chemical properties. Commercial
26. Solketal methacrylate (GMAK) 7098-80-8 Assay: 98%min Contact lenses, Thermal dyes, UV resin modifiers. Commercial
27. ALL-TRANS-RETINAL 116-31-4 Assay: 98%min Cosmetics Intermediates Pilot



# ND Pharma & Biotech

makinglifebetter

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When looking for a strategic partner, to make the right choice is all in terms of difference, success and future.

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