

# XermoStop™



## Onions · Potatoes · Shallots

Liquid Formula used as growth suppressant used to prevent undesirable sprouting in stored Potatoes and Onions alternative to Potentially Harmful and/ or restricted Chemical Compounds  
100% Food Product made from Worldwide Authorized Ingredients.

# XermoStop™

is a liquid growth retardant used to prevent undesirable sprouting in stored Onions and Potatoes alternative to Chemical Compounds As MC (Maleic Hydracide or CiPC), avoiding concerns regarding residue, toxicity, carcinogenicity and other potential harm.

**XermoStop™** is based on Food Grade ingredients and Acids and Food Grade Minerals like Calcium, Zinc, Sodium and Potassium.

Storage of Potatoes up to 120 days shown efficacy similar efficacy to MC and CiPC on identical conditions of temperature and humidity, with 0 sprouting percentile on 4 applications including silver scurfing prevention.

For use as direct application, spray, fog, and/or via aerial, ground, foggy and other applications. Post-harvest.

ND Pharma & Biotech



## About Us

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**ND Pharma & Biotech Co.** We are specialized in Pharma, Food and Chemical Industries. Within the Food & Nutrition sector we operate in food marketing and international business development. Our people are experts in networking specialized in food ingredients and food technology with a strong focus on New Developments and Added-Value Products for diverse markets.

Thanks to its Quality Products and Excellence in Service our reputation has grown rapidly and we are currently serving European Markets through a network of distributors and agents companies in the United States, Russia, Latin America, Turkey, UAE, India, Bangladesh, South Africa and Canada.

# XermoStop™

**The Organic and alternative System for Potato Sprout Control during Storage.**

Sprout control is a major indicator of potato quality during and after storage. If this control is not managed properly, it implies a significant reduction of product quality and the capacity and possibility of store such product during long periods of time is being reduced with consequent losses.

Major consequences of sprouting are weight loss that also imply a poorer airflow circulation between stored potatoes in the piles. That airflow reduction will lead to a higher temperature in piles and thus far the increasing possibility of diseases appearance as well as other problems.

Sprouting is also in relation with the conversion of starch into sugars, that corrupts potatoes destined to chips industry, since fried processing creates such potatoes turning into dark as an undesirable effect.

In markets, for regular consumers. sprouting potatoes are rejected by consumers.



There are different lengths of time in terms of dormancy that may differ between types and classes and sprouting times may differ between 50 and 120 days in some cases. Temperature is also important in the prevention of sprouting with an average as ideal surrounding 10°C.

Actual systems aside temperature control include the use of MH (Maleic Hydrazide) and CIPC (Chlorpropham).



## CIPC and MH / Chlorpropham and Maleic Hydrazyde

CIPC and Chlorpropham are the most used products for inhibit, suppression and control of sprouting. However in a number of countries, despite authorization and renewal of such, there are increasing concerns regarding safety and long-term effects of both compounds. This is why for those markets where MH and CIPC are not permitted (As Organic) or certain countries where we intend to export product, our company has researched and developed an safe, eco-friendly, non-toxic and cost-effective alternative for sprouting control, that works perfectly in the field.



## How it Works?

**Xermostop™** as alternative system is not a “sprout inhibitor” itself in the sense of other chemicals that inhibits sprouting interfering with cell division or other some biological process.

**Xermostop™** is more correctly called sprout suppressant since it physically damages developing sprouts with high concentration of the product in the surrounding headspace in storage.

**Xermostop™** creates little or no residue. As new sprouts develop, repeated applications may be required at 2-3 weeks intervals on continuous basis.

**Xermostop™** its applied thru the humidification system in potato storage. Frequent and repeated application is needed for long-term sprout suppression in large bulk storages. It also can be applied thru air compressor and fine mist that can be forced thru the piles.

**Xermostop™** time of application is critical. So the most effective time is before sprouts are one-eighth of an inch long, mean at the “peeping” time. Delay of application could result in suppression failure. Vigorous and quick applications should also be avoided. Systems may be fine tuned for each kind of growers, and in dependence of season and cultivars classes.

**Xermostop™** due to its natural moisture absorption results very effective in the weight loss control of tubers on the basis of low respiration observed on tubers during treatments and control procedures.



Sprout control after 9 weeks treatment with **Xermostop™** in comparison to Untreated (3 column)



Photomicrography of sprout damage caused by **Xermostop™**

## Other Benefits

Additional benefits from use of **Xermostop™** are reduction of pathogen numbers and sometimes reduction of incidence of disease during storage. Reduction in silver scurf on the surface of tubers is also an additional benefit derived from use of **Xermostop™**.

**Xermostop™** are able to retard the development of Fusarium dry rot, and soft rot without adversely affecting glucose or sucrose levels in potatoes stored over a 16 week period.

## Comparative Studies

In comparative studies with CIPC @ 6 months period **XermoStop™** shown same efficacy as CIPC during 10°C Storage and 95% RH following four treatments with each product.

Product	1 month	2 month	3 month	4 month	5 month	6 month
XermoStop	0	0	0	0	0	0
CIPC	0	0	0	0	0	0
Control	8	22	44	60	75	86

Sprouting of potato tubers (%) during 6 months of storage at 10 + 1 C and 95% RH, following four (4) treatments with XermoStop™, CIPC or control.

Product	1 month	2 month	3 month	4 month	5 month	6 month
XermoStop	0	9	23	38	51	63
CIPC	0	8	20	36	48	59
Control	14	37	55	65	74	89

Sprouting of potato tubers (%) during 6 months of storage at 10 + 1 C and 95% RH, following one (1) treatment with XermoStop™, CIPC or control.

## Composition of XermoStop™

Water, Calcium Chloride, Sodium Hydroxide. Mineral Salts and substances (*Aditio*) in accordance with Regulation EC 1925/2006 and 1170/2009 as well as Reg. EC 1333/2008 and related legislation are main components of our Formula.

Considered as basic substances *ex.art* 23 Reg. EC 1107/2009 in fine and Regulation of Execution UE 2015/2069.

Exempt from previous authorization in accordance with the Art. 28, 2, a) of Reg. EC 1107/2009 to be applied in phytosanitary use. (Plant Protection Products)

**XermoStop™** is presented in 5L, 20L, 200L and 1000L containers.

Product is manufactured under HACCP standards in Food Grade premises and ISO 9001:2015 Certified.

Ingredients are verified as premium quality prior to be added to our product.

## Recommended System for XermoStop™

Despite all methods existing and machinery that may be used, we strongly recommend for application fogging with atomizer as friendly to environment, easy to implement and inexpensive.

## ND Pharma & Biotech Co. Baby & Infant Food Ingredients

We have a range of solutions for Food Industry.

Our high quality Ingredients are developed against our expert knowledge and experience. We are globally recognized as a highly established and reliable suppliers of Ingredients and Special Ingredients for Food, Nutrition, Agriculture and Industrial Business.

We use high quality materials and process against the highest international quality standards to ensure consistency and quality of our Ingredients.

ND Pharma & Biotech Co. has been producing special ingredients from its inception establishing us as one of the most experienced and leading manufacturers. All raw materials are sourced via our well established and certified supply chains.



We are experts in sourcing and supply of all kind of ingredients and therefore understand perfectly processes and innovation applications for existing nutritional compounds. We develop our own Brands and formulas in a cutting-edge innovation continuing improvement and total quality system.

Whit a portfolio of more than 210.800 molecules and product references, we are leading manufacturers and suppliers for the most important operators in the sector.

# Intabiotech SLU is a commercial company of ND Pharma & Biotech Co

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## Somos Intabiotech

Intabiotech es una empresa líder en S&S (Sourcing & Supply) que conecta a empresas de todo el mundo con nosotros y entre si, tanto productores como consumidores de productos y servicios en los campos más variados desde las Ciencias de la Vida hasta los sectores Industriales.

Intabiotech es una compañía comercial que representa productos y marcas para aportar soluciones a diferentes negocios y empresas a través de su red de agentes, distribuidores, socios, etc., gente muy dedicada que se esfuerza cada día para hacer llegar nuestros productos y soluciones a todos aquellos que las necesitan o las demandan. Con un portafolio de mas de 200.000 referencias de producto desde la Biofarmacia, la investigación, las innovaciones en Alimentación y Nutrición tanto humana como animal, las terapias avanzadas o los materiales de consumo, somos líderes en la provisión de soluciones en Sourcing & Suply para todas y cada una de las necesidades.

Contáctanos y descubre nuestro potencial y cómo podemos serte de utilidad a tu empresa o negocio.

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# ThermoStop™



**Your Reliable Partner in Special Ingredients**