



# Inositol

Primary Information Services

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

<mailto:primaryinfo@gmail.com>



What is “Inositol” ?

Inositol is a vitamin-like substance.

It is found in many plants and animals.

It is also produced in the human body and can be made in a laboratory.

Inositol can be found in many forms (called isomers).

The most common forms are myo-inositol and D-chiro-inositol.



# Inositol in the market place

Inositol - Proce x | freepatentsonli x | INOSITOL PREP x | Inositol - Yahoo x | Primary Inform x | Inositol - Proce x | +

← → ↻ [https://in.images.search.yahoo.com/search/images;\\_ylt=AwrPhO.0JUNdcT0Alw67HAX;\\_ylu=X3oDMTB0N2poMXRwBGNvb...](https://in.images.search.yahoo.com/search/images;_ylt=AwrPhO.0JUNdcT0Alw67HAX;_ylu=X3oDMTB0N2poMXRwBGNvb...) ☆

Apps informer Outlook Mail Gmail Primary Info Google Advanced S... New Tab The fastest free You... Convert HTML to P...

The image displays a grid of 18 different inositol supplement products. The products are arranged in three rows and six columns. Brands visible include Now Foods, Jarrow Formulas, GNC, Nature's Way, Vital Nutrients, and Healthy Origins. Product types include capsules, powder, and crystals. Some products are specifically labeled for women's health or liver function. The background of the grid is white, and the products are shown against a light blue background.

Windows Taskbar: Type here to search | 23:17 | 01-08-2019



## WHY “ Inositol” ?

Inositol is a naturally occurring nutrient that is usually classified as a carbocyclic polyol. The most common form is sometimes referred to as myo-inositol. In the human body, it plays a major role in preventing the collection of fats in the liver, as well as promoting healthy hair growth. The presence of the nutrient also aids in efficient processing of nutrients into the conversion of energy, which in turn helps the body to maintain a healthy metabolism. It also can be considered brain food, as the nutrient is necessary to properly nourish the brain.



# Applications

Some people take inositol by mouth **for diabetes**, nerve problems caused by diabetes, diabetes diagnosed during pregnancy (gestational diabetes), treating a disorder called **metabolic syndrome** and conditions associated with menopause and **polycystic ovary syndrome (PCOS)**, including failure to ovulate, **high blood pressure**, high triglycerides, and high levels of testosterone

## **Segmentation by application:**

- Pharmaceuticals
- Food & Beverages
- Cosmetic
- Feed Additive



## Inositol Derivatives

**myo-inositol,  
neo-inositol,  
allo-inositol,  
chiro-inositol,  
epi-inositol,**

**muco-inositol,  
cis-inositol,  
scyllo-inositol,  
bicyclic inositols,  
bishomo-inositols**

# Composition

product-profile.pdf - Adobe Acrobat Reader DC

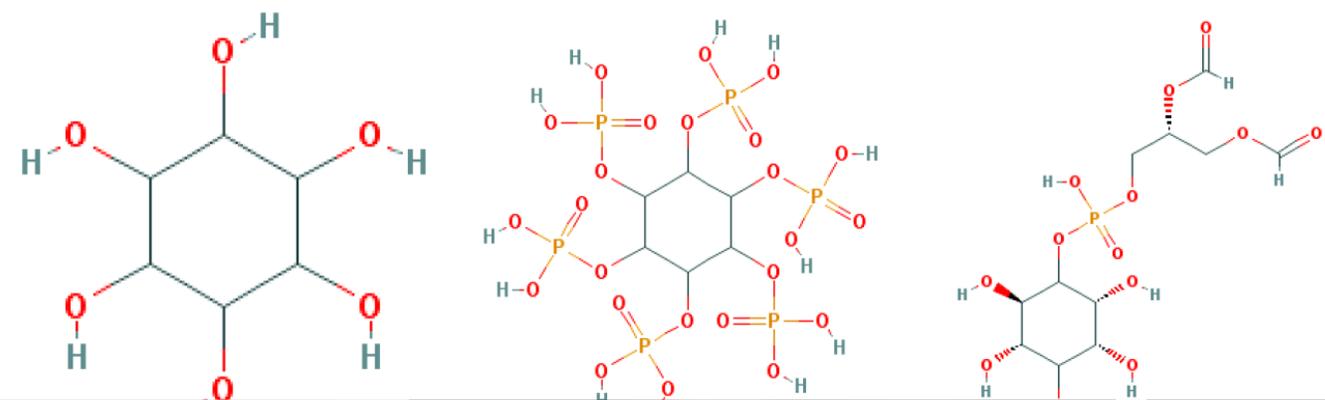
File Edit View Window Help

Home Tools synthesis.pdf product-profile.pdf x

1 / 12 107%

Share

24  
25 **Composition of the Substance:**  
26 Inositol is a 6-carbon, cyclic sugar alcohol that is present in all living cells (Clements and Darnell, 1980). Inositol  
27 is mainly present in plants in the form of phytic acid, or inositol hexaphosphate (IP6) (Kirschmann, 2007).  
28 However, the inositol in phytic acid and phytic acid salts is generally not bioavailable to humans (Reddy and  
29 Sathe, 2002; Montecalvo and Theuer, 1995). In animal cells, inositol is found freely or in the cells' phospholipid  
30 membranes in the form of phosphatidylinositol (Pereira et al., 1990; Kirschmann, 2007). While inositol can be  
31 present in any of nine structural forms, or stereoisomers, the most stable conformation is myo-inositol (Pereira et  
32 al., 1990). The molecular formula for inositol is  $C_6H_{12}O_6$ ; the chemical structures for inositol, phytic acid, and  
33 phosphatidylinositol are presented in Figure 1.  
34



The figure displays three chemical structures. On the left is inositol, a six-membered ring with six hydroxyl groups. In the middle is phytic acid, which consists of an inositol ring with six phosphate groups attached to its carbons. On the right is phosphatidylinositol, where the inositol ring is linked to a glycerol backbone, which is further attached to a fatty acid chain.



Type here to search



23:11

01-08-2019

15





## Synthesis

Myo-inositol was synthesized from D-glucose in several steps.

Different synthetic pathways for myo-inositol and their phosphates derivatives have been developed during the years because of the important biological functions

# Patented Technology



Inositol - Proce x | freepatentsonli x | INOSITOL PREF x | US2018005784 x | Primary Inform x | Inositol - Proce x | +

File | D:/projectA2Z/l/inositol/add-2019/US20180057844A1.pdf

Apps | informer | Outlook Mail | Gmail | Primary Info | Google Advanced S... | New Tab | The fastest free You... | Convert HTML to P...

  
US 20180057844A1

(19) **United States**  
(12) **Patent Application Publication** (10) **Pub. No.: US 2018/0057844 A1**  
**ZHANG et al.** (43) **Pub. Date: Mar. 1, 2018**

---

(54) **INOSITOL PREPARATION METHOD** **Publication Classification**

(71) Applicant: **TIANJIN INSTITUTE OF INDUSTRIAL BIOTECHNOLOGY, CHINESE ACADEMY OF SCIENCES, Tianjin (CN)** (51) **Int. Cl.**  
*C12P 7/02* (2006.01)  
*C12N 9/42* (2006.01)

(72) Inventors: **Yi-Heng Percival ZHANG, Blacksburg, VA (US); Chun YOU, Tianjin (CN)** (52) **U.S. Cl.**  
CPC ..... *C12P 7/02* (2013.01); *C12Y 204/01001* (2013.01); *C12Y 504/02002* (2013.01); *C12Y 204/0102* (2013.01); *C12Y 301/03025* (2013.01); *C12N 9/2437* (2013.01); *C12Y 204/01049* (2013.01); *C12Y 505/01004* (2013.01)

(21) Appl. No.: **15/783,996** (57) **ABSTRACT**  
An inositol preparation method by enzymatic catalysis uses starch and cellulose or substrates thereof as substrates. Raw materials are converted to inositol by in vitro multi-enzyme

(22) Filed: **Oct. 13, 2017**

US20180057844A1.pdf ^ Show all x



# Inositol - database

Inositol - Process, Technolog X | Y what is ?Inositol - Yahoo Indi X | Primary Information services X | Inositol - Process, Technolog

← → ↻ https://www.primaryinfo.com/scope/inositol.htm

Apps informer Outlook Mail Gmail Primary Info Google Advanced S... New Tab The fastest free You...

<https://www.primaryinfo.com/scope/inositol.htm>

## Inositol

Technology, Applications, Patent, Consultants, Company Profiles, Reports, Market, Projects

Primary Information Services

[Home](#) . [Ordering Information](#) . [Contact](#)

Search PrimaryInfo

### Information @ a Glance

- Inositol, (of which the most prominent naturally occurring form is myo-inositol, cis-1,2,3,5-trans-4,6-cyclohexanehexol), is a carbocyclic polyol that plays an important role as the structural basis for a number of secondary messengers in eukaryotic cells, including inositol phosphates, phosphatidylinositol (PI) and phosphatidylinositol phosphate (PIP)

### General Information

- Inositol information
- Inositol
- Inositol Importance
- About Inositol
- Structure of Myo-Inositol-1-Phosphate
- What is Inositol?

### Projects

- Inositol lipid dependence on acidification
- Quantification of myo-inositol hexakisphosphate in animal extracts by solution 31P NMR spectroscopy and spectral deconvolution
- Structural characterization of

### Contents on the CD Rom

Type here to search

https://www.primaryinfo.com/scope/inositol.htm

phosphatidylinositol phosphate (PIP) lipids.

- It is found in many foods, in particular, in cereals with high bran content, nuts, beans, and fruit, especially cantaloupe melons and oranges. Inositol is not considered a vitamin itself because it can be synthesised by the body. Inositol is needed for health at cellular level and a fair concentration is found in the lens of the human eye as well as the heart.
- Men taking extra inositol reported that their hair loss had improved, with less hair falling out - although this has not been tested under clinical situations
- Extracts of immature kernels of Zea mays catalysed the synthesis of indol-3-ylacetyl-myoinositol galactoside from indol-3-ylacetyl-myoinositol and UDP-galactose

### Company Profiles

- Company from China
- International Company
- China Company from Anhui
- Company from New Zealand
- Company from Japan

### Consultants

- Consultant from UK
- UK Consultant from Birmingham
- Consultant from California
- Consultant from Minnesota
- Consultant from USA
- Consultant from China

### Process

- Osmoregulatory changes in myoinositol transport by renal cells
- Characterization of Inositol-

### Products

- Inositol - Capsules
- Choline-Inositol Complex
- Inositol Crystals by Source Naturals
- InosoPhate 6™
- D-myo-Inositol 1,3,4-trisphosphate
- Inositol Powder
- Inositol Pure Soluble Powder
- SOLGAR Inositol

### Material Safety Data Sheet

23:04 01-08-2019

https://www.primaryinfo.com/scope/inositol.htm

printing technique.

- There is a paucity of data on the way (cAMP, inositol), qualitatively or quantitatively, altered in heart failure (HF). These studies were performed separately on animal models, but no study checked cAMP and inositol changes in the same animal model simultaneously.
- Pig feed is mainly based on cereals where phosphorus (P) is mostly present in inositol hexaphosphate (IP6), which is not readily available to monogastric animals. More available P sources are often added to ensure that pigs' requirements are fulfilled; this results in high excretion levels of P. The digestibility of P depends on phytase activity and amount of IP6 in feedstuffs.
- The formation of inositol within the animal body was used for the normal concentration of body inositol and the

### Technology

- Correlation of Myo-inositol Levels and Grading of Cerebral Astrocytomas
- Purification, characterization and functional cloning of inositol oxygenase from *Cryptococcus*
- Cerebrospinal fluid and plasma distribution of myoinositol and other polyols in Alzheimer disease
- Myocardial Concentrations of Inositol and cAMP in Intact Failed Rats
- A Novel Technique for the Pre-Concentration and Extraction of Inositol Hexakisphosphate from Soil Extracts with Determination by Phosphorus-31 Nuclear

### Market & Report

- Supply & Demand of Inositol
- Varying Cost and Free Nicotinic Acid Content in Over-the-Counter Niacin Preparations for Dyslipidemia
- Inositol-Induced Mania
- Myo-inositol content in pteridophytes and the isolation and characterization of L-myo-inositol-1-phosphate synthase from *Diplopterium* glaucum
- Dimerization of inositol monophosphatase *Mycobacterium tuberculosis* SuhB is not constitutive, but induced by binding of the activator Mg2+

### Dictyostelium discoideum

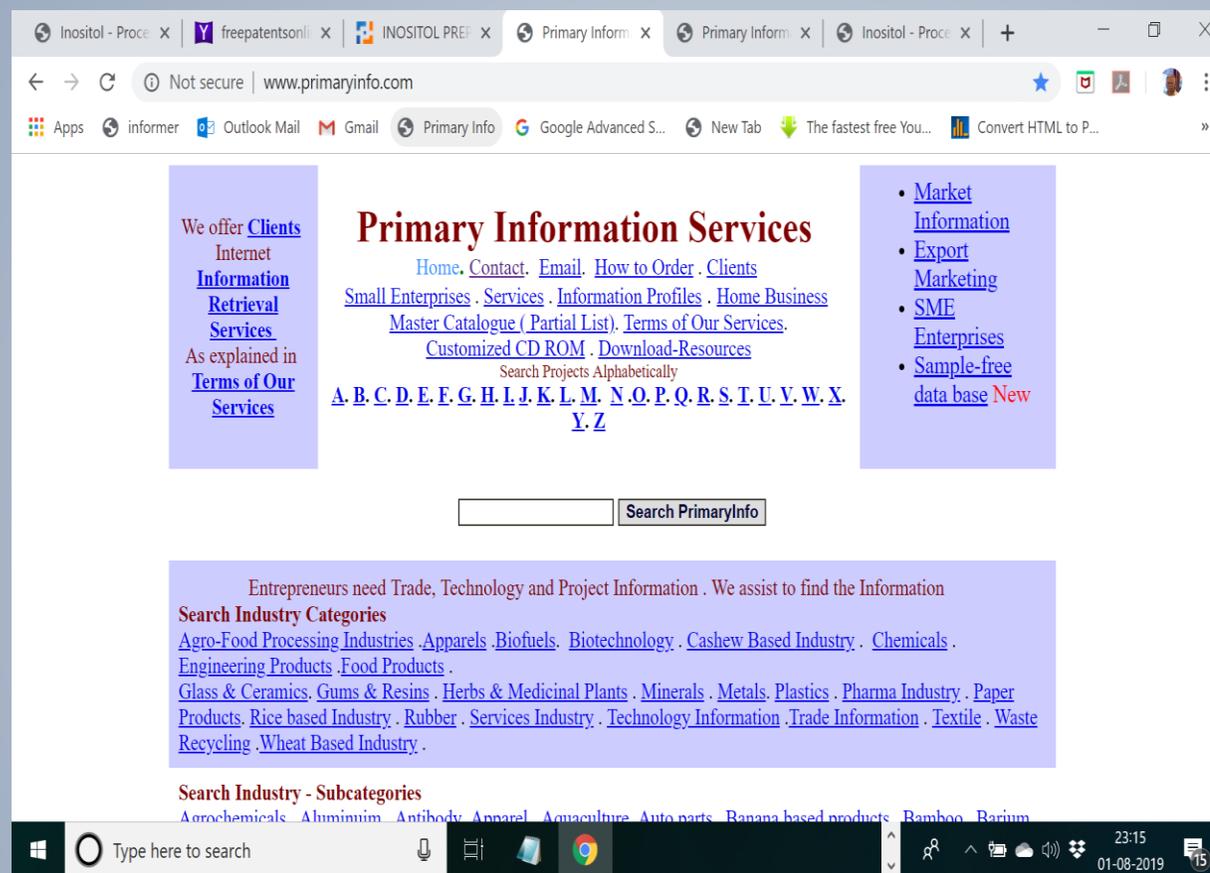
- The Synthesis of Inositol in the immature rat and chick embryo

### placebo-controlled trial

- Effects of Inositol Starvation on Phospholipid and Glycan Syntheses in *Saccharomyces cerevisiae*

01-08-2019

# QUESTIONS?



The screenshot shows a web browser window displaying the homepage of Primary Information Services. The browser's address bar shows the URL [www.primaryinfo.com](http://www.primaryinfo.com). The page features a central heading "Primary Information Services" with a list of navigation links including Home, Contact, Email, How to Order, Clients, Small Enterprises, Services, Information Profiles, Home Business, Master Catalogue (Partial List), Terms of Our Services, Customized CD ROM, and Download-Resources. Below this is a search bar with the text "Search Projects Alphabetically" and a list of letters from A to Z. To the left, a sidebar lists services such as "We offer Clients Internet Information Retrieval Services" and "As explained in Terms of Our Services". To the right, another sidebar lists "Market Information", "Export Marketing", "SME Enterprises", and "Sample-free data base New". At the bottom, there is a section titled "Entrepreneurs need Trade, Technology and Project Information . We assist to find the Information" followed by "Search Industry Categories" and a list of industry categories like Agro-Food Processing Industries, Chemicals, Engineering Products, etc. The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray with the date 01-08-2019 and time 23:15.

Primary Information Services  
[www.primaryinfo.com](http://www.primaryinfo.com)  
<mailto:primaryinfo@gmail.com>