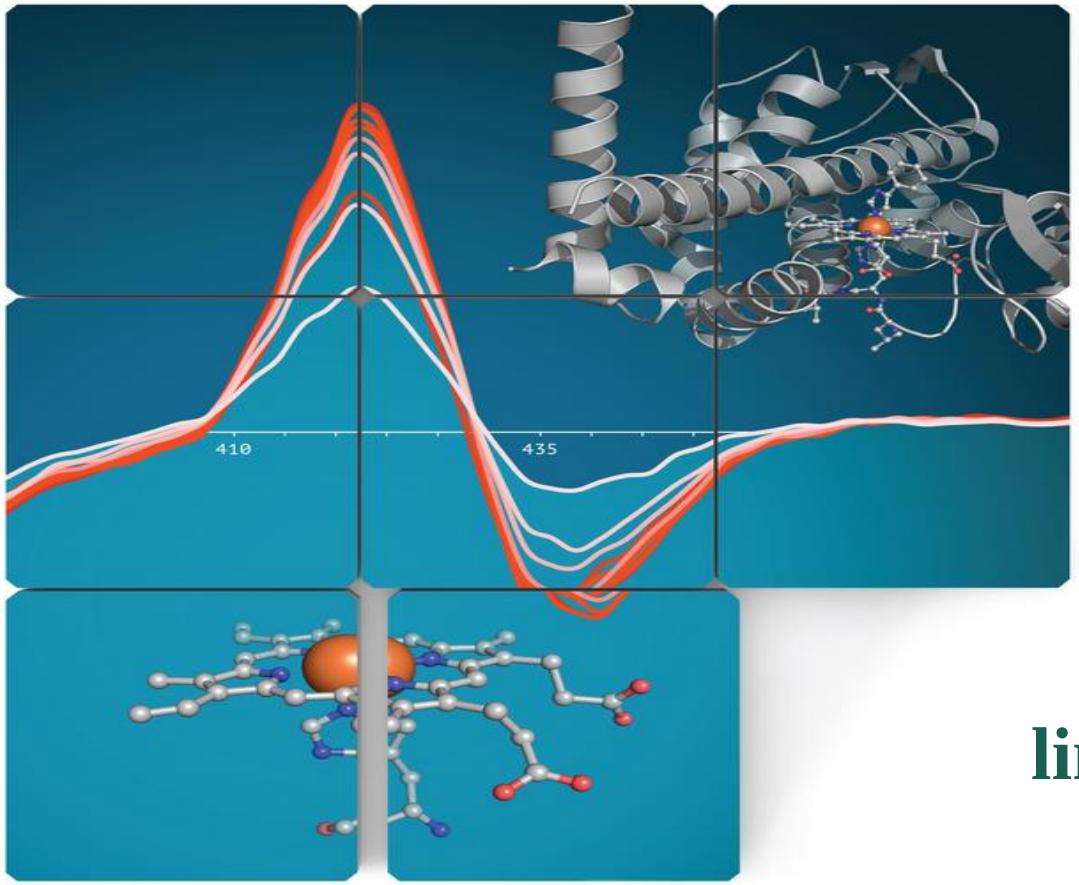
化学研究中的数据与事实检索



清华大学图书馆

林佳

linjia@lib.tsinghua.edu.cn

主要内容

为何需要数据事实检索

各类参考工具及其特点

如何检索所需数据事实

交流

1. 为何需要数据与事实检索

The Nobel Prize in Physiology or Medicine 2015

Ill. N. Elmehed. © Nobel Media AB 2015.

William C. Campbell

Prize share: 1/4

Ill. N. Elmehed. © Nobel Media AB 2015.

Satoshi Ōmura

Prize share: 1/4

Ill. N. Elmehed. © Nobel Media AB 2015.

Youyou Tu

Prize share: 1/2

Youyou Tu

Born: 1930, Zhejiang Ningpo, China

Affiliation at the time of the award: China Academy of Traditional Chinese Medicine, Beijing, China

Prize motivation: "for her discoveries concerning a novel therapy against Malaria"

Prize share: 1/2

如何查找

- 屠呦呦简历
- 第一时间找到其获诺奖演讲视频及幻灯片
- 青蒿素、疟疾的英文拼写
- 青蒿素和双氢青蒿素的
  - 系统命名、CASRN
  - 结构
  - 理化性质
  - 光谱数据
  - 药理毒性
  - 药物代谢动力学数据
  - 人工合成方法
  - 药品的研制、生产、使用、管理规范
  - ……

2. 各类参考工具及其特点

参考工具

Reference Works

Reference Tools

Reference Book

用于查找特定信息而不是供系统学习某方面知识的信息资源

2. 各类参考工具及其特点

参考工具常见形式

- 百科全书
- 辞典（词典）
- 年鉴
- 手册
- 法律法规及案例
- 技术标准
- 传记资料
- 表谱
- 地图
- 指南
- 名录
- ……

2. 各类参考工具及其特点

参考工具常见形式

- 印刷型工具书
- 参考工具数据库
- 网站
- 搜索引擎
- ……

0 数理科学和化学

中国图书分类法

- O1 数学
- O3 力学
- O4 物理学
- O6 化学
  - O61 无机化学
    - O611 化学元素与无机化合物
      - O611.2 结构
      - O611.6 无机化合物
        - O611.66 复盐
      - O611.7 同位素及同位素的化合物
    - O612 周期系统各族元素
  - O62 有机化学
  - O63 高分子化学（高聚物）
  - O65 分析化学
- O7 晶体学

2. 各类参考工具及其特点

《中国图书馆分类法》（第五版）——总论复分表

- -0　理论与研究方法
- -1　概况、现状、进展
- -2　机构、团体、会议
- -3　研究方法、工作方法
- -4　教育与普及
- -5　丛书、文集、连续出版物
- -6　参考工具书
- -8　通用概念

O62-6*　有机化学各类参考工具

-6　参考工具书
-61　名词术语、词典、百科全书
-62　手册、名录、指南、一览表、年表
-63　产品目录、产品样本、产品说明书
-64　表解、图解、图册、谱录、数据、公式、地图
-65　条例、规程、标准
-66　统计资料
-67　参考资料

-43　习题集

2. 各类参考工具及其特点

百科全书

- 一切知识门类或某一知识门类概述性的著述。
- “百科”，言知识之广；“全书”，言内容之博。
- 供人们查检知识和事实资料，还具有扩大读者知识视野和帮助人们系统求知的教育作用。常被誉为“没有围墙的大学”

encyclopædia; encyclopedia; encyclopaedia

2. 各类参考工具及其特点

百科全书

- 印刷版
- 数字版

✓ **综合百科**

收集、整理人类所积累的一切学科知识，涉及各个领域，兼收并蓄。

✓ **专科大全**

更加深入地揭示某一学科领域或某一学术门类的知识。

2. 各类参考工具及其特点

百科全书

2. 各类参考工具及其特点

百科全书

关键字 | ti:(encyclopedia and chem*) | 全部馆藏 | 检索

找到 65 条记录 按日期排序 .

结果页 1 2 3 4 5 6 后一页

保存标记记录 保存本页所有记录

关键字 (1-12 共 65)

1

Innovations in Green Chemistry and Green Engineering [electronic resource] : Selected Entries from t

Anastas, Paul T.

New York, NY : Springer New York : Imprint: Springer, 2013.

2013

2

中国化工产品大全 zhong guo hua gong chan pin da quan = = Encyclopedia of Chinese chemical pr

北京 : 化学工业出版社, 2012

2012

3

Transport and Fate of Chemicals in the Environment [electronic resource] : Selected Entries from the

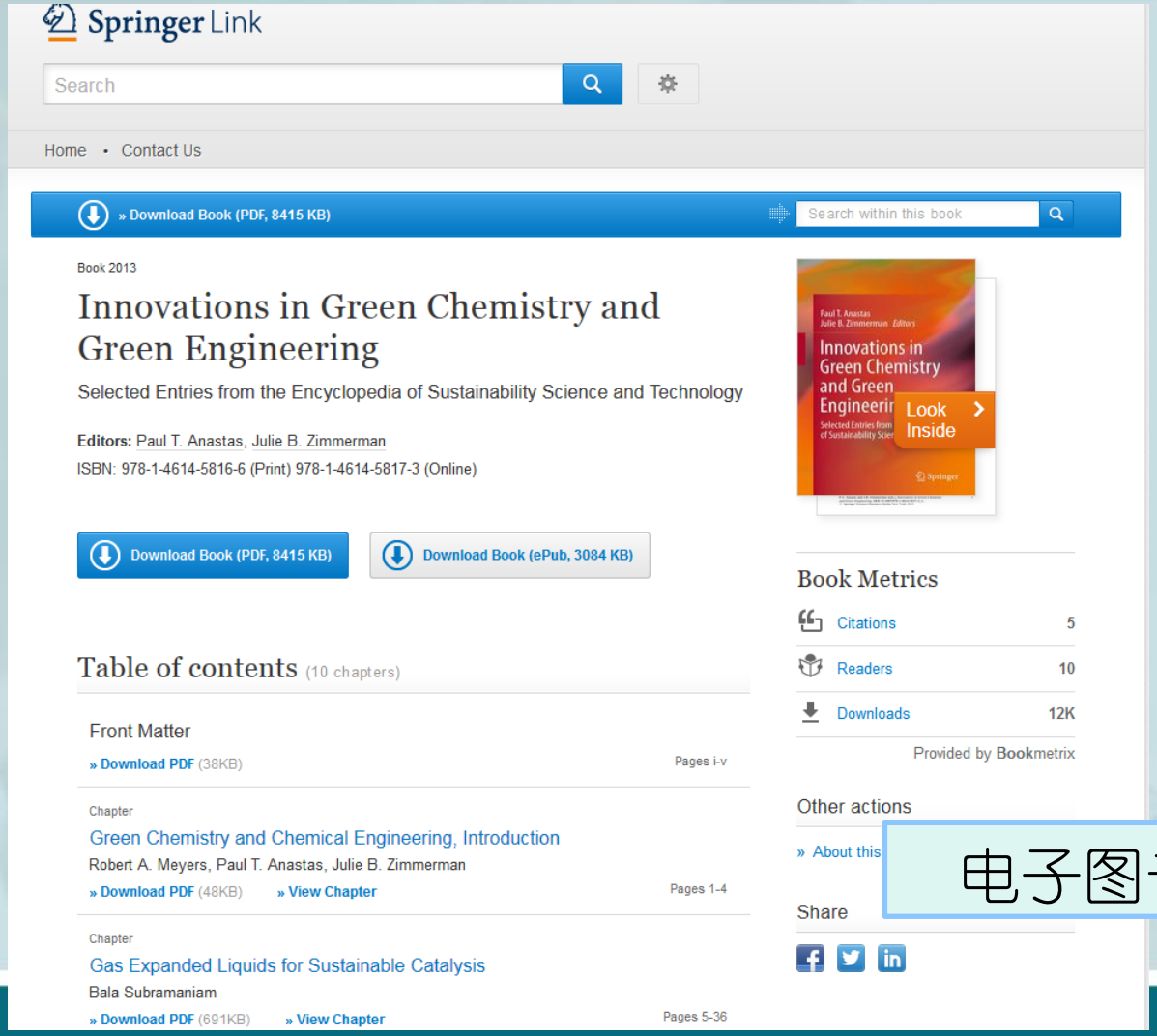
Gulliver, John S.

New York, NY : Springer New York : Imprint: Springer, 2012.

2012

2. 各类参考工具及其特点

百科全书

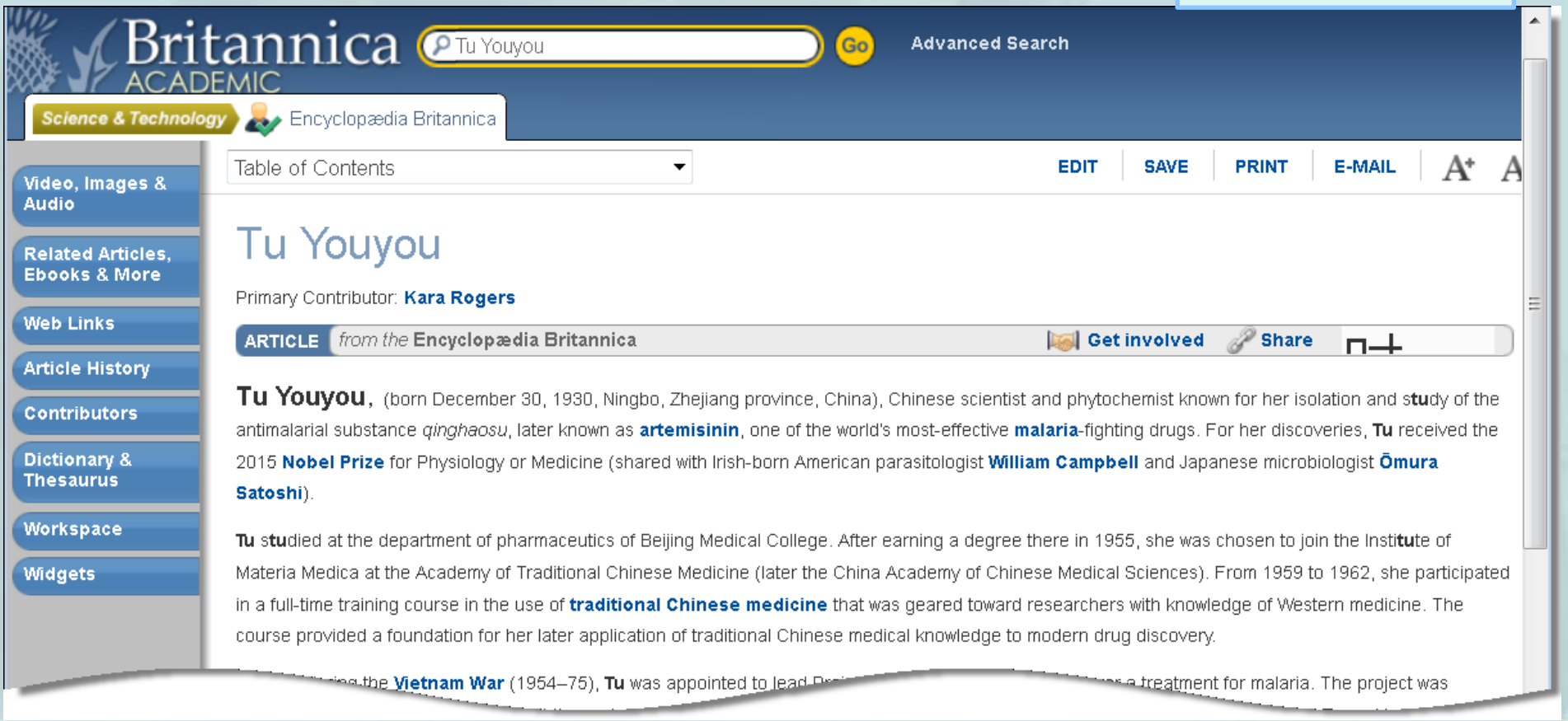


电子图书

2. 各类参考工具及其特点

百科全书

Encyclopedia Britannic Online



中国大百科全书(Ed. 1)数据库

http://ecph.cnki.net/

2. 各类参考工具及其特点

词典（辞典）

- 印刷版
- 数字版

- ✓ 语言对照
- ✓ 专业术语（词汇、缩略语）

2. 各类参考工具及其特点

年鉴（Year Book，Almanac，……）

- 汇集年度重要时事、文献和统计资料，按年度连续出版的参考工具。
- 具有系统全面、客观正确以及浓缩精炼等特点。
- 通过年鉴，可查找国内国际时事、各部门各行业的进展、各学科各专业的研究动态、政府颁布的重要法规文献、逐年可比的统计数据等。

2. 各类参考工具及其特点

年鉴

- 印刷版
- 数字版

- ✓ 行业年鉴
- ✓ 机构年鉴
- ✓ 百科年鉴

2. 各类参考工具及其特点

年鉴

中国电子政务年鉴 zhong guo dian zi zheng wu nian jian. 2014 = e-government yearboo

北京 : 社会科学文献出版社, 2015.9

2015中国房地产年鉴 2015 zhong guo fang di chan nian jian / 中国房地产研究会, 中国 [illegible]

: 企业管理出版社 北京, 2015.5 1

国医年鉴 guo yi nian jian / 孙涛主编

: 中医古籍出版社 北京, 2015.5 1

印刷版年鉴

2. 各类参考工具及其特点

年鉴

中国年鉴网络出版总库（中国知网）

可分类浏览，可全文检索

2. 各类参考工具及其特点

手册（handbook）

- 印刷版
- 数字版

- ✓ 参数
- ✓ 常数
- ✓ 性能
- ✓ ……

2. 各类参考工具及其特点

手册

印刷版手册

关键字 | ti:("手册" and "化工") | 全部馆藏 | 检索

找到 389 条记录 按日期排序 .

结果页 1 2 3 4 5 6 7 8 9 10 11 ... 33 后一页

保存标记记录 保存本页所有记录

关键字 (1-12 共 389)

1

精细化工配方常用原料手册 Jing Xi Hua Gong Pei Fang Chang Yong Yuan Liao Shou Ce / 侯滨

侯滨滨

北京 : 化学工业出版社, 2015

2

常用化工原料手册 chang yong hua gong yuan liao shou ce / 赵晨阳主编

赵晨阳

北京 : 化学工业出版社, 2015

关键字 | ti:(handbook and chemistry) | 全部馆藏 | 检索

找到 169 条记录 按日期排序 .

结果页 1 2 3 4 5 6 7 8 9 10 11 ... 15 后一页

保存本页所有记录

69)

The Handbook of Lithium-Ion Battery Pack Design : Chemistry, Components, Types and Terminology

John T Warner

: Elsevier Science, 2015

A handbook for DNA-encoded chemistry [electronic resource] : theory and applications for exploring c

Hoboken, New Jersey : Wiley, [2014]

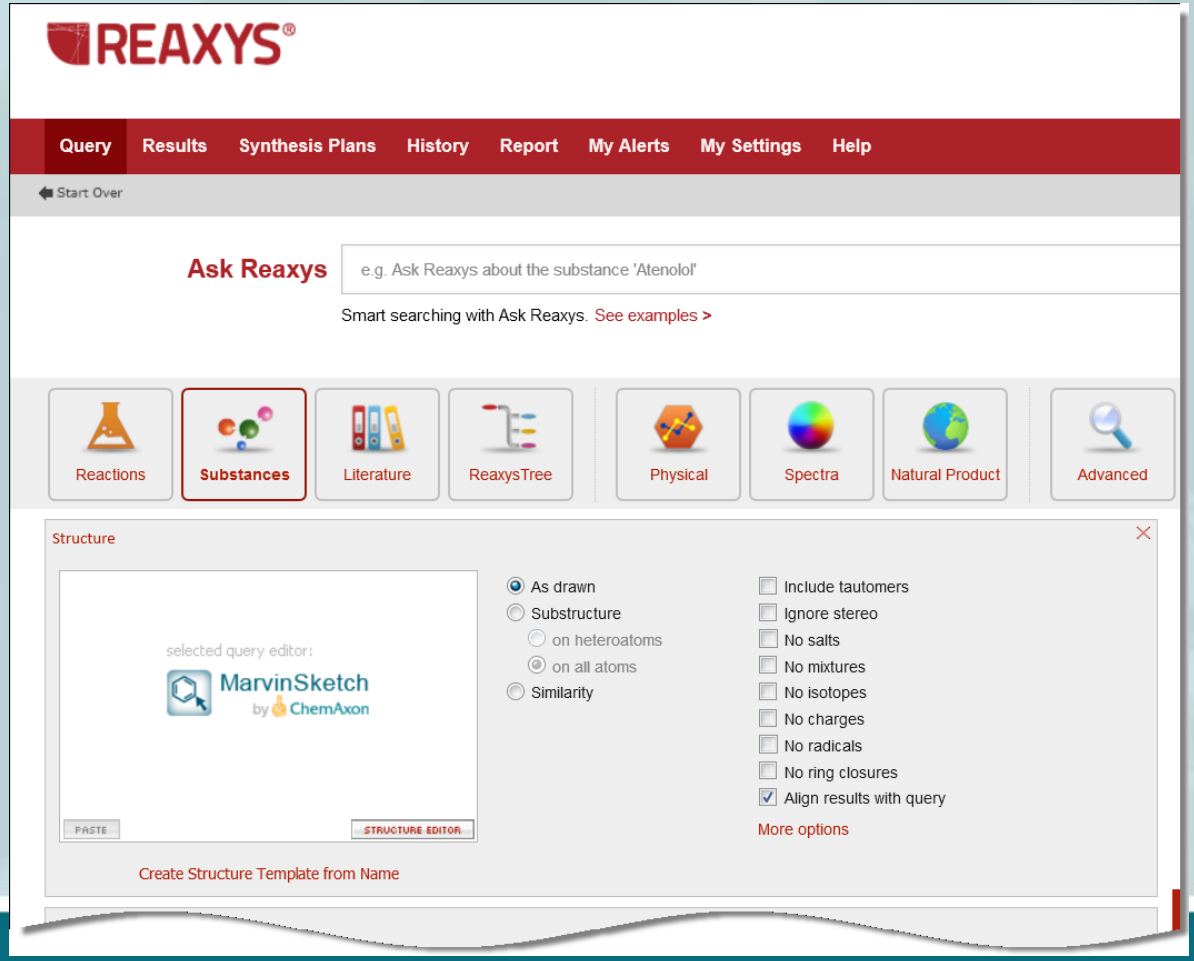
Chemical Structure of Pelagic Redox Interfaces [electronic resource] : Observation and Modeling / ed

Yakushev, Evgeniy V.

Berlin, Heidelberg : Springer Berlin Heidelberg : Imprint: Springer, 2013.

2. 各类参考工具及其特点

手册



Reaxys数据库，以德国化学会出版的“盖默林无机与金属有机化学手册”和“贝尔斯坦有机化学手册”为基础

2. 各类参考工具及其特点

法律法规、案例、判决文书

- 印刷版
- 数字版

- ✓ 不同法律层级
- ✓ 不同主题
- ✓ 不同颁布机关
- ✓ 不同效力状态
- ✓ ……

2. 各类参考工具及其特点

法律法规、案例、判决文书

各种法律法规数据库

2. 各类参考工具及其特点

法律法规、案例、判决文书

清华大学数据库导航系统

版权公告

学术信息资源门户 | 电子期刊导航 | 资 源 动 态 | 校 外 访 问 | 多媒体资源 | 中外文核心期刊 | 首 页

按数据库名称检索： 查找 咨询反馈

按字顺浏览数据库： A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 中文库

共有记录12条，当前1-12条 上一页，下一页

资源名称	年限范围	资源类型	访问方式	资源简介	详细信息
高校财经数据库—中国法律法规库	1949 -	法律/法规	登录出校	收集中华人民共和国自1949年以来的各类法律法规及条例案例全文（包括地方及行业法律法规）。...[更多]	more
中国法律资源全互动数据库 (北大法意)		法律/法规	登录出校	是从建国至今最为完备的法规数据库之一。专门为司法机构、各行业、各领域的法律、法学工作者，以及法学院的师生提供专业系统的法...[更多]	more
HeinOnline - Treaties and Agreements Library	1776 -	法律/法规		HeinOnline是美国著名法律期刊全文数据库，所收录期刊大多从创刊开始，是许多学术期刊回溯查询的重要资源。HeinO...[更多]	more
北大法宝 - 法律法规检索系统	1949 -	法律/法规	登录出校	收录自1949年起至今的法律法规，包括中央法规司法解释、地方法规规章、合同与文书范本、港澳台法律法规、中外条约、外国法律...[更多]	more
Westlaw		法律/法规		Westlaw 是国际领先的法律检索数据库，发布于 1975 年。经过 30 多年的发展， Westlaw? 已经成为世...[更多]	more
HeinOnline - Code of Federal		法律/		HeinOnline 's CFR coverage is comprehensive and	

各种法律法规数据库

2. 各类参考工具及其特点

技术标准（standard）

- 对重复性的技术事项在一定范围内的统一规定。
- 经协商一致制定并经一个公认机构的批准。

2. 各类参考工具及其特点

技术标准

- 印刷版
- 数字版

- ✓ 不同应用目的
- ✓ 不同使用范围
- ✓ 强制/推荐

ICS 67.100
C 53

中华人民共和国国家标准

GB/T 22388—2008

原料乳与乳制品中三聚氰胺检测方法

Determination of melamine in raw milk and dairy products

2008-10-07 发布　　2008-10-07 实施

中华人民共和国国家质量监督检验检疫总局
中国国家标准化管理委员会　发布

原料乳与乳制品中三聚氰胺检测方法

1 范围

本标准规定了原料乳、乳制品以及含乳制品中三聚氰胺的三种测定方法，即高效液相色谱法(HPLC法)、液相色谱-质谱/质谱法(LC-MS/MS法)和气相色谱-质谱联用法[包括气相色谱-质谱法(GC-MS法)，气相色谱-质谱/质谱法(GC-MS/MS法)]。

本标准适用于原料乳、乳制品以及含乳制品中三聚氰胺的定量测定；液相色谱-质谱/质谱法、气相色谱-质谱联用法(包括气相色谱-质谱/质谱法)同时适用于原料乳、乳制品以及含乳制品中三聚氰胺的定性确证。

本标准高效液相色谱法的定量限为2 mg/kg，液相色谱-质谱/质谱法的定量限为0.01 mg/kg，气相色谱-质谱法的定量限为0.05 mg/kg(其中气相色谱-质谱/质谱法的定量限为0.005 mg/kg)。

2 规范性引用文件

下列文件中的条款通过本标准的引用而成为本标准的条款。凡是注日期的引用文件，其随后所有的修改单(不包括勘误的内容)或修订版均不适用于本标准，然而，鼓励根据本标准达成协议的各方研究是否可使用这些文件的最新版本。凡是不注日期的引用文件，其最新版本适用于本标准。

GB/T 6682　分析实验室用水规格和试验方法(GB/T 6682—2008，ISO 3696:1987，MOD)

3 第一法　高效液相色谱法(HPLC法)

3.1 原理

试样用三氯乙酸溶液-乙腈提取，经阳离子交换固相萃取柱净化后，用高效液相色谱测定，外标法定量。

3.2 试剂与材料

除非另有说明，所有试剂均为分析纯，水为GB/T 6682规定的一级水。

3.2.1　甲醇：色谱纯。

3.2.2　乙腈：色谱纯。

3.2.3　氨水：含量为25%～28%。

3.2.4　三氯乙酸。

3.2.5　柠檬酸。

3.2.6　辛烷磺酸钠：色谱纯。

3.2.7　甲醇水溶液：准确量取50 mL甲醇和50 mL水，混匀后备用。

3.2.8　三氯乙酸溶液(1%)：准确称取10 g三氯乙酸于1 L容量瓶中，用水溶解并定容至刻度，混匀后备用。

3.2.9　氨化甲醇溶液(5%)：准确量取5 mL氨水和95 mL甲醇，混匀后备用。

3.2.10　离子对试剂缓冲液：准确称取2.10 g柠檬酸和2.16 g辛烷磺酸钠，加入约980 mL水溶解，调节pH至3.0后，定容至1 L备用。

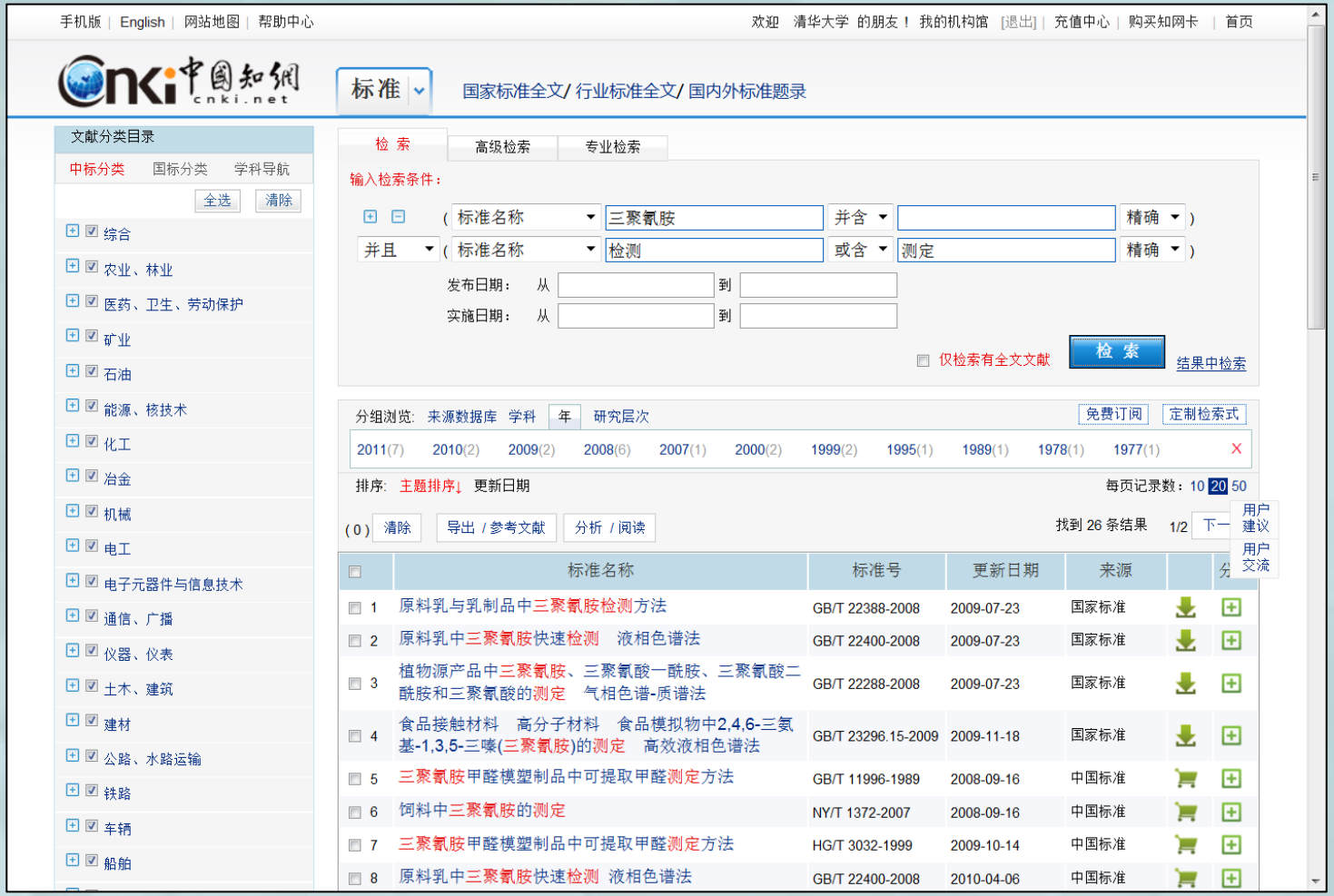
3.2.11　三聚氰胺标准品：CAS 108-78-01，纯度大于99.0%。

3.2.12　三聚氰胺标准储备液：准确称取100 mg(精确到0.1 mg)三聚氰胺标准品于100 mL容量瓶中，用甲醇水溶液(3.2.7)溶解并定容至刻度，配制成浓度为1 mg/mL的标准储备液，于4 ℃避光保存。

2. 各类参考工具及其特点

技术标准

标准数据库
（中国知网）



3. 如何检索各种数据与事实

分析检索需求

● 概念/事实/术语	百科全书、词典、年鉴……
● 理化常数/器件参数/性能	手册、……
● 法律文件	法律文书
● 技术标准	标准文书
● 统计数据	年鉴、统计资料、官网……
● 人物传记	传记资料、百科全书、……
● 名录	各种名录、……

3. 如何查找各种数据与事实

应用实例

- 屠呦呦简历

Bai du 百度

屠呦呦

百度一下

网页 新闻 贴吧 知道 音乐 图片 视频 地图 文库 更多»

百度为您找到相关结果约1,270,000个

搜索工具

屠呦呦_百度百科

姓名：屠呦呦

生日：1930年(庚午年)12月30日 职业：药学家

简介：屠呦呦，女，药学家。1930年12月30日生于浙江宁波，...

人物经历 学

baike.baidu.

为您推荐：屠呦呦 青蒿素 屠呦

屠呦呦为什么没有获得诺贝尔

3个回答 - 提问时间: 2014年11月27日

2011年美国最具声望的生物医学奖项

素研究开发中心主任屠呦呦获奖,成为

www.zybang.com/questio... V3 -

中国女药学家屠呦呦获2015年

2015年10月

间10月5日下

女药学家屠呦

tech.qq.com

周小平:屠呦呦所得到的,远超

2015年10月

客厅》的文章

收藏 3913 2023

屠呦呦

编辑

屠呦呦，女，药学家。1930年12月30日生于浙江宁波，1951年考入北京大学，在医学院药学系生药专业学习。[1] 1955年，毕业于北京医学院（今北京大学医学部）。毕业后曾接受中医培训两年半，并一直在中国中医研究院（2005年更名为中国中医科学院）工作，期间前后晋升为硕士生导师、博士生导师，现为中国中医科学院的首席科学家。[2-3] [4] 。中国中医研究院终身研究员兼首席研究员，青蒿素研究开发中心主任，博士生导师、药学家，诺贝尔医学奖获得者。

屠呦呦多年从事中药和中西药结合研究，突出贡献是创制新型抗疟药青蒿素和双氢青蒿素。1972年成功提取到了一种分子式为C15H22O5的无色结晶体，命名为青蒿素。2011年9月，因为发现青蒿素——一种用于治疗疟疾的药物，挽救了全球特别是发展中国家的数百万人的生命获得拉斯克奖和葛兰素史克中国研发中心"生命科学杰出成就奖"[5] 。2015年10月，屠呦呦获得诺贝尔生理学或医学奖，理由是她发现了青蒿素，这种药品可以有效降低疟疾患者的死亡率。她成为首获科学类诺贝尔奖的中国人。

屠呦呦是第一位获得诺贝尔科学奖项的中国本土科学家、第一位获得诺贝尔生理医学奖的华人科学家。[2] 是中国医学界迄今为止获得的最高奖项，也是中医药成果获得的最高奖项。[6]

中文名	屠呦呦	毕业院校	北京大学医学部 [2]
外文名	Tu Youyou	主要成就	创制抗疟药—青蒿素和双氢青蒿素
国　籍	中华人民共和国		拉斯克临床医学奖（2011年9月）
民　族	汉族		葛兰素史克中国研发中心"生命科学杰出成就奖"（2011
出生地	浙江省宁波市		年） [5]
出生日期	1930年(庚午年)12月30日		诺贝尔医学奖（2015年10月）
职　业	药学家	代表作品	发现青蒿素

Tu Youyou

Gale Biography in Context, October 1, 2015

Listen

Born: December 30, 1930 in Ningbo, China

Nationality: Chinese

Occupation: Medical researcher

National Science Congress Prize (1978), National Inventor's Prize (1979), Albert Einstein World Science Prize (1987), GlaxoSmithKline Outstanding Achievement Award in Life Science, (2011), Albert Lasker Award for Clinical Medical Research (2011), Outstanding Contribution Award of the China Academy of Chinese Medical Sciences (2011), Warren Alpert Foundation Prize (2015), Nobel Prize in Physiology or Medicine (2015)

Tu was awarded a share of the 2015 Nobel Prize in Physiology or Medicine for her discovery of artemisinin, a drug that has proved to be a highly effective treatment against malaria, one of the world's most serious health problems.

Early Life and Career

Tu was born on December 30, 1930, in Ningbo, Zhejiang province, on the east coast of China, south of Shanghai. She attended Xiaoshi and Ningbo middle schools before matriculating at Peking University Medical School (now Peking University Health Science Center) in 1951. She graduated four years later with a degree in pharmaceutical sciences. She then decided to continue her studies in Traditional Chinese Medicine (TCM)

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nal of Clinical

3. 如何查找各种数据与事实

应用实例

- 什么是多聚酶链式反应（Polymerase Chain Reaction，PCR）？
- 青蒿素(Artemisinin)是什么？

Video, Images & Audio
Related Articles, Ebooks & More
Web Links
Article History
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polymerase chain reaction

polymerase chain reaction, **(PCR)**, a technique used to make numerous copies of a specific segment of **DNA** quickly and accurately. The polymerase chain reaction enables investigators to obtain the large quantities of **DNA** that are required for various experiments and procedures in **molecular biology**, forensic analysis, evolutionary **biology**, and medical diagnostics.

PCR was developed in 1983 by **Kary B. Mullis**, an American biochemist who won the Nobel Prize for Chemistry in 1993 for his invention. Before the development of PCR, the methods used to amplify, or generate copies of, recombinant DNA fragments were time-consuming and labour-intensive. In contrast, a machine designed to carry out PCR reactions can complete many rounds of replication, producing billions of copies of a DNA fragment, in only a few hours.

The PCR technique is based on the natural processes a cell uses to replicate a new DNA strand. Only a few biological ingredients are needed for PCR. The integral component is the **template DNA**—*i.e.*, the DNA that contains the region to be copied, such as a **gene**. As little as one DNA molecule can serve as a template. The only information needed for this fragment to be replicated is the sequence of two short regions of **nucleotides** (the subunits of DNA) at either end of the region of interest. These two short template sequences must be known so that two **primers**—short stretches of nucleotides that correspond to the template sequences—can be synthesized. The primers bind, or anneal, to the template at their complementary sites and serve as the starting point for copying. DNA synthesis at one primer is directed toward the other, resulting in replication of the desired intervening sequence. Also needed are free nucleotides used to build the new DNA strands and a DNA polymerase, an **enzyme** that does the building by sequentially adding on free nucleotides according to the instructions of the template.

PCR is a three-step process that is carried out in repeated cycles. The initial step is the **denaturation**, or separation, of the two strands of the DNA molecule. This is accomplished by heating the starting material to temperatures of about 95° C (203° F). Each strand is a template on which a new strand is built. In the second step the temperature is reduced to about 55° C (131° F) so that the primers can anneal to the template. In the third step the temperature is raised to about 72° C (162° F), and the DNA polymerase begins adding nucleotides onto the ends of the annealed primers. At the end of the cycle, which lasts about five minutes, the temperature is raised and the process begins again. The number of copies doubles after each cycle. Usually 25 to 30 cycles produce a sufficient amount of DNA.

In the original PCR procedure, one problem was that the DNA polymerase had to be replenished after every cycle because it is not stable at the high temperatures needed for denaturation. This problem was solved in 1987 with the discovery of a heat-stable DNA polymerase called ***Taq***, an enzyme isolated from the thermophilic bacterium *Thermus aquaticus*, which inhabits hot springs. *Taq* polymerase also led to the invention of the PCR machine.

Britannica:
Encyclopædia
Year in Review
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Featured Result

artemisinin (drug)

More Results

Tu Youyou (Chinese scientist and phytochemist)

Applications of synthetic biology *from the article* **synthetic biology**

antiprotozoal drug

Diagnosis and treatment *from the article* **malaria (pathology)**

artemisinin

ARTICLE *from the* Encyclopædia Britannica

artemisinin, also called **qinghaosu**, antimalarial drug derived from the sweet wormwood plant, *Artemisia annua*. **Artemisinin** is a sesquiterpene lactone (a compound made up of three isoprene units bound to cyclic organic esters) and is distilled from the dried leaves or flower clusters of *A. annua*. The antipyretic (fever-reducing) properties of the plant were first recognized in the 4th century CE by Chinese physicians, who called the plant *qinghao* and recommended a natural remedy in the form of *qinghao* tea. In the following centuries, this remedy was commonly prescribed for hemorrhoids and malaria. The active agent, called *qinghaosu*, was isolated from the plant in the 1970s; this compound became widely known as **artemisinin**. Today, there are several derivatives of **artemisinin**, including artesunate and artemether, that are used in the treatment of malaria.

Artemisinin is effective against all the malaria-causing protozoal organisms in the genus *Plasmodium*. The drug is particularly useful in the

SEE MORE...

3. 如何查找各种数据与事实

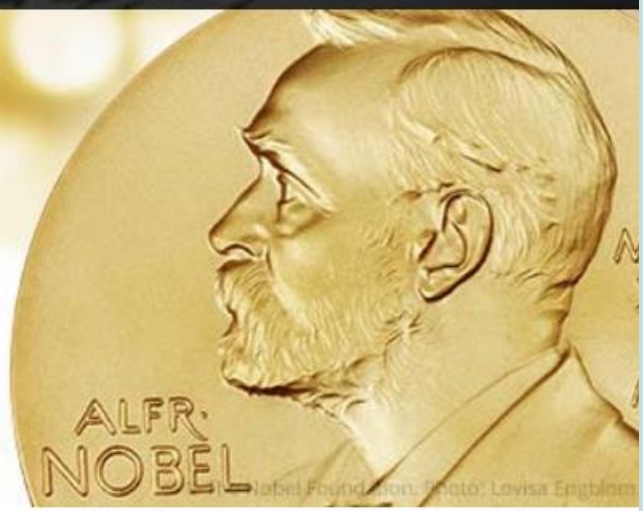
应用实例

- 某诺奖获得者的演讲视频及演示文档

"For the greatest benefit to mankind"
Alfred Nobel

2015 NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

William C. Campbell
Satoshi Ōmura
Youyou Tu



The Nobel Prize in Physiology or Medicine

Awarded to 210 Nobel Laureates since 1901

Most Popular Medicine Laureates


1. Youyou Tu


2. William C. Campbell


3. Satoshi Ōmura


4. Sir Alexander Fleming

Nobel Prizes and Laureates

Medicine Prizes 2014

- About the Nobel Prize in Physiology or Medicine 2014
- John O'Keefe
  - Facts
  - Nobel Lecture
  - Prize Presentation
  - Banquet Speech
  - Interview
  - Nobel Diploma
  - Photo Gallery
  - Other Resources
- May-Britt Moser
- Edvard I. Moser

All Nobel Prizes in Physiology or Medicine
All Nobel Prizes in 2014

The Nobel Prize in Physiology or Medicine 2014
John O'Keefe, May-Britt Moser, Edvard I. Moser

John O'Keefe - Facts

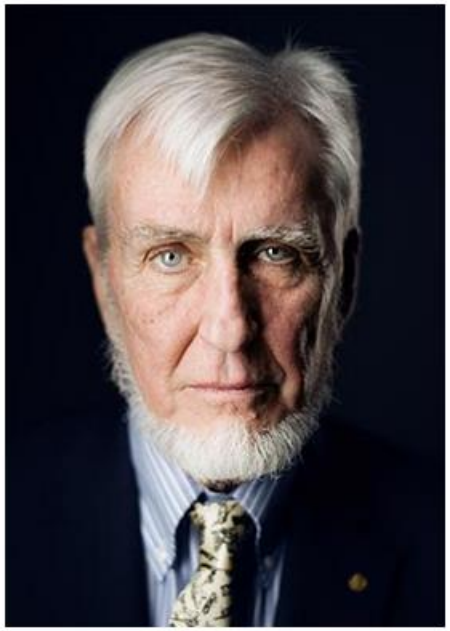


Photo: A. Mahmoud

John O'Keefe

Born: 18 November 1939, New York, NY, USA

Affiliation at the time of the award: University College, London, United Kingdom

Prize motivation: "for their discoveries of cells that constitute a positioning system in the brain"

Field: physiology, spatial behavior

Prize share: 1/2

3. 如何查找各种数据与事实

应用实例

- 青蒿素和双氢青蒿素的
  - 系统命名、CASRN、三维结构、手性原子
  - 理化性质、光谱数据
  - 药理毒性、药物代谢动力学数据
  - 人工合成方法
  - 药品的研制、生产、使用、管理规范

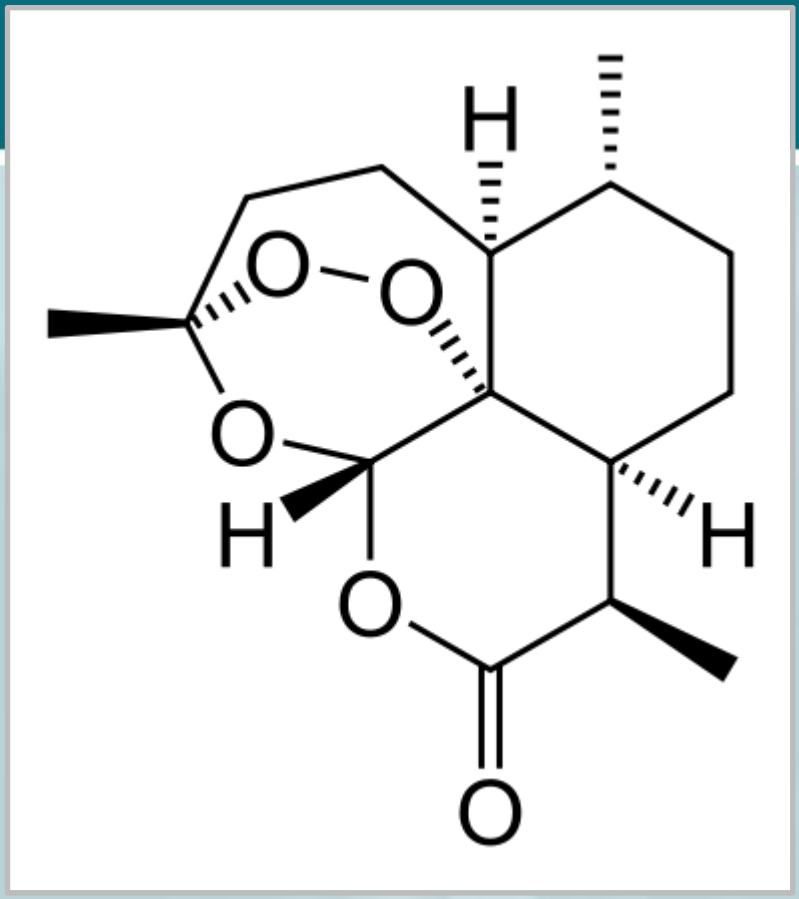
基本思路

- ✓ 利用英汉对照词典等工具查出英文拼写
- ✓ 利用百科全书找到结构式及常用理化性质
- ✓ 更多数据可通过专业数据库找到

- 青蒿素
- 双氢青蒿素
- 疟疾

- Artemisinin
- Dihydroartemisinin
- Malaria; Helopyra

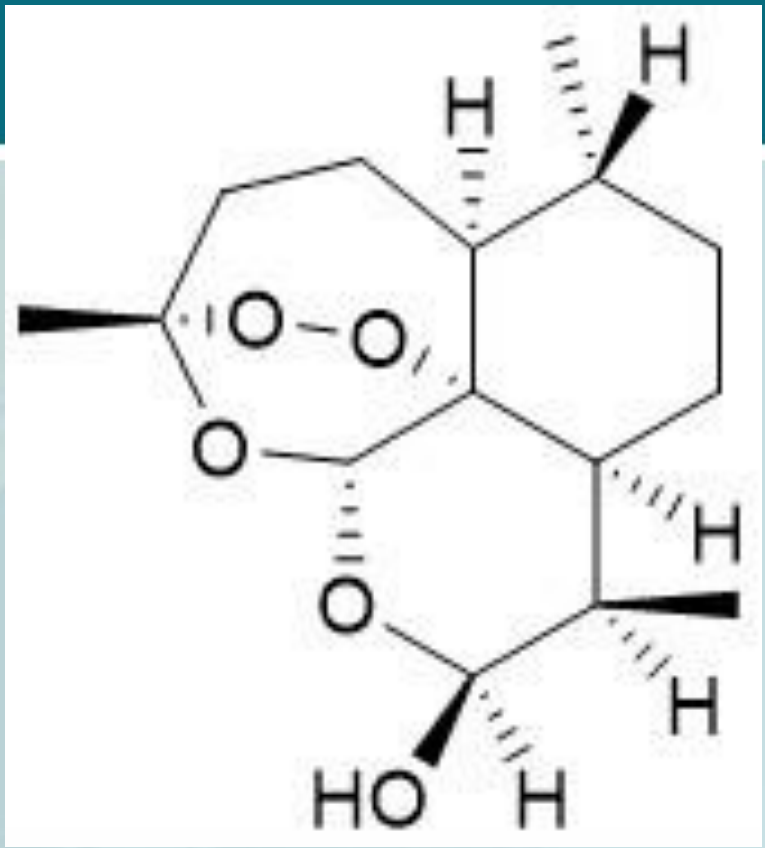
- Qinghaosu



青蒿素

63968-64-9

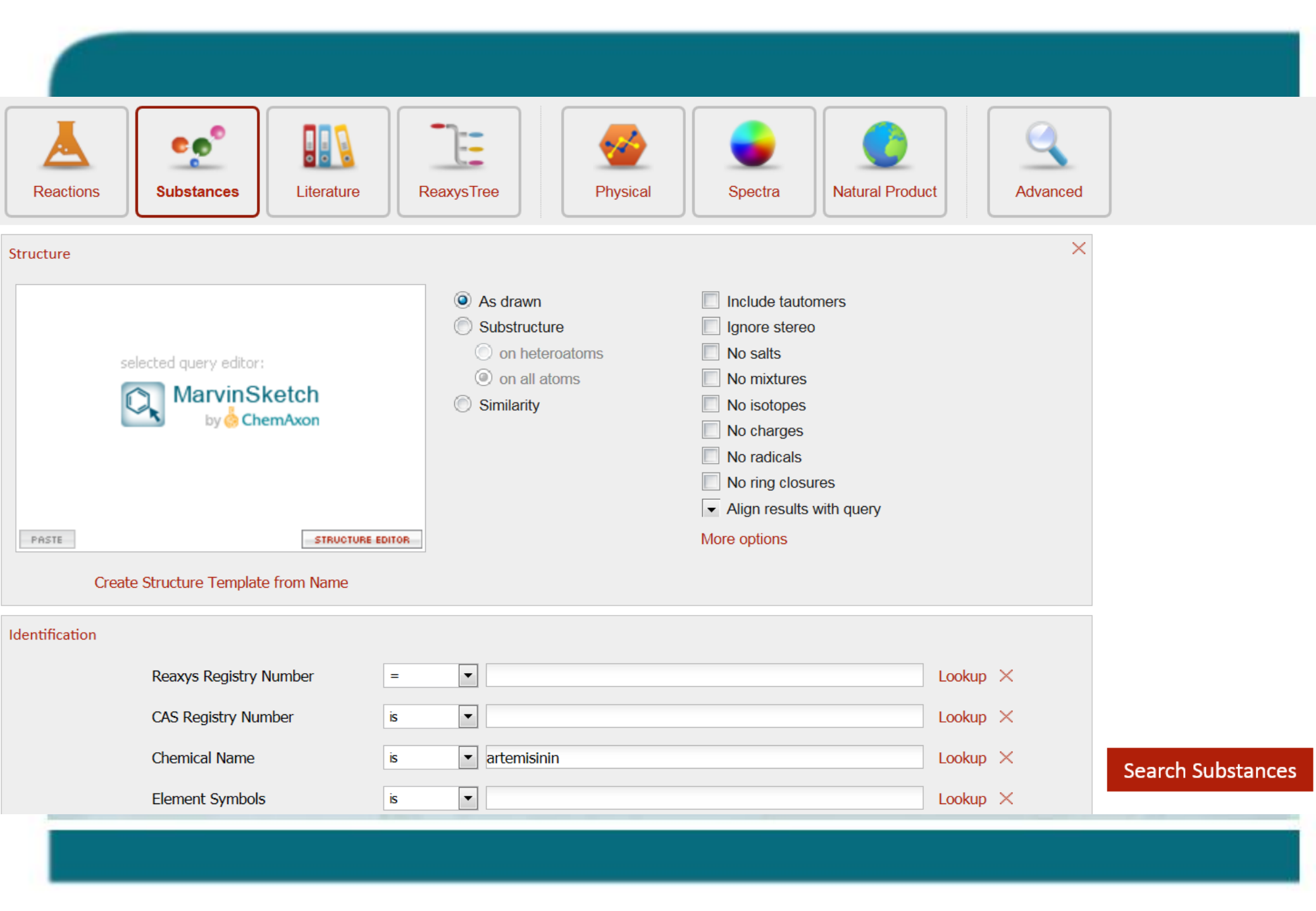
等3个



双氢青蒿素

81496-81-3

等5个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MarvinSketch
by ChemAxon
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STRUCTURE EDITOR
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No isotopes
No charges
No radicals
No ring closures
Align results with query
More options
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CAS Registry Number
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Chemical Name
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artemisinin
Lookup
Element Symbols
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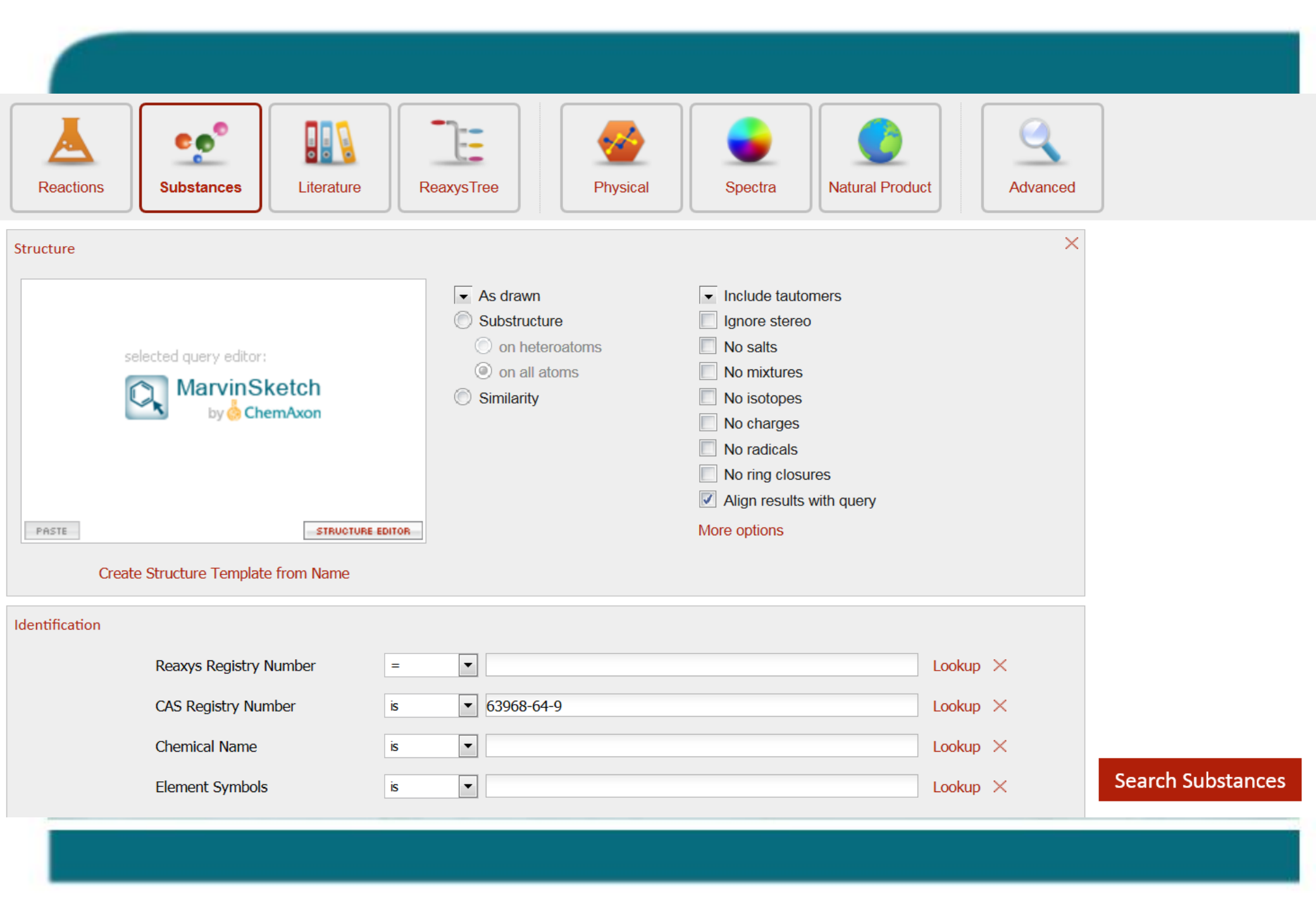
Lookup
Search Substances


Reactions
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MarvinSketch
by ChemAxon
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STRUCTURE EDITOR
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No mixtures
No isotopes
No charges
No radicals
No ring closures
Align results with query
More options
Create Structure Template from Name
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Lookup
Chemical Name
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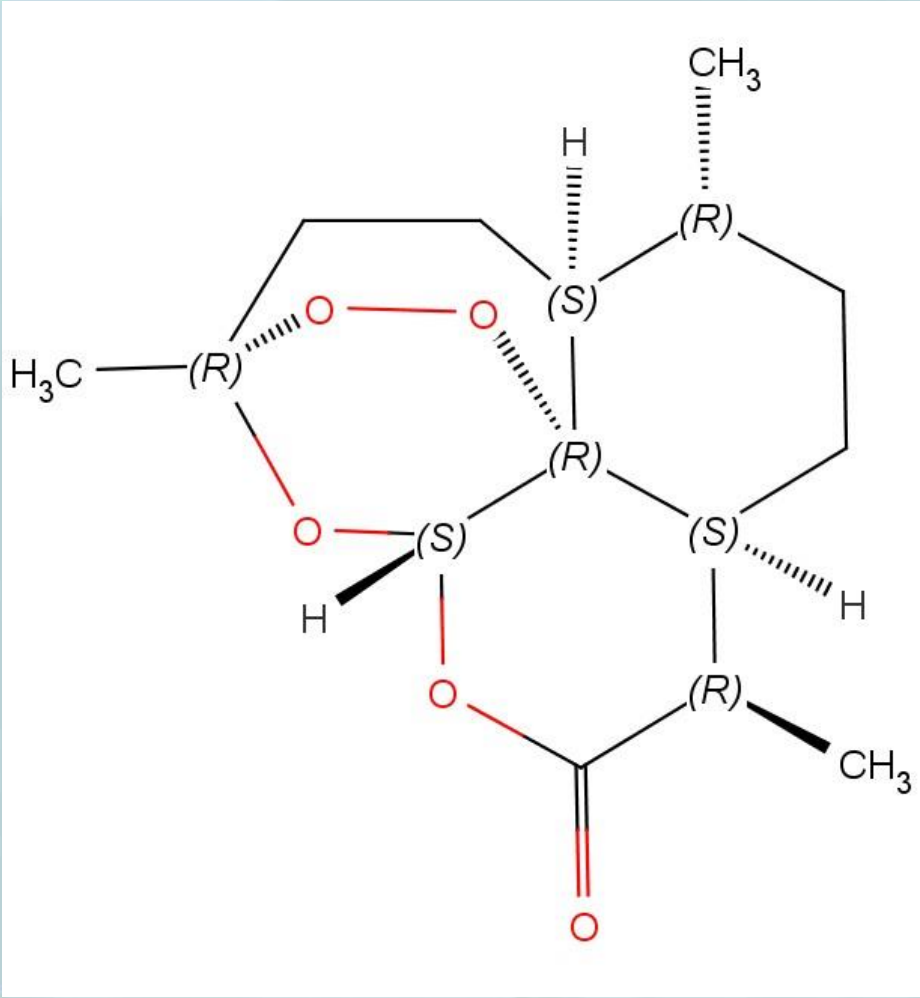
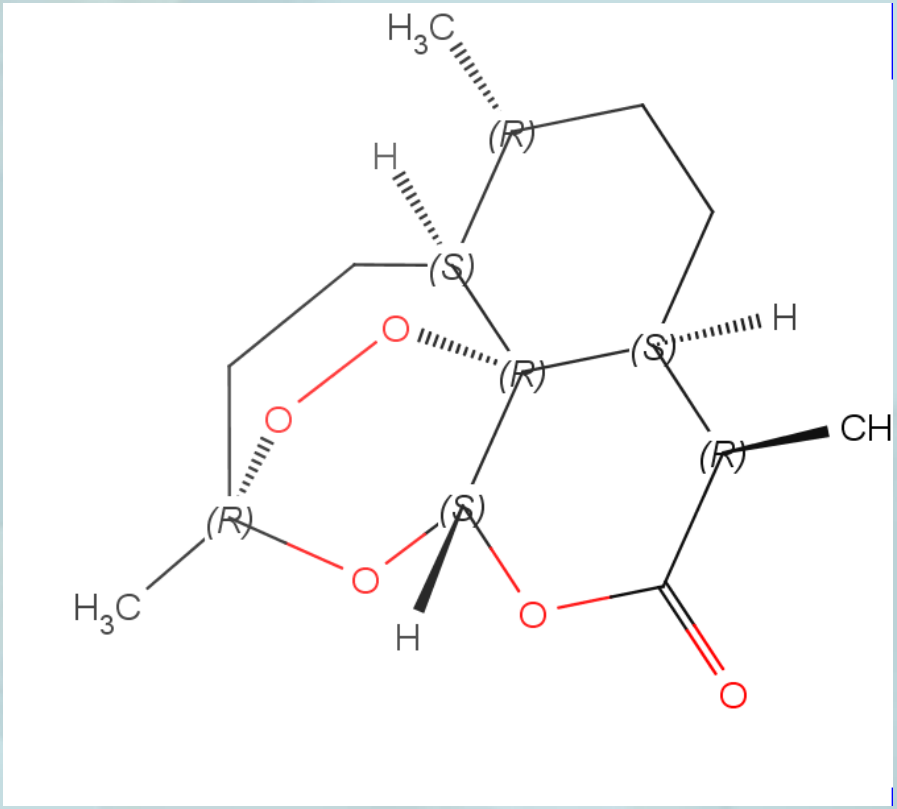
Lookup
Element Symbols
is
Lookup
Search Substances

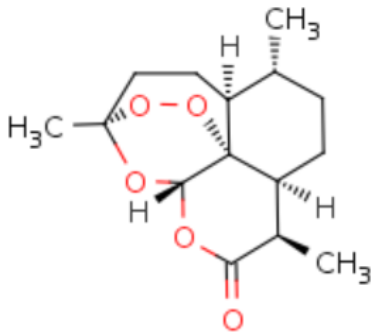


旋转后



Reactions | **Substances** | Literature | ReaxysTree | Physical | Spectra | Natural Product | Advanced

Structure



Create Structure Template from Name

- (•) As drawn
- ( ) Substructure
  - ( ) on heteroatoms
  - (•) on all atoms
- ( ) Similarity

- [ ] Include tautomers
- [ ] Ignore stereo
- [ ] No salts
- [ ] No mixtures
- [ ] No isotopes
- [ ] No charges
- [ ] No radicals
- [ ] No ring closures
- [x] Align results with query

More options

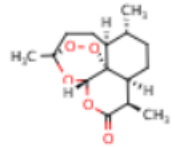
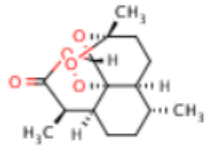
Search Substances

Identification

Reactions (983) | Substances (9) | Citations (840)

go to Page Page 1 of 1

Limit to | Exclude | Export | Print | Zoom in | Zoom out | Hide | Sort by No of References | Display as:

	Structure	Structure/Compound Data	N° of preparations All Preps | All Reactions	Available Data	N° of ref.
1	 Synthesize | Show Details Find similar	**Chemical Name**: (3R,5aS,6R,8aS,9R,12S,12aR)-octahydro-3,6,9-trimethyl-3,12-epoxy-12H-pyrano[4,3-j]-1,2-benzodioxepin-10(3H)-one **Reaxys Registry Number**: 4194670 **CAS Registry Number**: 63968-64-9 **Type of Substance**: heterocyclic **Molecular Formula**: $C_{15}H_{22}O_5$ **Linear Structure Formula**: $C_{12}H_{13}O_2(CH_3)3(O)(OO)$ **Molecular Weight**: 282.337 **InChI Key**: BLUAFEHZUWYNDE-NNWCWBAJSA-N	103 prep out of 786 reactions.	Identification Physical Data (339) Spectra (87) Bioactivity (1029) Ecological Data (1) Use/Application (132) Natural Product (18) Quantum Chemical Data (2)	720
2		**Chemical Name**: artemisinin **Reaxys Registry Number**: 5754123 **CAS Registry Number**: 63968-64-9, 113472-97-2, 119241-68-8 **Type of Substance**: heterocyclic **Molecular Formula**: $C_{15}H_{22}O_5$ **Linear Structure Formula**: $C_{15}H_{22}O_5$ **Molecular Weight**: 282.337	16 prep out of 149 reactions.	Identification Physical Data (15) Spectra (31) Bioactivity (128) Use/Application (24) Natural Product (8)	100

Physical Data

- Melting Point (13)
- Density (6)
- Association (MCS) (10)
- Chromatographic Data (2)
- Circular Dichroism (15)
- Conformation (2)
- Crystal Phase (5)
- Crystal Property Description (8)
- Crystal System (6)
- Electrochemical Characteristics (2)
- Enthalpy of Combustion (1)
- Enthalpy of Formation (1)
- Henry Constant (MCS) (1)
- Interatomic Distances and Angles (2)
- Liquid/Liquid Systems (MCS) (2)
- Optical Rotatory Dispersion (1)
- Optical Rotatory Power (15)
- Partition octan-1-ol/water (MCS) (2)
- Solubility (MCS) (235)

Melting Point (13)

Melting Point	Solvent (Melting Point)	Location	Reference
153 - 154 °C	cyclohexane	Page/Page column 57	**MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFT** **David Tyler; SEEBERGER, Peter H.; GILMORE, Kerry** **Patent:** WO2015/7693 A1, **2015** ; Title/Abstract Full Text Show Details
159 °C			**Turconi, Joel; Griolet, Frederic; Guevel, Ronan; Oddon, Gilles; Villa, R** **Rossen, Kai; Goeller, Rudolf; Burgard, Andreas** Organic Process Research and Development, **2014** , vol. 18, # 3 p. 417 - 42 Title/Abstract Full Text View citing articles Show Details
153 - 154 °C	cyclohexane		**Chen, Hui-Jun; Han, Wei-Bo; Hao, Hong-Dong; Wu, Yikang** Tetrahedron, **2013** , vol. 69, # 3 p. 1112 - 1114 Title/Abstract Full Text View citing articles Show Details
153 - 154 °C	cyclohexane	Page/Page column 74	**MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFT** **KOPETZKI, Daniel; LÉVESQUE, Francois** **Patent:** WO2013/30247 A1, **2013** ; Title/Abstract Full Text Show Details
153 - 154 °C		Paragraph 0081	**Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.; See** **Francois, Dr.; Kopetzki, Daniel, Dr.** **Patent:** EP2565197 A1, **2013** ; Title/Abstract Full Text Show Details
154 - 155 °C	cyclohexane ethanol		**Kopetzki, Daniel; Levesque, Francois; Seeberger, Peter H.** Chemistry - A European Journal, **2013** , vol. 19, # 17 p. 5450 - 5456 Title/Abstract Full Text View citing articles Show Details
153 -	cyclohexane	supporting	**Levesque, Francois; Seeberger, Peter H.**

Chemical Names and Synonyms

(3R,5aS,6R,8aS,9R,12S,12aR)-octahydro-3,6,9-trimethyl-3,

- **Identification**
  - **Substance Label (36)**
  - **Patent-Specific Data (5)**
  - **Related Structure (1)**
- **Physical Data**
- **Spectra**
  - **NMR Spectroscopy (43)**
  - **IR Spectroscopy (13)**
  - **Mass Spectrometry (26)**
  - **UV/VIS Spectroscopy (4)**
  - **Other Spectroscopic Methods (1**
- **Bioactivity**
- **Ecological Data**
- **Use/Application**
- **Natural Product**
- **Quantum Chemical Data**

IR Spectroscopy (13)

Description (IR Spectroscopy)	Solvent (IR Spectroscopy)	Original Text (IR Spectroscopy)	Location	Comment (IR Spectroscopy)	Reference
Bands	neat (no solvent)				**Nowak, Deanne M.; Lansbury, Peter T.** Tetrahedron, **1998** , vol. 54, # 3-4 p. 319 - 336 Title/Abstract Full Text View citing articles Show Details **Ansari, Muhammad Tayyab; Pervez, Humayun; Shehzad, Muhammad Tariq; Saeed-Ul-Hassan, Syed; Mehmood, Zahid; Shah, Syed Nisar Hussain; Razi, Muhammad Tahir; Murtaza, Ghulam** Acta Poloniae Pharmaceutica - Drug Research, **2014** , vol. 71, # 3 p. 451 - 462 Title/Abstract Full Text View citing articles Show Details **Suresh, Kuthuru; Chaitanya Mannava; Nangia, Ashwini** RSC Advances, **2015** , vol. 4, # 102 p. 58357 - 58361 Title/Abstract Full Text View citing articles Show Details
Bands		IR (film) v 2960, 2933, 2860, 1731 , 1 1 12, 991 cm^{-1}.	Page/Page column 57	film	**MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFTEN E.V.; KOPETZKI, Daniel; MCQUADE, Davi Tyler; SEEBERGER, Peter H.; GILMORE, Kerry** **Patent:** WO2015/7693 A1, **2015** ; Title/Abstract Full Text Show Details
Bands				film	**Chen, Hui-Jun; Han, Wei-Bo; Hao, Hong-Dong; Wu, Yikang** Tetrahedron, **2013** , vol. 69, # 3 p. 1112 - 1114 Title/Abstract Full Text View citing articles Show Details
Bands		IR (film) v 2960, 2933, 2860, 1731 , 1 1 12, 991 $cm^{"1}$.	Page/Page column 74	film	**MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFTEN E.V.; SEEBERGER, Peter, H.; KOPETZKI, Daniel; LÉVESQUE, Francois** **Patent:** WO2013/30247 A1, **2013** ; Title/Abstract Full Text Show Details
Bands		IR (film) v 2960, 2933, 2860, 1731, 1112, 991 cm^{-1}.	Paragraph 0081		**Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.; Seeberger, Peter H., Prof. Dr.; Lévesque, Francois, Dr.; Kopetzki, Daniel, Dr.**

Spectra

Bioactivity

Pharmacological Data (1025)

Ecotoxicology (4)

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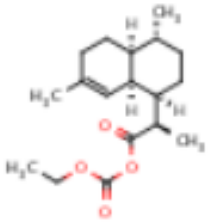
His
Rep

1 of 4

Effect (Ecotoxicology)	antiangiogenic
Species or Test-System (Ecotoxicology)	chick embryos
Concentration (Ecotoxicology)	5 nmol/egg
Kind of Dosing (Ecotoxicology)	samples loaded on coverslip on CAM of individual embryos through window made
Method (Ecotoxicology)	8 fertilized eggs; 80-90 percent relative humidity; 37 deg C; incubated for 6.5 da avascular zone (3-6 mm diameter); number of positive eggs counted
Further Details (Ecotoxicology)	(-)-fumagillin and (-)-thalidomide used as reference comp.
Results	title compound inhibited neovascularization by 25 percent (2/8 positive eggs) vs. /(4/8) positive eggs)
Reference	**Jung, Mankil**; **Tak, Jungae**; **Chung, Won-Yoon**; **Park, Kwang-Kyun** Bioorganic and Medicinal Chemistry Letters, **2006**, vol. 16, # 5 p. 1227 - 1230 Title/Abstract Full Text ew Details



Synthesize
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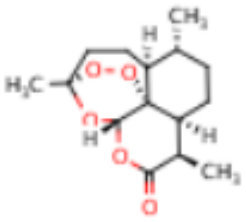
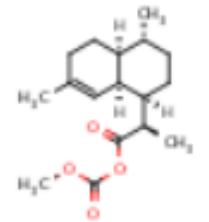


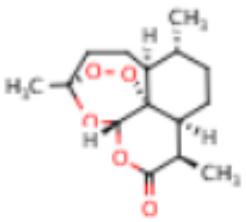
Synthesize
Find similar

Rx-ID: 30396440
Find similar reactions

Qry
His
Rep

62%	**With** oxygen; trifluoroacetic acid; tetraphenylporphyrin **in** dichloromethane T=-10 - 20°C; 22 h; Photochemical reaction; Show Experimental Procedure	**Sanofi-Aventis** **Patent:** EP2289897 A1, **2011** ; **Location in patent:** Page/Page column 13-14 ; Title/Abstract Full Text Show Details
370 kg	**With** tetraphenylporphyrin; trifluoroacetic acid **in** dichloromethane T=-15 - -10°C; IrradiationIndustrial scale;	**Turconi, Joel; Griolet, Frederic; Guevel, Ronar Andrea; Hvala, Massimo; Rossen, Kai; Goeller,** Organic Process Research and Development, **201** Title/Abstract Full Text View citing articles





3. 如何查找各种数据与事实

应用实例

- 青蒿素和双氢青蒿素药品的研制、生产、使用、管理规范

3. 如何查找各种数据与事实

应用实例

- 青蒿素购买渠道

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Substance Identifier "artemisinin " > **substances (1)**

SUBSTANCES | Get References | Get Reactions | Get Commercial Sources | Tools ▾

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Sort by: CAS Registry Number

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Analyze by: Substance Role

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- Biological Study 1
- Formation, Nonpreparative 1
- Miscellaneous 1
- Occurrence 1
- Preparation 1
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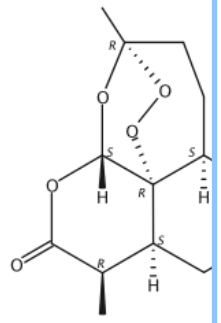

Absolute stereoche

$C_{15}H_{22}O_5$

3,12-Epoxy-12*H*-pyrano[4,3-*j*]-1,2-benzoc
octahydro-3,6,9-trimethyl-, (3*R*,5a*S*,6*R*,8a

Key Physical Properties

Regulatory Information

Spectra

Experimental Properties

Featured Commercial Sources for 3,12-Epoxy-12*H*-pyrano[4,3-*j*]-1,2-benzodioxepin-10(3*H*)-one, oct...

Best of Chemicals BOC Sciences

BOC Sciences

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Sort by: Commercial Source ▲ Display Options

0 of 157 Commercial Sources Selected Page: 1 of 8

Commercial Source	Substance	Purity	Quantity	Purchasing Details	Stock Status	Ships Within
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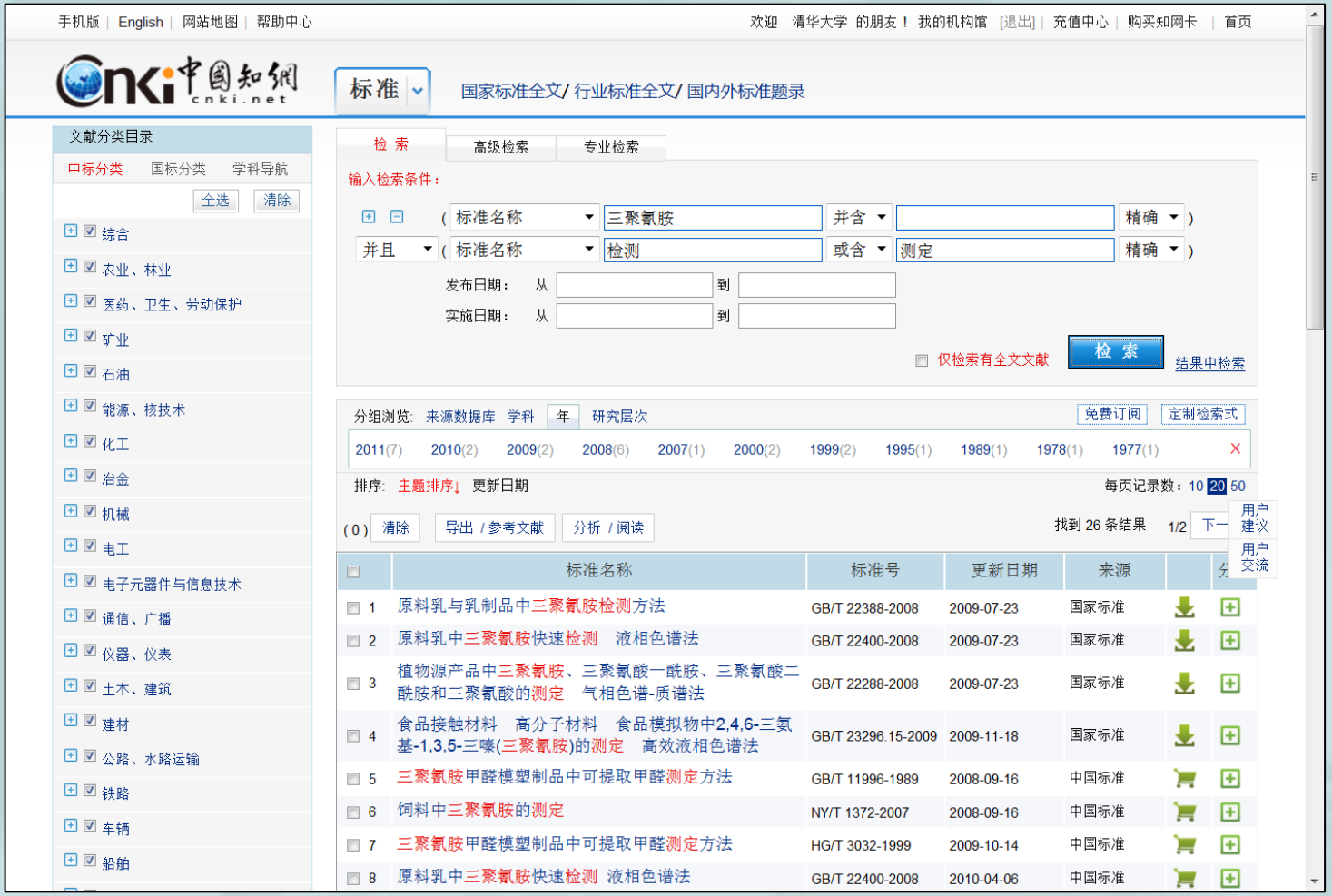
2. **A Chemtek Product List** United States — Set Preference ▾	63968-64-9 Artemisnini		Grams	1g 5g	Intermittently available	
3. **Abblis Chemicals Product List** United States — Set Preference ▾	63968-64-9 Artemisinin		Grams	Order from Source 1g, $170		
4. **Abblis Chemicals Product List** United States — Set Preference ▾	63968-64-9 Artemisinin		Milligrams	Order from Source 200mg, $50		

3. 如何查找各种数据与事实

应用实例

- 三聚氰胺检测标准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建材
公路、水路运输
铁路
车辆
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检 索 高级检索 专业检索
输入检索条件：
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并且 (标准名称 检测 或含 测定 精确)
发布日期： 从 到
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3 植物源产品中三聚氰胺、三聚氰酸一酰胺、三聚氰酸二酰胺和三聚氰酸的测定 气相色谱-质谱法 GB/T 22288-2008 2009-07-23 国家标准
4 食品接触材料 高分子材料 食品模拟物中2,4,6-三氨基-1,3,5-三嗪(三聚氰胺)的测定 高效液相色谱法 GB/T 23296.15-2009 2009-11-18 国家标准
5 三聚氰胺甲醛模塑制品中可提取甲醛测定方法 GB/T 11996-1989 2008-09-16 中国标准
6 饲料中三聚氰胺的测定 NY/T 1372-2007 2008-09-16 中国标准
7 三聚氰胺甲醛模塑制品中可提取甲醛测定方法 HG/T 3032-1999 2009-10-14 中国标准
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原料乳与乳制品中三聚氰胺检测方法

【英文标准名称】	Determination of melamine in raw milk and dairy products
【中文标准名称】	原料乳与乳制品中三聚氰胺检测方法
【标准号】	GB/T 22388-2008
【标准状态】	现行
发布日期】	2008-10-07
实施日期】	2008-10-07
发布部门】	中华人民共和国国家质量监督检验检疫总局;中国国家标准化管理委员会
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【中国标准分类号】	C53
【国际标准分类号】	67.100
【摘要】	本标准规定了原料乳、乳制品以及含乳制品中三聚氰胺的三种测定方法,即高效液相色谱法(HPLC)、液相色谱-质谱/质谱法(LC-MS/MS)和气相色谱-质谱联用法[包
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3. 如何查找各种数据与事实

应用实例

- 乙炔（acetylene）液体，多少温度时密度为0.5g/cm3？

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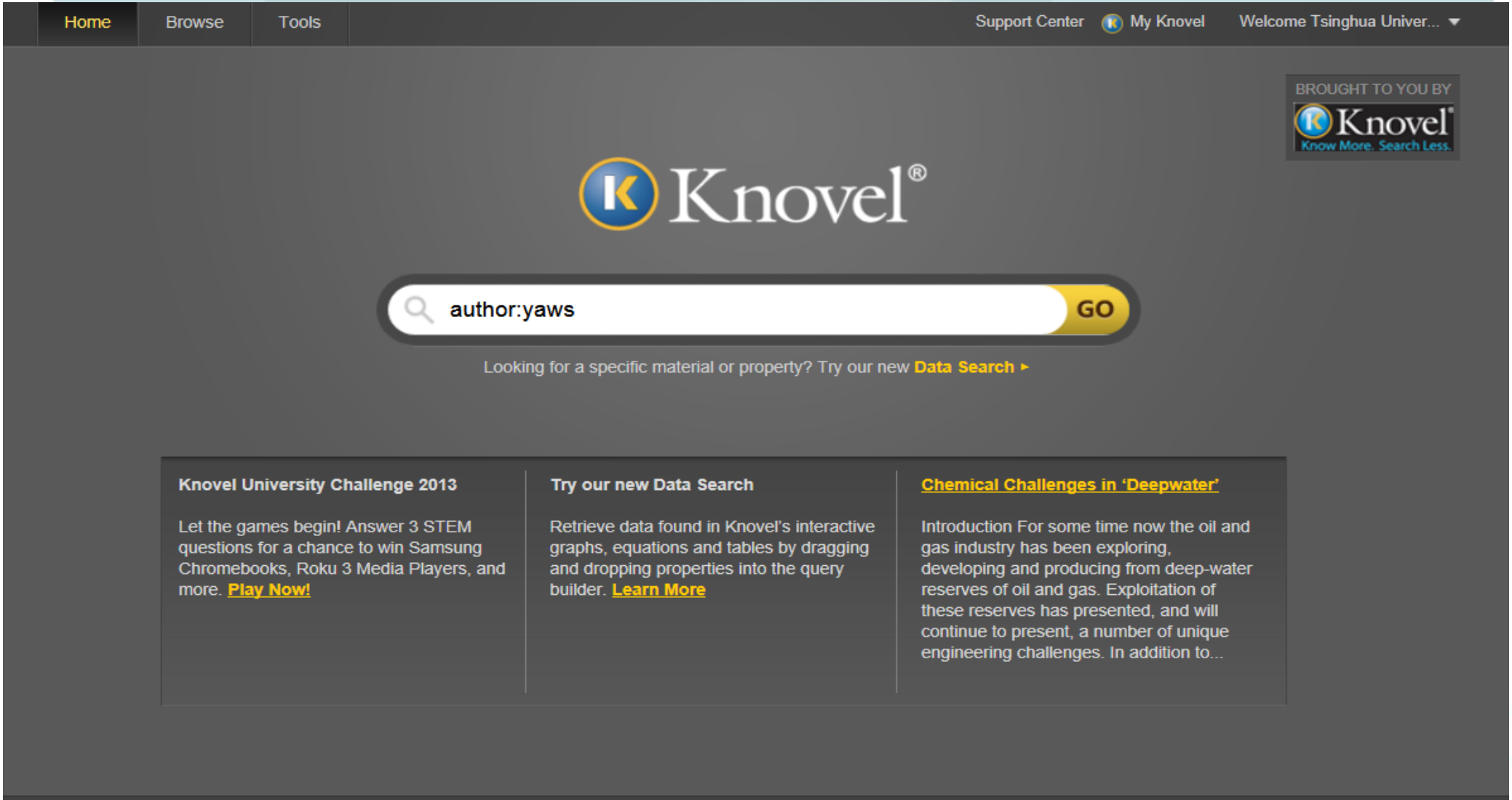

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6.1 UV Stabilisers

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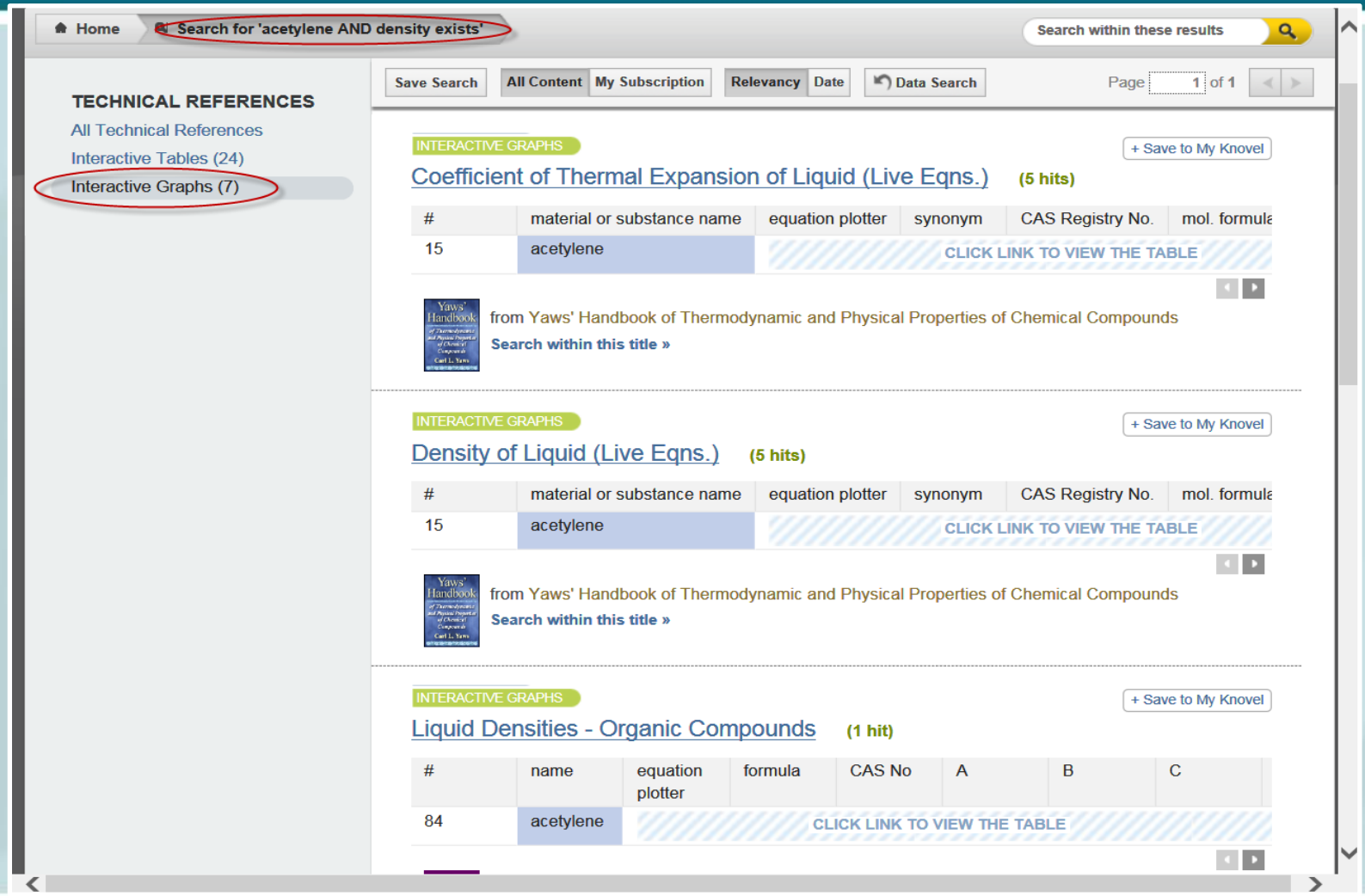
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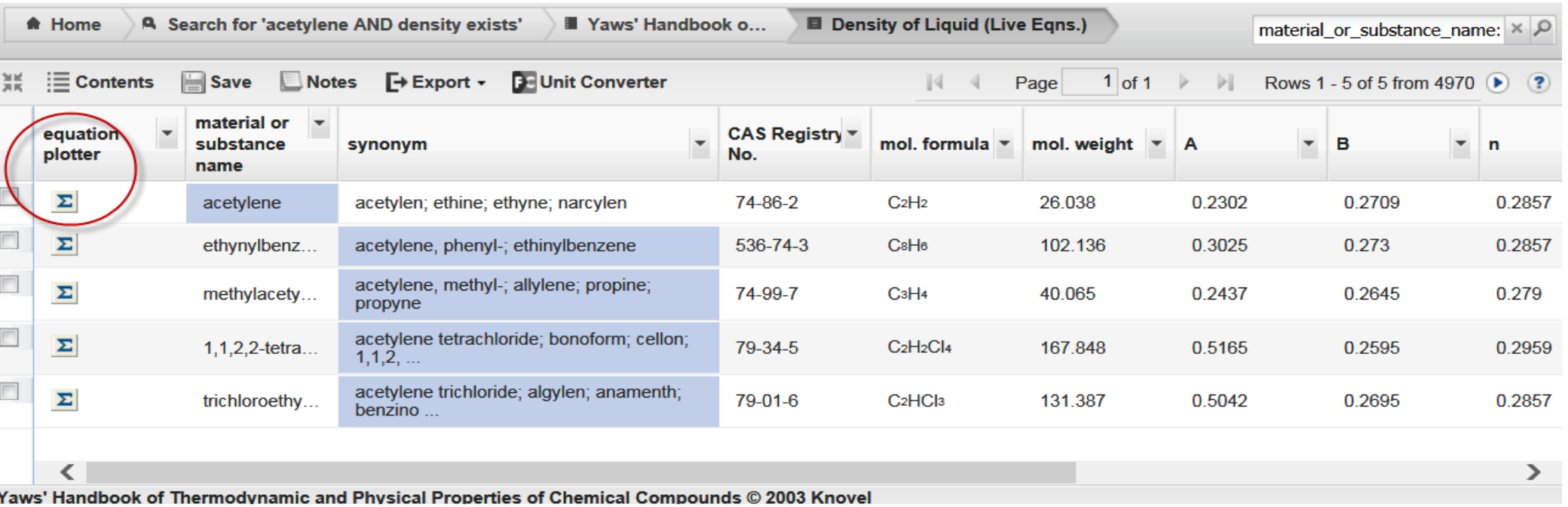

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Σ	methylacety...	acetylene, methyl-; allylene; propine; propyne	74-99-7	C_3H_4	40.065	0.2437	0.2645	0.279
Σ	1,1,2,2-tetra...	acetylene tetrachloride; bonoform; cellon; 1,1,2, ...	79-34-5	$C_2H_2Cl_4$	167.848	0.5165	0.2595	0.2959
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▸ How to Use

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$$density = A \cdot B^{-\left(1-\frac{T}{TC}\right)^{N}}$$

Variable (X)

Temperature

X Range: 192.4 - 308.3 K

X Unit

K

Function (Y)

Liquid Density

Y Unit

g/cm³

X Significant Digits 4

Y Significant Digits 4

X	Y
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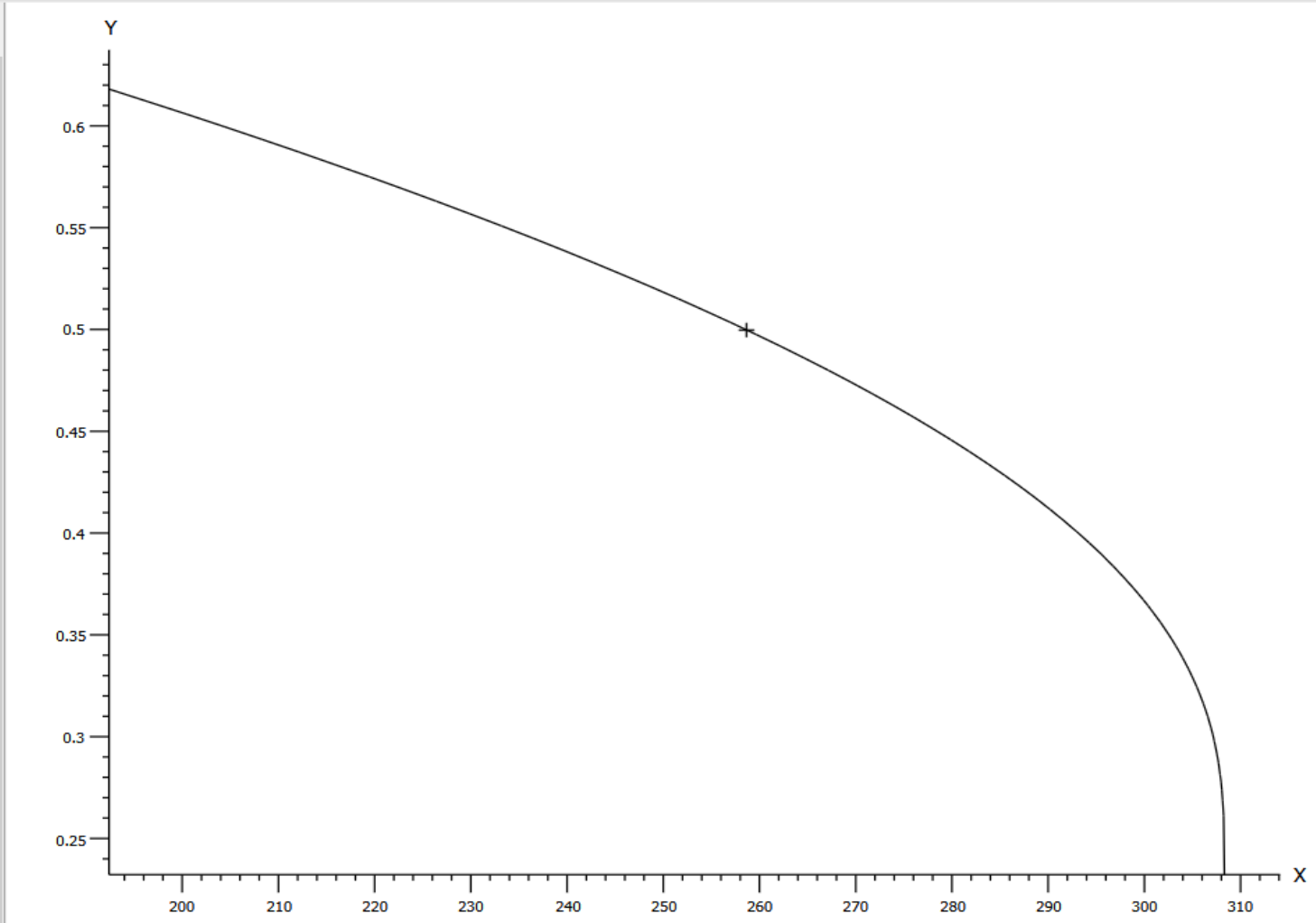

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