



# KETAMINE

DATABASE



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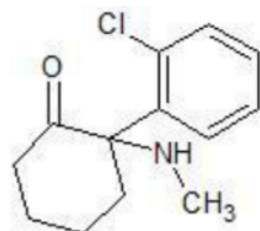
# WHAT IS IT?

**Ketamine is a medication mainly used for starting and maintaining anesthesia. It induces a trance-like state while providing pain relief, sedation, and memory loss. Other uses include sedation in intensive care and treatment of pain and depression.**

**Some ketamine experiences involve a terrifying feeling of almost complete sensory detachment that is likened to a near-death experience. These experiences, similar to a “bad trip” on LSD, are called the “K-hole.” Low-dose intoxication from ketamine results in impaired attention, learning ability, and memory. In high doses, ketamine can cause delirium, amnesia, impaired motor function, high blood pressure, depression, and potentially fatal respiratory problems**



### **Ketamine (C<sub>13</sub>H<sub>16</sub>ClNO)**



Ketamine

#### **General Facts**

*Molecular formular:* C<sub>13</sub>H<sub>16</sub>ClNO

*Systematic name:* 2-(2-chlorophenyl)-2-(methylamino)cyclohexan-1-one (IUPAC name)

*Alternatenames:*

- a. In medical jargon: Ketaject, Ketanest, dl-Ketamine, Ketalar, CI 581 base, CLSTA 20, Ketolar
- b. In drug jargon: special K, green, jet, K, and super C

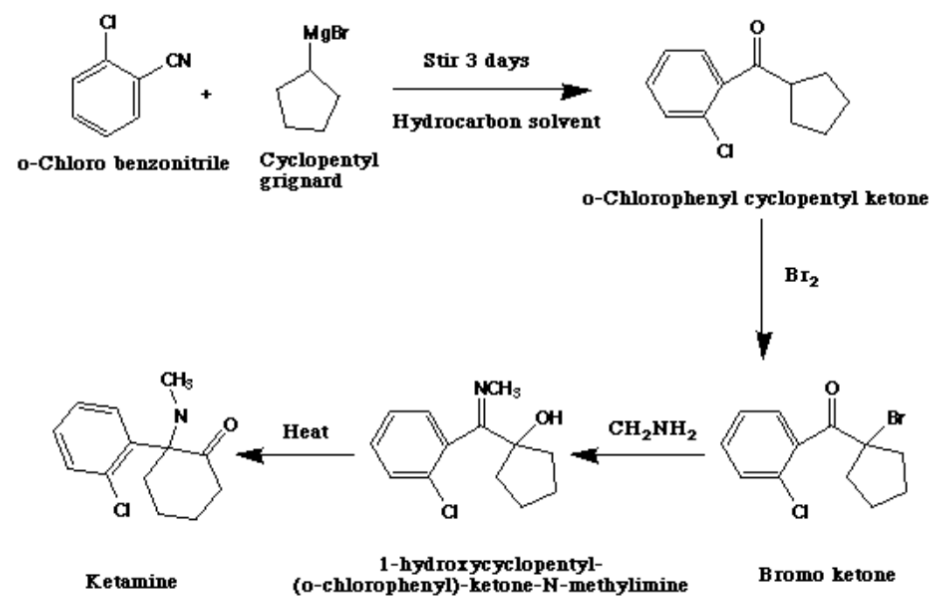
*Molar mass:* 237.092042 g/mol

Synthesis of Ketamine: x New Tab x +

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### Synthesis of Ketamine



Pre-feasibility.pdf ^ pilot-plant.pdf ^ Show all x

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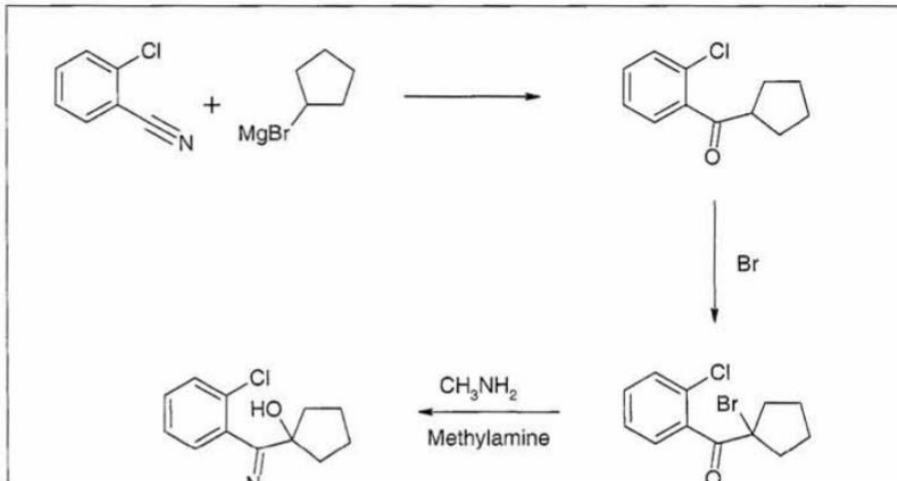
## 174 HALLUCINOGENS

**Ketamine synthesis**

Ketamine, although similar in structure to PCP, is synthesized via a completely different and more complex route (Lednicer and Mitscher, 1977). The reaction proceeds through a bromo-ketone intermediate formed through the reaction of cyclopentylmagnesium bromide with *o*-chlorobenzonitrile followed by a bromination step (Figure 4.49).

**Figure 4.49**

Synthesis of ketamine by Lednicer and Mitscher (1977)





US005817699A

**United States Patent** [19]  
**Flores et al.**

[11] **Patent Number:** **5,817,699**  
[45] **Date of Patent:** **Oct. 6, 1998**

[54] **PROCESS FOR THE PREPARATION OF KETAMINE OINTMENT**

[76] Inventors: **John A. Flores**, POB 12182, San Bernardino, Calif. 92423; **Kenton L. Crowley**, 40970 Alton Ct., Temecula, Calif. 92591

[21] Appl. No.: **866,770**  
[22] Filed: **May 30, 1997**  
[51] **Int. Cl.**<sup>6</sup> ..... **A61K 31/135**  
[52] **U.S. Cl.** ..... **514/647**  
[58] **Field of Search** ..... **514/647**

**OTHER PUBLICATIONS**

Budavari, Susan, Ed., *The Merck Index*, Eleventh Edition, entry No. 5174, p. 834. 1989.

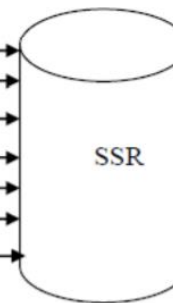
*Primary Examiner*—Willam R.A. Jarvis  
*Attorney, Agent, or Firm*—Rob L. Phillips

[57] **ABSTRACT**

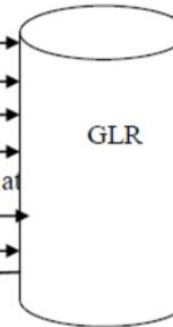
The present invention relates to a process for producing a ketamine ointment that is self-administered topically by a subject to alleviate neuropathic, sympathetic medicated pain and myofacial pain said subject is experiencing. The present invention is also utilized to improve the motor skills,

**Flow Chart:****Process Flow for KETAMINE****Stage-I**

1. Charge THF and 2-Chlorobenzonitrile at RT
2. Cool the RM to 10°C
3. Add Cyclopentyl magnesium bromide at below 10°C
4. Maintain the RM at below 10°C till the reaction complies
5. Slowly add Ammonium chloride solution at below 10°C
6. Separate the Aqueous layer and organic layer
7. Distill off the organic layer under vacuum to get Stage-I Material

**Stage-II**

1. Charge Carbon tetrachloride and Stage-I at RT
2. Cool the RM 0 to 5°C
3. Add Bromine at below 5°C
4. Maintain the RM till the reaction complies
5. Once reaction complies add Sodium Bisulfate and water soln into the RM at Below 5°C.
6. Separate the Organic layer
7. Distill off solvent completely to get Stage-II Material



**Table 1: Details of Machinery and Plant Equipments**

Sr No	Machinery	Nos	Capacity	Unit
1	SS 316 Reactor with Stirrer, Jacket, SS 316 Condensers, SS 316 Receivers with Motors, Gear Box	1	305	Liter
2	SS 316 Reactor with Stirrer, Jacket, SS 316 Condensers, SS 316 Receivers with Motors, Gear Box	1	675	Liter
3	SS 316 Reactor with Stirrer, Jacket, SS 316 Condensers, SS 316 Receivers with Motors, Gear Box	1	800	Liter
4	SS 316 Reactor with Stirrer, Jacket, SS 316 Condensers, SS 316 Receivers with Motors, Gear Box	1	1500	Liter
5	SS 316 Reactor with Stirrer, Jacket, SS 316 Condensers, SS 316 Receivers with Motors, Gear Box	1	2500	Liter
6	SS 316 Reactor with SS 316 Condensor, SS 316- 200 Ltr. Receiver complete suitable for high vacuum distillation	1	400	Liter
7	Glass Lined Rector with stirrer, Jacket, Motor, Gear Box complete with glass columns distillation assembly	1	2500	Liter
8	PPFRP Reactor with PPFRP stirring assembly	1	5000	Liter



**Table 3: Required Raw Materials for Production of API's and Fine Chemicals**

For Production of 12000 Kg of Ketamine Hydrochloride per Annum			
Raw Material Required	Daily Consumption	Yearly Consumption	Unit
2 chloro benzoyl 2 – methylamino cyclopentanol HCL	58.95	17680	Kg
Decaline	10	3000	Kg
charcoal	0.33	100	Kg
IPA	1.67	500	Kg
IPA HCL	20.33	6100	Kg
NaOH	5.78	1732	Kg
For Production of 1020 Kg of Carvedilol Phosphate from existing Carvedilol per Annum			
Raw Material Required	Daily Consumption	Yearly Consumption	Unit
Carvedilol	2.72	816	Kg



amine: A Remarkable Antidepressant

# Ketamine: A Remarkable Antidepressant

Presented By  
**David Feifel, MD, PhD**  
UC San Diego School of Medicine

0:05 / 3:45

Depression Treatment Program Now Offers Ketamine and Esketa...

## KETAMINE IN THE BAY AREA

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**Ketaset (Ketamine Hydrochloride) Veterinary  
Injection for Intramuscular Use**

**Material  
Safety Data Sheet**

WW MSDS No. 30-4401

**Section 1. Product and Company Identification**

<b>Manufactured/ Supplied by</b>	Fort Dodge Animal Health 800 5th Street NW P.O. Box 518 Fort Dodge, IA 50501 Phone: 515-955-4600 Fax: 515-955-9149	<b>Date of Preparation</b>	17 January 2002
<b>Product Trade Name</b>	Ketaset (Ketamine Hydrochloride) Veterinary Injection for Intramuscular Use	<b>Product No.</b>	30-4401
<b>Common Name</b>	Not applicable.	<b>Formula No.</b>	Not available.
<b>Synonyms</b>	Ketamine	<b>CAS No.</b>	Mixture.
<b>Chemical Formula</b>	Mixture.	<b>U.N. No.</b>	Not applicable.
<b>Chemical Family</b>	Not available.	<b>EINECS No.</b>	Not applicable.

In Case of 515-955-9999

# KETAMINE IN THE MARKET

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The image grid contains 15 individual photos: 1. A hand holding a vial of Ketamine HCl Injection, USP, 100 mg per 10 mL. 2. A collection of various medical vials and syringes on a table. 3. A close-up of a syringe with a blue plunger. 4. A vial of Ketamine HCl Injection, USP, 100 mg per 10 mL. 5. A pile of white, crystalline powder on a brown surface. 6. A metal spoon filled with white powder. 7. A close-up of several syringes and vials. 8. A box and vial of Ketamine HCl Injection, USP, 10 mL. 9. A yellow diamond-shaped warning sign that reads 'WARNING KETAMINE'. 10. A white envelope or piece of paper. 11. A vial of Ketamine HCl Injection, USP, 500 mg/10 mL. 12. A vial with a red cap. 13. A pile of white powder. 14. A vial of Ketamine HCl Injection, USP. 15. A vial of Ketamine HCl Injection, USP.



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11:26 16-04-2020 3

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## Detailed Export Data of ketamine hydrochloride bp usp

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Establishing secure connection... Manufacturers of ketamine hydrochloride bp usp

Imports of ketamine hydrochloride bp usp in USA

Buyers of ketamine hydrochloride bp usp in USA

Manufacturers of ketamine hydrochloride bp usp

Date	HS Code	Description	Destination	Port of Loading	Unit	Quantity	Value (INR)	Per Unit (INR)
Aug 25 2016	30039090	KETAMINE HYDROCHLORIDE BP/USP	Colombia	Bombay Air Cargo	KGS	10	286,900	28,690
Aug 20 2016	30039090	KETAMINE HYDROCHLORIDE BP/EP/USP	Paraguay	Bombay Air Cargo	KGS	30	601,772	20,059
Aug 18 2016	30039090	KETAMINE HYDROCHLORIDE BP/EP/USP	Argentina	Bombay Air Cargo	KGS	120	1,920,065	16,001
Aug 18 2016	30039090	KETAMINE HYDROCHLORIDE BP/USP	Switzerland	Bombay Air Cargo	KGS	1	50,081	50,081
Aug 06 2016	30039090	KETAMINE HYDROCHLORIDE BP/USP	Argentina	Bombay Air Cargo	KGS	200	3,181,584	15,908

Ketamine\_50mg\_10mL\_MSDS.pdf 1 / 4

**Hospira**

**MATERIAL SAFETY DATA SHEET**

**Product Name: Ketamine Hydrochloride Injection, USP**

**1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

<b>Manufacturer Name And Address</b>	Hospira, Inc. 275 North Field Drive Lake Forest, Illinois 60045 USA
<b>Note:</b>	Hospira, formerly the Hospital Products Division of Abbott Laboratories, was created as an independent company in May 2004.
<b>Emergency Telephone Hospira, Inc.</b>	CHEMTREC: 800 424-9300 224 212-2055
<b>Product Name</b>	Ketamine Hydrochloride Injection, USP
<b>Synonyms</b>	None

**BlueCross BlueShield**  
Federal Employee Program.

**KETAMINE POWDER (ketamine)**

**RATIONALE FOR INCLUSION IN PA PROGRAM**

**Background**  
Ketamine is a rapid-acting anesthetic that can produce anesthesia while maintaining skeletal muscle tone, laryngeal-pharyngeal reflexes, and cardiovascular and respiratory stimulation (1).

**Regulatory Status**  
FDA-approved indication: Ketamine is used as an adjunct in general anesthesia as well as a sedative in minor surgical or diagnostic procedures that do not require skeletal muscle relaxation (1).

**ORIGINAL RESEARCH ARTICLE**

# Development of a Sublingual/Oral Formulation of Ketamine for Use in Neuropathic Pain

## Preliminary Findings from a Three-Way Randomized, Crossover Study

*Chitri Chong,<sup>1</sup> Stephen A. Selig,<sup>1,2</sup> Madhu Page-Sharp,<sup>2</sup> Barry Jenkins<sup>3</sup> and Kenneth F. Ilett<sup>2,4</sup>*

- 1 Department of Anaesthesia and Pain Medicine, Royal Perth Hospital, Perth, Western Australia, Australia
- 2 Pharmacology and Anesthesiology Unit, School of Medicine and Pharmacology, University of Western Australia, Crawley, Western Australia, Australia
- 3 Pharmacy Department, Royal Perth Hospital, Perth, Western Australia, Australia
- 4 Clinical Pharmacology and Toxicology Laboratory, PathWest Laboratory Medicine, Nedlands, Western Australia, Australia

**Abstract**  
**Background and objective:** Enteral, administered low-dose ketamine is being used increasingly to treat pain states. However, suitable oral or sublingual formulations are not available. The objective of this study was to develop a

Clin Drug Invest. 2020; 50(16): 117-124  
11732601/2020-0717445-04  
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news.yahoo.com/ketamine-hydrochloride-market-report-2020-132800153.html

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# Ketamine Hydrochloride Market Report 2020: Worldwide Trends & Developments, Major Players, Patents, and More - ResearchAndMarkets.com

businesswire Business Wire • March 27, 2020

  The "Ketamine hydrochloride (CAS 1867-66-9) Market Research Report 2020" report has been added to

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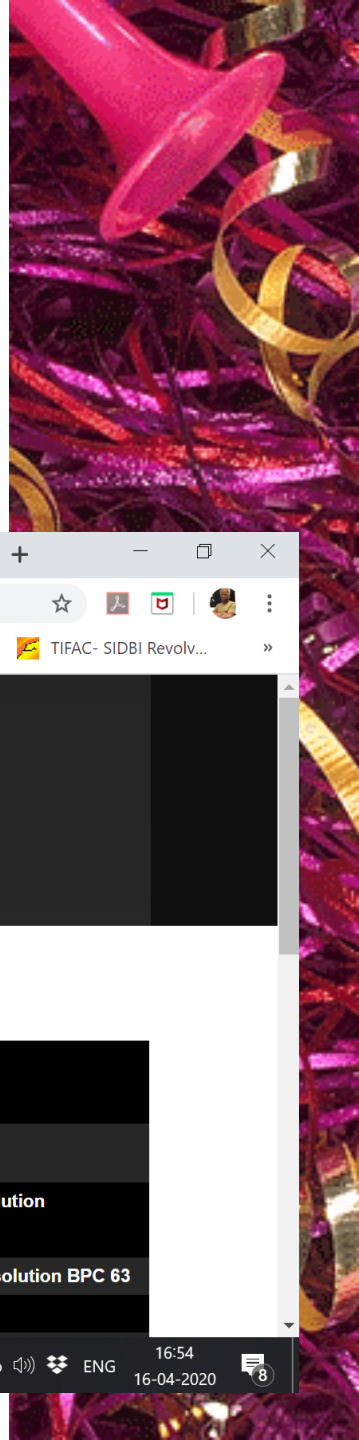
**BNM ORGANICS PRIVATE LIMITED**

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## PRODUCTS

Name of Products	Pharmacopea
Ketamine Hydrochloride	BP / USP / EP/ IP
Esketamine Hydrochloride / Quinapyramine Chloride	EP B Vet C
Calcium Glycerophosphate	BP/ EP/ BPC 63 / 50% W/W solution
Magnesium Glycerophosphate	BP / EP / BPC 63
Sodium Glycerophosphate	BP (Hydrated)/ BPC 49 / 50% solution BPC 63
Sodium Alendronate	BP

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Although clinicians are hopeful that Janssen Pharmaceutical's newly approved esketamine nasal spray, Spravato, will expand access to treatment, many also worry about the drug's potential for abuse.

CREDIT: JANSSEN PHARMACEUTICALS, INC.

# FDA APPROVAL

Ketamine - General, Process, x | ketamine manufacturing app x | Drugs@FDA: FDA-Approved x | Ketamine - General, Process, x

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Drug Name	Active Ingredients	Strength	Dosage Form/Route	Marketing Status	RLD	TE Code	Application No.	Company
KETALAR	KETAMINE HYDROCHLORIDE	EQ 10MG BASE/ML	INJECTABLE;INJECTION	Prescription	Yes	AP	016812	PAR STERILE PRODUCTS
KETAMINE HYDROCHLORIDE	KETAMINE HYDROCHLORIDE	EQ 10MG BASE/ML	INJECTABLE;INJECTION	Prescription	No	AP	<a href="#">076092</a>	MYLAN INSTITUTIONAL

Showing 1 to 2 of 2 entries

**INJECTABLE;INJECTION; EQ 50MG BASE/ML**

TE Code = AP

CSV Excel Print

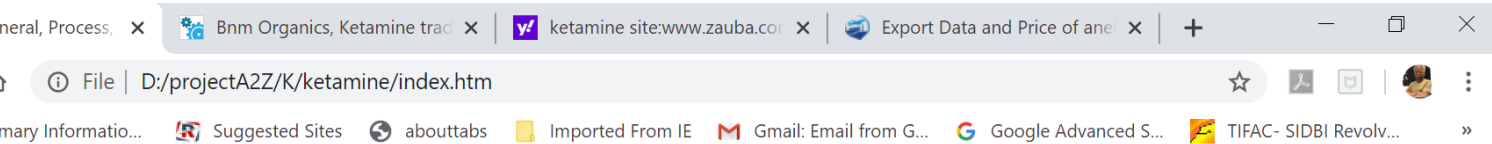
Drug Name	Active Ingredients	Strength	Dosage Form/Route	Marketing Status	RLD	TE Code	Application No.	Company
KETALAR	KETAMINE HYDROCHLORIDE	EQ 50MG BASE/ML	INJECTABLE;INJECTION	Prescription	Yes	AP	016812	PAR STERILE PRODUCTS
KETAMINE HYDROCHLORIDE	KETAMINE HYDROCHLORIDE	EQ 50MG BASE/ML	INJECTABLE;INJECTION	Prescription	No	AP	<a href="#">074549</a>	HOSPIRA



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# KETAMINE - DATABASE



## Ketamine

General, Process, Patent, Company Profiles, Reports, Material Safety data Sheet, Suppliers

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### Project @ a Glance

- Ketamine hydrochloride, or "Special K," is a powerful hallucinogen widely used as an animal tranquilizer by veterinarians. Users sometimes call the high caused by Special K, "K hole," and describe profound hallucinations that include visual distortions and a lost sense of time, sense, and identity.
- Ketamine is a dissociative anesthetic developed in 1963 to...

### General

- [Ketamine introduction](#)
- [Basics](#)
- [Club Drugs](#)
- [Ketamine](#)
- [Ketamine peril and promise](#)

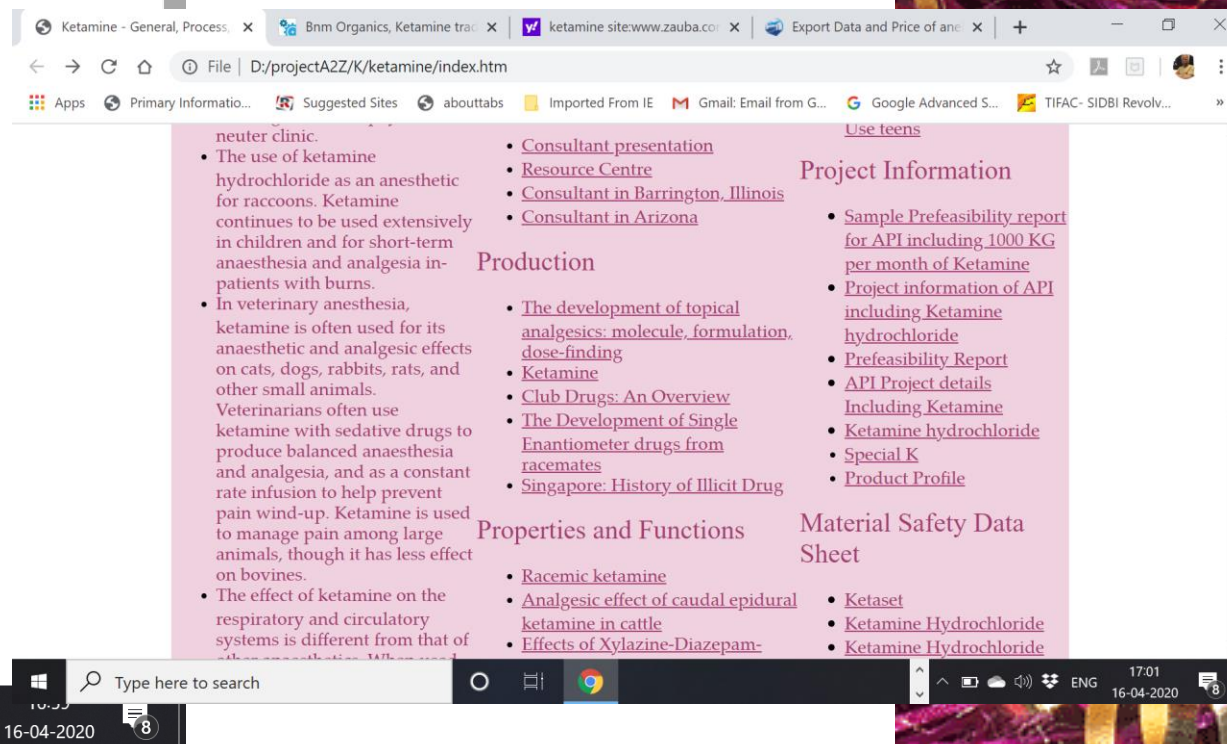
### Process

- [Ketamine Synthesis](#)
- [Method of manufacture -](#)

### Contents

#### Patents

- [Ketamine Formulations](#)
- [Preparation of Ketamine Ointment](#)
- [Process for the preparation of ketamine ointment](#)
- [Ketamine analogues for the treatment of thrombocytopenia](#)
- [Use of ketamine for the manufacturing of medicaments for](#)



<https://www.primaryinfo.com/industry/ketamine.htm>

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