## Emeramide 99% (NBMI, OSR, BDTH2)

A safe Heavy Metal Chelator (Mercury, Lead, Cadmium)

CAS: 351994-94-0

Supplier: Medkoo, FandaChem, EmeraMed

Package: 5g; 20g

**MF:** C<sub>12</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>S<sub>2</sub>

# **IUPAC / Chemical Name:**

N1,N3-bis(2-sulfanylethyl)benzene-1,3-dicarboxamide InChi Key: JUTBAVRYDAKVGQ-UHFFFAOYSA-N InChiCode:InChI=1S/C12H16N2O2S2/c15-11(13-4-6-17)9-2-1-3-10(8-9)12(16) 14-5-7-18/h1-3,8,17-18H,4-7H2,(H,13,15)(H,14,16) SMILES Code: O=C(C1=CC=CC(C(NCCS)=O)=C1)NCCS Appearance: White to off-white solid powder with density 0.64 g/mL Solubility: Soluble in DMSO, not in water.

# **Chemical structure:**



# Use:

1) Emeramide 99% (NBMI, OSR, BDTH2) is a heavy metal chelator and an antioxidant, and the molecule consists of two thiol groups and linked via a pair of amide groups. (Mercury Chelator, Lead Chelator, Cadmium Chelator)

2) Emeramide 99% (NBMI, OSR, BDTH2) is used as prevention and Treatment of Mercury toxicity and other Heavy Metal toxicity including Lead toxicity and Cadmium toxicity in the EU and USA. So it is widely used as very effective treatment of Mercury Poisoning and other Heavy Metal Toxicity, especially Lead and Cadmium.

3) Emeramide 99% (NBMI, OSR, BDTH2) will easily Detox Mercury From the Body Naturally. (Mercury Detox).

4) Also Emeramide 99% is used for treatment of Children's Autism.

# Synonyms:

Emeramide 99% (NBMI, OSR, BDTH2), Emeramide 99% NBMI OSR BDTH2,mercury chelator,heavy metal chelator,Lead chelator,Cadmium chelator, Treatment of Mercury toxicity, Heavy Metal toxicity,Lead toxicity, Cadmium toxicity, Mercury Poisoning, Heavy Metal Toxicity, Detox Mercury, Mercury Detox, Lead Detox, Detox Lead, Detox Cadmiun, Cadmium Detox, Cadmium chelation therapy, Lead chelation therapy, mercury chelation therapy, Emeramide for Lead chelation therapy, Emeramide for Cadmium chelation therapy, Emeramide for Children' Autism, Mercury EmeraMed, NBMI Chelator, BDETH2, emerimide, Irminix-NBMI, IRMINIX, NBMI, Irminix, emera mide haley,trade bovd names B9,OSR1,erminix,MetX,Emiramide,OSR#1,Mercury chelation.medkoo bdth2,Heavy metal chelating agent,Lead chelating agent,Cadmium chelating buy,emeramide agent,emeramide agent, Mercury chelating boyd haley,Emeramide for sale,boyd haley emeramide,buy emeramide,emeramide dosage,emeramide dosage for autism,boyd haley osr/emeramide/nbmi,buy emeramid, emeramide dr klinghardt, emeramide for mercury chelation therapy, buy emeramide suplement, osr emeramide pka, treating mercury toxicity with emeramide dr. mercola,emeramid,medkoo nbmi emeramide,emeramide boyd,emeramide mercury, emeramide for sale, mercola emeramide, BDTH2 Hg.

# FAQ of Emeramide (NBMI,OSR, BDTH2)

# 1) The symptoms of heavy metal poisoning

There are two types of Heavy metal poisoning, acute and chronic poisoning. What we are talking about here is chronic poisoning by heavy metals. We can find heavy metals everywhere, in the water, air, foods, and toys, etc. If you live in a heavy metal polluted environment for a while, there are risks that you may get heavy metal poisoning.

Common symptoms of heavy metal poisoning include nausea, vomiting, shortness of breath, diarrhea, abdominal pain, tingling of your hands and feet, chills, and weakness. It is better to see a doctor right away when you have these symptoms when you have lived in such environments polluted by high-level heavy metals.

# 2) Features of Emeramide (NBMI,OSR, BDTH2), a unique chelator

It is one of our recently developed novel active molecules. It is a brand-new lipid-soluble antioxidant and a novel heavy metal chelator (Mainly used for mercury poisoning). Its structure is specifically designed to bind mercury(II) in water.

It is insoluble in water but easily soluble in fat or lipids. It is also soluble in DMSO(DMSO is the solvent for its 1HNMR testing).

Emeramide was previously used for treating mercury contaminated soil and water, but later it is also found to be able to detox animals with mercury poisoning.

Emeramide, also known as BDTH2, is a safe metals chelator and an antioxidant, Emeramide is an exceptionally safe and effective lipophilic,It is currently going through the European Medical Agency (EMA) and the United States Food and Drug Administration (FDA) drug approval process.

It is for the treatment of mercury poisoning. The molecule consists of two thiol groups and linked via a pair of amide groups. BDTH2 can be used to chelate heavy metals like lead, cadmium, copper, manganese, zinc, iron, and mercury. such as mercury, Emeramide fully combines with that metal to quickly render the metal chemically inert and nontoxic. The Emeramide mercury complex (Em/Hg) is insoluble in fat, water, acid or base. Furthermore, it takes 230 degrees Celsius to break apart the firm bond between Emeramide and mercury.

Emeramide is an exceptionally safe antidote for heavy metal poisoning and also a powerful antioxidant. It is currently going through the European Medical Agency (EMA) and the United States Food and Drug Administration (FDA) drug approval process.

emeramide nbmi moleculeEmeramide was first introduced to the dental/medical community in 2008 as an antioxidant supplement with adverse reporting tracked. It is made from two natural substances we eat every day. The first building block is carboxyl benzoate which is found naturally in cranberries. Carboxyl benzoate is widely used as a preservative in

many foods and drinks and generally recognized as a safe compound. Two arms are made out of cysteamine (found naturally in meat and on the terminal end of Co-enzyme A) which is also a widely used natural antioxidant. The cysteamines have a sulfhydryl (-SH) at their terminal ends, and the amino ends are attached on the 1st and 3rd carbon groups of the carboxyl benzoate. This allows the -SH groups to flex, rotate and take many different positions to accommodate the binding parameters of several toxic metals that are attracted to -SH groups, which covers most toxic heavy metals.

The amino acid hands terminate with a sulfur group on the free end that heavy metals strongly bind to. There are movable bonds at the carbon and the nitrogen atoms that allow the arms to freely move in any direction to grasp various metal atoms such as mercury.

## 3) Emeramide 99% (NBMI,OSR, BDTH2) : A History of Success

About 2.5 million doses of the original Emeramide compound were sold as the supplement OSR#1 (Oxidative Stress Relief) with no significant adverse reactions reported to the listed adverse effects reporting site on the OSR containers nor to the FDA. There were, however, numerous anecdotal reports of remarkable recoveries that have guided the research required for drug development. Initial studies supported the safety of OSR#1 as a food supplement. Three clinical trials required for drug development have further established safety. The Phase 1 safety study and Phase 2 clinical trials showed no adverse effects in humans. Therefore, individuals who need Emeramide can now obtain it through named patient access in the EU and as a compassionate use drug in the USA through the FDA as an investigative new drug (IND) which also requires monitoring by an institutional review board (IRB), or right-to-try.

## 4) How Is Emeramide 99% (NBMI,OSR, BDTH2) Produced In Lab?

The synthesis of NBMI can be done in one-step synthesis as shown on the left. Just make sure the reaction takes place at a low temperature.

We first dissolve 2-aminoethylthiol hydrochloride in chloroform and triethylamine and placed in an ice bath with stirring. Then we add the solution

containing Isophthaloyl chloride dissolved in chloroform slowly. Then we stir the mixture flask in an ice bath for two hours.

NBMI will precipiate after we add about 100 mL of 0.1 mol L-1 HCl. Later we collect the and dry the powder to get what we need.

#### 5) Effectiveness of Emeramide 99% (NBMI,OSR, BDTH2)

Emeramide is soluble in lipophilic, fatty tissues. Once it encounters a heavy metal, such as mercury, Emeramide fully combines with that metal to quickly render the metal chemically inert and nontoxic. The Emeramide mercury complex (Em/Hg) is insoluble in fat, water, acid or base. Furthermore, it takes 230 degrees Celsius to break apart the firm bond between Emeramide and mercury. Experiments have shown that the Em/Hg complex is removed from the body by the P-450 detox system which attaches a charged water soluble group to the complex, marking it for excretion through the bowel as is commonly done for many water insoluble compounds and drugs.

#### 6) Dosages of Emeramide 99% (NBMI,OSR, BDTH2)

Some people have had allergic reactions when first starting BDTH<sub>2</sub>. This is believed to be a response to residues from the solvents used to make it, as batches made with different solvents have not caused a reaction.

Emeramide was designated as an orphan drug by the European Commission and USFDA since 2012. For now, it is still under processing by the pharmaceutical company EmeraMed Limited. The trade name is Irminix. A useful precaution is to start with a dose of about 3-5mg/day for a week to see if any reactions develop. If there are none, try increasing the dose slowly up to the recommended dose of 300mg/day.

#### 7) How Does Emeramide 99% (NBMI,OSR, BDTH2) Work In Vivo?

Also in clinical trial tests performed by Emeramed Limited, BDTH2 is proved to be a safe, effective way to detox mercury without the issues and side effects of other chelating agents. Oxidative stress releases free radicals and is a major part of all illnesses. Emeramide captures free radicals, which are unstable molecules that can damage the cells in your body. Additionally Emeramide captures the heavy metals mercury and iron which helps create free radicals and thereby helps restore normal function to the mitochondria and overall health.BDTH2 enters cells and scavenges free radicals eliminating them harmlessly through the urine, and reducing oxidative stress very rapidly. This leads to a favorable increase in intracellular reduced Glutathione, the body's most important antioxidant.

Toxicity of mercury occurs at the intracellular level by binding of Hg2+ with thiol groups of relevant proteins. It has been proved in amimal models that mercury toxicity can be relieved by the use of BDTH2, which is able to cross the cell membrane and the blood brain barriers to chelate Hg2+.

In-vivo research (300mg per day) shows that Emeramide captures mercury and other heavy metals, which helps create free radicals and thereby restores normal functions to the mitochondria and overall health. By trial tests of Emeramed Limited, emeramide is a safe, effective way to detox without the issues and side effects of other chelating agents.

Besides, Emeramide (also NBMI or OSR) can also chelate Mercury, Gadolinium, Uranium, Lead, Arsenic, Cadmium, Copper, and Iron. In humans, BDTH<sub>2</sub> has been tested on mercury. In animals, BDTH<sub>2</sub> has been tested on iron and lead. In vitro, BDTH<sub>2</sub> has been tested on cadmium and arsenic. The aim is to test the chelating capacity on all these metals in humans.

Clinical trials in humans have not yet conducted, but several trials have been conducted in small rodents that are especially bred to suffer from genetically induced iron overload. In these test animals BDTH2 reduced the iron content towards normal levels in the liver and brain, normalized the oxidative stress level in the brain, and improved the abnormal behaviour of these animals induced by that oxidative stress.

# 8). How long is the usual chelating period of Emeramide 99% (NBMI,OSR, BDTH2) ?

It depends on what disease that you are treating and on how serious your condition is. For acute mercury poisoning, ie, recent exposure to a large amount, the mercury will mostly still be in the blood. For these people, one round has often been enough, while for others several treatments have been beneficial. For chronic mercury poisoning such as amalgam fillings, vaccines or exposure at work, the mercury will mostly have left the blood and will be stored in organs throughout the body. In this case, it may take several years to eliminate it.

# 9 ) Does Emeramide 99% (NBMI,OSR, BDTH2) cause any side effects?

In three Phase 1 and 2a clinical trials, there have been no drug related adverse events. Between 2008 and 2010 2.5 million doses of the compound were sold through doctors and dentists offices with adverse event tracking. There were no drug related adverse events. US FDA demanded a halt of sales not due to side effects, which they have none reported, but due to considering the compound being a New Chemical Entity (NCE) needing to go through a drug development program before it could again be available, as a drug.

# 10) How to use Emeramide 99% (NBMI,OSR, BDTH2)?

BDTH<sub>2</sub> is a fat-soluble powder. It is best absorbed when dissolved in oil. It can be taken orally mixed with a teaspoon of oil like olive or coconut oil, or even in peanut butter. Or it can be used transdermally by mixing with a light oil and rubbing it thoroughly into the skin.

# 11) Can my pet get Emeramide 99% (NBMI,OSR, BDTH2)?

Yes. In the near future BDTH2 is hoped to be approved in the US for pets who are heavy metal toxic from their diets. It has been available for some time in the EU under a different program for wild animals and animal rescue. BDTH2 gavaged into heavily metal toxic and incapacitated eagles and eagle owls in Sweden recovered remarkably quickly and were later able to fly appearing to have totally regained their health.

## 12) HS code of Emeramide 99% (NBMI,OSR, BDTH2)

Emeramide is classified as an organic compound belongs to the class of Other organic sulfur compounds, with HS code as 2930909099. If you are looking to import its finished formulations, its HS code should be 30049092 or 3004900000.

# Note

1, Shipping Condition: Shipped under ambient temperature as non-hazardous chemical. This product is stable enough for a few weeks during ordinary shipping and time spent in Customs.

2. Storage Condition: Dry, dark and at 0 - 4 C for short term (days to weeks) or -20 C for long term (months to years).

3. Shelf Life: 2 years after customer received if the product is stored properly

4、Drug Formulation: This drug may be formulated in DMSO

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