PROFESSIONAL INFORMATION

COMPLEMENTARY MEDICINE (DISCIPLINE-SPECIFIC)

This unregistered medicine has not been evaluated by the SAHPRA for its quality, safety or intended use. Health Supplements should not be used as a substitute for a varied and balanced diet and healthy lifestyle.

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SCHEDULING STATUS

1. NAME OF THE MEDICINE

NUTRIPURE KIDS SLEEP SUPPORT (multiple substances, gummies)

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each gummy contains:

Matricaria recutita L. (Chamomile)	10 mg
[flower extract 10 mg ration 1:1]	
Melissa officinalis L. Extract (Lemon Balm)	10 mg
[Aerial parts 10 mg ratio 1:1]	
Magnesium salts of citric acid	500 mg
providing elemental magnesium	56 mg

Pyridoxine Hydrochloride (Vitamin B6)	0,5 mg
Cyanocobalamin (Vitamin B12)	0,9 µg

Contains sugar: Glucose syrup (0,85 g); Sucrose (0,74 g)

For full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Gummies

NUTRIPURE KIDS SLEEP SUPPORT is a red coloured gummy with a red berries flavour.

4. CLINICAL PARTICULARS

4.1. Therapeutic indications

Supports sleep.

4.2. Posology and method of administration

Posology

Age 3 years and older: Take 1 gummy daily.

Do not exceed the recommended dose without consulting a relevant health care provider (see **4.4. Special warnings and precautions for use**).

For best results, give 30 minutes before bedtime.

Method of administration

Take orally.

Instruct child to chew each bear carefully and thoroughly.

4.3. Contraindications

NUTRIPURE KIDS SLEEP SUPPORT should not be used by patients who have an allergy or are hypersensitive to any of the ingredients, including hypersensitivity to other Asteraceae/Compostae plants (e.g. ragweed, daisies).

Do not give to children under 3 years old.

4.4. Special warnings and precautions for use

For use by children only under adult supervision.

This medicine contains sugar and should be used with caution in patients with diabetes mellitus.

Use with caution in patients with hormone-sensitive conditions, as chamomile has demonstrated anti-estrogenic activity in vitro (see **4.5 Interactions with other medicines and other forms of interaction**).

Use with caution in patients with thyroid disease or those receiving thyroid hormone replacement therapy, as lemon balm may affect thyroid function (see **4.5 Interactions with other medicines and other forms of interaction**).

Discontinue at least 2 weeks prior to elective surgery due to potential additive CNS depression with anaesthetics/other perioperative medicines (see **4.5 Interactions with other medicines and other forms of interaction**).

Do not exceed the recommended dose without consulting a relevant health care provider (see **4.2. Posology and method of administration**).

Use with caution in patients receiving medicines whose absorption may be affected by magnesium (e.g. tetracycline antibiotics, quinolone antibiotics, and bisphosphonates). These medicines should be administered at least 2 hours before or after NUTRIPURE KIDS SLEEP SUPPORT (see **4.5 Interactions with other medicines and other forms of interaction**).

Use with caution in patients using other magnesium-containing products, as concomitant use may increase the risk of gastrointestinal adverse effects (see **4.5 Interactions with other medicines and other forms of interaction**).

Use with caution in patients receiving levodopa without carbidopa, as vitamin B6 may reduce the clinical effects of levodopa (see **4.5 Interactions with other medicines and other forms of interaction**).

Use with caution in patients receiving antiepileptic medicines such as phenytoin or phenobarbital, as high doses of vitamin B6 may reduce plasma concentrations and clinical effects (see **4.5 Interactions with other medicines and other forms of interaction**).

Consult a relevant health care provider prior to use if you are pregnant or breastfeeding (see **4.6. Fertility, pregnancy and lactation**).

If symptoms worsen, consult a relevant health care provider.

4.5. Interactions with other medicines and other forms of interaction

CNS depressants (sedatives, anxiolytics, alcohol)

Concomitant use with CNS depressants (e.g. sedatives, anxiolytics, alcohol, hypnotics, some antihistamines, opioids) or other sedative agents, including sedative herbal products or supplements may result in additive sedative effects/drowsiness (see **4.4. Special warnings and precautions for use**).

Warfarin / anticoagulants

Concomitant use with anticoagulants such as warfarin may theoretically increase the risk of bleeding due to chamomile constituents (see **4.4. Special warnings and precautions for use**).

Hormone-related therapies (estrogens, tamoxifen)

Use with caution in patients receiving estrogen therapy or tamoxifen, as chamomile has demonstrated anti-estrogenic activity in vitro (see **4.4. Special warnings and precautions for use**).

Thyroid hormone replacement (e.g., levothyroxine)

Theoretical interaction. Lemon balm may affect thyroid function and could interfere with thyroid hormone replacement therapy. Use with caution and monitor if used concomitantly (see **4.4. Special warnings and precautions for use**).

Medicines affected by magnesium absorption

Concomitant use with oral magnesium may reduce the absorption of certain medicines, including tetracycline antibiotics, quinolone antibiotics, and bisphosphonates. It is recommended that these medicines be administered at least 2 hours before or after NUTRIPURE KIDS SLEEP SUPPORT (see **4.4. Special warnings and precautions for use**).

Other magnesium-containing products

Concomitant use with other magnesium-containing products may increase the risk of gastrointestinal adverse effects (see **4.4. Special warnings and precautions for use**).

Levodopa

Vitamin B6 may reduce the clinical effects of levodopa when levodopa is taken without carbidopa. This interaction is not expected when levodopa is used in combination with carbidopa (see **4.4 Special warnings and precautions for use**).

Antiepileptics (phenytoin, phenobarbital)

High doses of vitamin B6 may reduce plasma levels and clinical effects of phenytoin or phenobarbital. This is not expected at the recommended dose; however, use with caution in patients receiving these medicines (see **4.4 Special warnings and precautions for use**).

4.6. Fertility, pregnancy and lactation

Insufficient reliable information available; consult a relevant health care provider prior to use if you are pregnant, breastfeeding. (**see section 4.4. Special warnings and precautions for use**).

The effect on fertility is unknown.

4.7. Effects on ability to drive and use machines

There is no known effect on the ability to drive and use machines.

4.8. Undesirable effects

NUTRIPURE KIDS SLEEP SUPPORT is generally well tolerated when used at the recommended dose.

Common:

- Hypersensitivity reactions (including allergic reactions and skin irritation such as rash, pruritus, erythema, urticaria).
- Drowsiness or sedation
- Dizziness or light-headedness
- Headache
- Gastrointestinal discomfort (including nausea, abdominal pain, loose stools, or diarrhoea)

Uncommon/Rare:

- Respiratory symptoms associating with hypersensitivity reactions (e.g. wheezing).
- Acneiform eruptions
- Rosacea fulminans

If adverse effects do occur, please discontinue use and consult your physician.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Health care providers are requested to report any suspected adverse drug reactions to SAHPRA via the Med Safety APP (Medsafety X SAHPRA) and eReporting platform (who-umc.org) found on SAHPRA website.

4.9. Overdose

Symptoms of overdose may include gastrointestinal disturbances such as diarrhoea, nausea, vomiting, and abdominal pain.

In cases of excessive magnesium intake, particularly in patients with renal impairment, symptoms such as diarrhoea, hypotension, lethargy, muscle weakness, and, in severe cases, respiratory depression may occur.

Treatment is supportive and symptomatic. Discontinue use and consult a relevant health care provider. In the event of severe overdose, appropriate medical management should be instituted.

In the event of suspected overdose, medical advice should be sought immediately.

5. PHARMACOLOGICAL PROPERTIES

5.1. Pharmacodynamic properties

Complementary Medicine – Discipline-specific

D 33.7 Combination Products

Chamomile

The applicable part of German chamomile is the flower. Active constituents of German chamomile include flavonoids (including quercetin, apigenin, luteolin), coumarins (including umbelliferone), sesquiterpenes (including matricin), terpenoids (including chamazulene, alpha bisabolol, and bisabolol oxides), spiroether, essential oil, polysaccharides, amino acids, fatty acids, and minerals.

The constituents responsible for the sedative activity of German chamomile are unclear. Some laboratory research suggests that apigenin binds to gamma-aminobutyric acid

(GABA) receptors which are the primary receptor sites of benzodiazepines in the central nervous system. However, other research suggests that apigenin doesn't affect GABA receptors, and other constituents of German chamomile are responsible for the sedative activity.

Lemon balm

Lemon balm contains citronellal, neral, and geranial monoterpenoid aldehydes; flavonoids and polyphenolic compounds (including rosmarinic acid); and monoterpene glycosides. These substances may contribute to the behavioural effects of lemon balm dried leaf and essential oil.

Some research suggests lemon balm might have acetylcholine receptor activity with both nicotinic and muscarinic binding.

Clinical research suggests that lemon balm induces a calming effect and reduces alertness.

Magnesium

Magnesium is an essential mineral that plays a key role in numerous physiological processes, including neuromuscular transmission, neuronal excitability, and enzymatic activity. It contributes to normal nerve and muscle function and is involved in the regulation of cellular signalling pathways in the central nervous system.

Magnesium has been proposed to support sleep regulation through modulation of neurotransmitter systems, including inhibition of N-methyl-D-aspartate (NMDA) receptors and interaction with gamma-aminobutyric acid (GABA)–related pathways, which are associated with reduced neuronal excitability. Magnesium has also been associated with effects on circadian regulation through influences on melatonin and cortisol levels.

Vitamin B6

Vitamin B6 (pyridoxine) is a water-soluble vitamin that functions as a coenzyme in numerous enzymatic reactions, particularly those involved in amino acid metabolism and neurotransmitter synthesis. It plays an essential role in the normal functioning of the nervous system through its involvement in the synthesis of neurotransmitters such as gamma-aminobutyric acid (GABA), serotonin, and dopamine, which are important for neuronal signalling and regulation of mood and behaviour.

Through its role in neurotransmitter synthesis, vitamin B6 contributes to normal neurological function and may support central nervous system processes associated with relaxation and sleep. Vitamin B6 is also involved in homocysteine metabolism and immune function. Its pharmacodynamic effects are supportive in nature and occur as part of normal physiological processes.

Vitamin B12

Vitamin B12 (cobalamin) is an essential water-soluble vitamin. It refers to cobalamins that act as coenzymes in humans (including adenosylcobalamin, methylcobalamin, and hydroxocobalamin). Vitamin B12 is required for nucleoprotein and myelin synthesis, cell reproduction, normal growth, and normal erythropoiesis.

Cyanocobalamin and hydroxocobalamin are converted to active coenzyme forms that are essential for key metabolic pathways, including conversion of methylmalonate to succinate and remethylation of homocysteine to methionine. Vitamin B12 also supports fat and carbohydrate metabolism and protein synthesis, and is essential for folate utilisation; absence of vitamin B12 can result in a functional folate deficiency.

5.2. Pharmacokinetic properties

Chamomile

There is insufficient reliable information available about the pharmacokinetics of German chamomile.

Lemon balm

Absorption

A 200 mL serving containing 1.8 g lemon balm standardized to 2% rosmarinic acid, suggests a peak concentration of rosmarinic acid at 30 min to 1 hour post ingestion, before returning to baseline levels.

Distribution

Certain volatile constituents of lemon balm essential oil may be rapidly absorbed and are capable of crossing the blood-brain barrier.

Magnesium

Absorption

Magnesium is absorbed from the gastrointestinal tract following oral administration. The extent of absorption is influenced by the magnesium salt used, dose, and individual gastrointestinal factors. Herbal components such as chamomile and lemon balm contain multiple active constituents that are absorbed orally; however, comprehensive pharmacokinetic data for these components are limited.

Distribution

Absorbed magnesium is distributed throughout the body, with the majority stored in bone and muscle tissue. Magnesium is present in both intracellular and extracellular compartments. Limited data are available regarding the distribution of herbal constituents.

Metabolism

Magnesium is not metabolised and is present in the body as an ion. Herbal constituents undergo variable metabolism, primarily via hepatic pathways; however, detailed metabolic profiles are not fully characterised.

Elimination

Magnesium is primarily eliminated via the kidneys, with urinary excretion reflecting serum magnesium concentrations. Unabsorbed magnesium is excreted in the faeces. Herbal constituents and their metabolites are eliminated mainly via renal and biliary routes.

Vitamin B6

Absorption

Vitamin B6 is absorbed passively in the upper gastrointestinal tract.

Metabolism

In the liver, vitamin B6 is converted to the coenzyme pyridoxal phosphate.

Excretion

Vitamin B6 metabolites are excreted in the urine.

Vitamin B12

Absorption

Vitamin B12 is absorbed following oral administration primarily via an active, intrinsic factor–mediated transport mechanism in the terminal ileum. A smaller proportion is absorbed by passive diffusion. Absorption may be reduced in conditions associated with decreased gastric acidity or impaired intrinsic factor production. Oral vitamin B12 may also be absorbed to a limited extent via passive diffusion, particularly at higher doses. Peak plasma concentrations following oral administration are reported to occur approximately three hours post-dose.

Excretion

Orally, vitamin B12 as cyanocobalamin and cyanocobalamin-SNAC has a half-life of about 25-30 hours.

6. PHARMACEUTICAL PARTICULARS

6.1. List of excipients

Glucose Syrup,

Sucrose,

Water,

Mixed Fruit Juice Concentrate,

Gelling Agent (Pectin),

Acidulant (Citric Acid),

Acidity Regulator (Sodium Citrate),

Natural Red Berries Flavouring,

Colour: Anthocyanins E-163,

Coconut Oil,

Anticaking Agent (Carnauba Wax)

6.2. Incompatibilities

None known.

6.3. Shelf life

The shelf life for NUTRIPURE KIDS SLEEP SUPPORT is two years.

6.4. Special precautions for storage

Store in a cool dry place below 25 °C.

Keep bottle tightly closed.

6.5. Nature and contents of container

NUTRIPURE KIDS SLEEP SUPPORT is supplied in a clear 300 ml PET bottle with a light green CRC cap.

6.6. Special precautions for disposal and other handling

No special requirements

7. HOLDER OF CERTIFICATE OF REGISTRATION

MDI Healthcare cc

P.O. Box 35259, Menlo Park

Pretoria

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8. REGISTRATION NUMBER(S):

To be allocated.

9. DATE OF FIRST AUTHORISATION/ RENEWAL OF THE AUTHORISATION

To be allocated.

10. DATE OF REVISION OF THE TEXT

To be allocated.