SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT
Dimag 365 mg Sachets Containing Single Dose Powder

2. QUALITATIVE AND QUANTITATIVE COMPOSITION
Each sachet contains;

Active substance:
Equivalent to 365 mg Magnesium ion

Magnesium carbonate	670 mg
Magnesium oxide	342 mg

Excipients:

Sorbitol	50.00 mg
Sodium cyclamate	200.0 mg
Sodium bicarbonate	200.0 mg
Sodium saccharine	50.0 mg
FDC yellow number 5	4.5 mg

For excipients see 6.1.

3. PHARMACEUTICAL FORM
Sachets Containing Single Dose Powder
Yellow coloured granulated powder.

4. CLINICAL PARTICULARS
4.1. Therapeutic indications
DIMAG is indicated in the treatment of,

- Ameliorating the symptoms occurred in deficiency of magnesium
- Heart and vascular system: Tachycardia, cardiac arrhythmia, myocardial infarction, angina pectoris, mild hypertension
- Nerve and muscles: Tetany, cramps in smooth and skeletal muscle, gastrointestinal cramps, neuromuscular hyperexcitability, systremma, cramped conditions in infants and young children
- Gynecological and obstetric: Pre-term spasm, cervical insufficiency, premature rupture of membrane, spasm in pregnancy (eclampsia/pre-eclampsia), tocolysis necessary to use betamimetic, dismenore
- Orthopedics: Calcification and ossifications
- Prevention of renal calculus formation: Prevention of renal calculus formation (prevention of repetition of calcium oxalate urolithiasis)
- Treatment of diabetic and migraine

4.2. Posology and method of administration
Posology / Frequency and duration of administration
Unless otherwise recommended by the doctor;
Recommended daily dose is 1-2 sachets for adults and adolescents (12-17 aged).
Recommended daily dose during pregnancy and breast-feeding period is 1-2 sachets.

Route of administration:
DIMAG is for oral administration.
Each sachet should be dissolved in 150 ml (1 glass of) water and taken with food.

Additional information on special populations
Renal failure:
The patients with severe renal failure should not take magnesium because as a result of accumulation, toxicity may occur.

Hepatic failure
No data available on the patients with hepatic failure.

Pediatric population:
Recommended daily dose for children between 6-11 years old is ½ - 1 sachet. It should be taken in control of the doctor in children under 6 years old.

Geriatric population:
No data available on the geriatric population.

4.3. Contraindications
It is contraindicated on the patients with severe renal failure or hypersensitivity to any components in the formulation.

4.4. Special warnings and precautions for use
Reducing of renal clearance (creatinine clearance <30 ml/min). of absorbed magnesium may result in hypermagnesemia and toxicity. Patients with severe renal failure should not take magnesium since toxicity may occur due to accumulation. Serum magnesium levels should be monitored in patients with creatinine clearance of <25mL/min.

It should be taken with caution in patients using digital, heart block originated from the variations in cardiac transmit can be seen.

It should be taken with caution in patients using lithium.

Diarrhea may be seen in patients above medium age due to disease or drug usage. Diarrhea may cause disorder in electrolyte balance. Serum level should be monitored for toxicity.

Oral magnesium is generally not applicable for magnesium deficiency treatment for patient with serum magnesium concentrations of <1.5 mEq/L.

Drugs containing magnesium should be taken with food. Taking in fast conditions may cause diarrhea.

It may cause allergic reactions because of containing FDC yellow number 5 coloring agent as ingredient.

One sachet contains 106.30 mg (4.67 mmol) sodium ion. This case should be considered for the patients having controlled sodium diet.

The patients have rarely seen hereditary fructose intolerance problem should not use this medicine.

4.5. Interaction with other medicinal products and other forms of interaction

DIMAG enhances the effect and toxicity of non-depolarized neuromuscular blockers.

DIMAG decreases the absorption of aminoquinolones, digoxin, nitrofurantoin, penisilamine and tetracyclines.

The concurrent usage of magnesium with oral tetracyclines may inhibit the presenting the effect of tetracyclines completely. For this reason, magnesium should be taken at least 1-3 hours before or after oral tetracyclines usage.

The concurrent usage of DIMAG with sodium polystyrene sulfonate decreases the effect of magnesium.

The concurrent usage of DIMAG with cellulose sodium phosphate may inhibit presenting the effect of cellulose phosphate completely. For this reason, magnesium should be taken at least 1 hour before or after cellulose sodium phosphate usage.

The use of DIMAG with other magnesium-containing preparations, including magnesium enantiomers, will lead to higher magnesium blood levels, thus increasing the likelihood of side effects.

The concurrent usage of DIMAG with high dose barbiturates, opioids, hypnotics can cause breathing depression risk.

The concurrent usage of DIMAG with nifedipine can cause hypotension.

The concurrent usage of DIMAG with fluoroquinolone group antibiotics, significantly reduces the absorption of fluoroquinolones from the intestines.

When the drugs containing levothyroxine are taken with DIMAG, the two drugs should be taken at least 4 hours apart as the absorption of DIMAG is impaired.

Additional information on special population
No interaction study has been established for specific population.

Pediatric population:
No interaction study has been established for pediatric population.

4.6. Pregnancy and lactation
General recommendation:
Pregnancy category: B

Women have the possibility of giving birth/Contraception
There is no recommendation on use of the medicine with the women has possibility of giving birth and take contraception.

Pregnancy
No clinical data related to exposure during pregnancy for DIMAG.

Studies conducted on animals has not shown direct or indirect hazard effects related to pregnancy/embryonal/fetal improvement/birth or post-birth improvement.

Precaution should be taken while prescribing for pregnant women.

Lactation
DIMAG should be taken by consulting a doctor during pregnancy and breast-feeding since it may cause laxative effects.

Reproduction/Fertility
Reproductive studies conducted on rats, magnesium sulfate administrated by subcutaneous route at high doses (1000 mg/kg bw/day, 3 times in a day) resulted as consuming less food intake, mother rat put on less weight and delayed differentiation had been occurred on offspring rats.

4.7. Effects on ability to drive and use machines

DIMAG has no negative effect on driving and using machines.

4.8. Undesirable effects
The adverse reactions reported have been listed by the following frequency (very common (≥ 1/10); common (≥ 1/100 to< 1/10); uncommon (≥ 1/1.000 to < 1/100); rare (≥ 1/10.000 to < 1/1.000); very rare (< 1/10.000), not known (cannot be estimated from available data).

Immune system disorders
Not known: Allergic reaction, redness, itching

Psychiatric disorders
Common: Mental depression, confusion

Nervous system disorders
Common: Coma

Cardiac disorders
Common: Hypotension, EKG variations

Respiratory, thoracic and mediastinal disorders
Common: Breathing depression

Gastrointestinal disorders
Common: Nausea, vomiting
Very common: Diarrhea

Musculoskeletal, connective tissue and skeletal disorders
Not known: Cramp

General disorders and administration site conditions
Not known: Feeling of tiredness, weakness

4.9. Overdose
Serum magnesium reference range:
In children: 1.5-1.9 mg/dL (1.2-1.6 mEq/L)
In adults: 1.5-2.5 mg/dL (1.2-2.0 mEq/L)

Symptoms such as blurred or double vision, coma, dizziness or fainting, severe weakness, decreased or increased urinary excretion, slowness of heartbeats, difficulty in breathing may occur. Overdose has been seen rarely on adult individuals have normal renal functions. Hypermagnesemia has been occurred especially at acute and chronic renal disorders and treated effectively with dialysis method.

5. PHARMACOLOGICAL PROPERTIES
5.1. Pharmacodynamic properties
Pharmacotherapeutic group: Magnesium
ATC code: A12CC30

Magnesium is the second most abundant intracellular cation in the body, and acts as a cofactor of more than 300 enzymatic reactions related to energy metabolism and protein and nucleic acid synthesis; It also acts as a coenzyme in amino acids, fats, carbohydrates and steroid metabolisms.

Magnesium directs electrophysiological, electromechanical and hemodynamic events in the body. It has an important role in physiology of heart muscle transmit.

Magnesium is a natural antagonist of calcium. It stabilizes biological membranes and reduces fluidity by forming complexes with phospholipids and ATP.

Magnesium is a vital element for the organism. Inadequate intake of magnesium may cause fatigue, tremor, convulsions, cardiac arrhythmias, hypokalemia and hypocalcaemia.

Inadequate intake or excessive consumption of magnesium via nutrition leads to impairment in enzymatic systems and metabolism.

Studies indicated that chronic latent magnesium deficiency may play a role in atherosclerosis, myocardial infarction, hypertension, cancer, urinary calculus, premenstrual syndrome and psychiatric disorders.

5.2. Pharmacokinetic properties

Absorption:
The absorption of orally administrated magnesium is initiated from small intestine after 1 hour and completed within 8-12 hours. After 12 hours, the unabsorbed part reaches the large intestine. Absorption can take place here very little, too.

Distribution:
A 70 kg weighed human body has about an average of 1 mole of magnesium. Almost half of the magnesium in the body is present in the soft tissue and the other half in the bone tissue. The fraction less than 1% of total body magnesium is present in blood. One third of the magnesium in serum is found as bounded to proteins; 25% of total serum magnesium is bounded to albumin, and 8% to globulin. Approximately 92% of the ultra-filterable 2/3 portion is present as free ion (61% of total serum magnesium) and 8% is phosphate, citrate complexes and other compounds (5.5% of total serum magnesium).

Biotransformation:
Magnesium exists in three different states in biological systems; bounded to protein, in status formed complexes with anions and as free. Within these forms is the only free form of magnesium that has biological activity.

Elimination:
Magnesium participates to bloodstream following absorption and the free ionic state is filtered through ultra filtration in the kidneys. Approximately 30% of absorbed magnesium ions are excreted by urine. Unabsorbed magnesium is excreted via feces. Half-life is about 4.5 hours. Unlike other cations, more than 50% of magnesium is re-absorbed from the rising part of Henle's handle.

Linearity/Nonlinear status:
No data is available.

5.3. Preclinical safety data
Traditional safety pharmacology does not present a particular hazard to humans based on repeated dose toxicity, genotoxicity, carcinogenic potential and reproductive toxicity studies.

6. PHARMACEUTICAL PROPERTIES

6.1. List of excipients
Citric acid anhydrous
Sorbitol
Sodium cyclamate
Sodium bicarbonate,
Sodium saccharine
Polyvinyl pyrrolidone
Lemon flavor
FDC yellow number 5 (tartrazine E 102)

6.2. Incompatibilities
Not applicable.

6.3. Shelf life
24 months

6.4. Special precautions for storage
Store at room temperature under 25°C and away from moisture. Store in the package and keep out of the reach and sight of children.

6.5. Nature and contents of container
DIMAG is packed in coated paper/Al/LDPE folio sachets. Each of carton boxes contains 10, 20 or 30 pouches.

Each of commercial presentation type may not be commercialized.

6.6. Special precautions for disposal and other handling
Any unused product or waste material should be disposed of in accordance with “Directive on Control of Medical Waste” and “Directive on the Control of Packaging and Packaging Waste”.

7. MARKETING AUTHORIZATION HOLDER

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8. MARKETING AUTHORISATION NUMBER(S)

245/48

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorization: 10.10.2012
Date of latest renewal:

10. DATE OF REVISION OF THE TEXT

19.07.2017