SUMMARY OF THE PRODUCT CHARACTERISTICS

1  **NAME OF THE MEDICINAL PRODUCT**
Kalcipos-D 500 mg/400 IU chewable tablet

2  **QUALITATIVE AND QUANTITATIVE COMPOSITION**
One chewable tablet contains:
calcium 500 mg as calcium carbonate
cholecalficiferol (vitamin D₃) 10 microgram (400 IU)

Excipients with known effect: glucose 200 mg, sucrose 0.9 mg.

For the full list of excipients, see section 6.1.

3  **PHARMACEUTICAL FORM**
Chewable tablet

White, round engraved with R 137, diameter 17 mm.

4  **CLINICAL PARTICULARS**

4.1  **Therapeutic indications**
Prevention and treatment of calcium and vitamin D deficiency in elderly people.
Vitamin D and calcium supplement in addition to specific osteoporosis treatment of patients
who are at risk of vitamin D and calcium deficiency.

4.2  **Posology and method of administration**

*Adults and elderly*
One chewable tablet 1-2 times daily.
To be chewed or slowly melt in the mouth.

*Dosage in hepatic impairment*
No dose adjustment is required

*Dosage in renal impairment*
Kalcipos-D chewable tablets should not be used in patients with severe renal impairment.

4.3  **Contraindications**
- Hypersensitivity to the active substances or to any of the excipients listed in section 6.1
- Hypercalciuria and hypercalcemia and diseases and/or conditions resulting in
hypercalcemia and/or hypercalciuria (e.g. myeloma, bone metastases, primary
hyperparathyroidism)
- Nephrolithiasis
- Nephrocalcinosis
- Hypervitaminosis D
- Severe renal impairment and renal failure
4.4 Special warnings and precautions for use

During long-term treatment, serum calcium levels should be followed and renal function should be monitored through measurements of serum creatinine. Monitoring is especially important in elderly patients on concomitant treatment with cardiac glycosides or diuretics (see section 4.5) and in patients with a high tendency to calculus formation. In case of hypercalcaemia or signs of impaired renal function the dose should be reduced or the treatment discontinued.

Vitamin D should be used with caution in patients with impairment of renal function and the effect on calcium and phosphate levels should be monitored. The risk of soft tissue calcification should be taken into account. In patients with severe renal insufficiency, vitamin D in the form of cholecalciferol is not metabolised normally and other forms of vitamin D should be used (see section 4.3).

Kalcipos-D chewable tablets should be prescribed with caution to patients suffering from sarcoidosis due to risk of increased metabolism of vitamin D into its active form. These patients should be monitored with regard to the calcium content in serum and urine.

Kalcipos-D chewable tablets should be used cautiously in immobilised patients with osteoporosis due to increased risk of hypercalcaemia.

The content of vitamin D (400 IU) in Kalcipos-D chewable tablets should be considered when prescribing other medicinal products containing vitamin D. Additional doses of calcium or vitamin D should be taken under close medical supervision. In such cases it is necessary to monitor serum calcium levels and urinary calcium excretion frequently. Milk-alkali syndrome (Burnett’s syndrome) i.e. hypercalcaemia, alkalosis and renal impairment, can develop when large amounts of calcium are ingested with absorbable alkali.

Paediatric population
Kalcipos-D chewable tablets are not intended for use in children.

Kalcipos-D chewable tablets contain 200 mg glucose and 0.9 mg sucrose. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.

4.5 Interaction with other medicinal products and other forms of interaction

Thiazide diuretics reduce the urinary excretion of calcium. Due to increased risk of hypercalcaemia, serum calcium should be regularly monitored during concomitant use of thiazide diuretics.

Systemic corticosteroids reduce calcium absorption. During concomitant use, it may be necessary to increase the dose of Kalcipos-D chewable tablet.

Simultaneous treatment with ion exchange resins such as cholestyramine or laxatives such as paraffin oil may reduce the gastrointestinal absorption of vitamin D.

Calcium carbonate may interfere with the absorption of concomitantly administered tetracycline preparations. For this reason, tetracycline preparations should be administered at least two hours before or four to six hours after oral intake of calcium.
Hypercalcaemia may increase the toxicity of cardiac glycosides during treatment with calcium and vitamin D. Patients should be monitored with regard to electrocardiogram (ECG) and serum calcium levels.

If a bisphosphonate or sodium fluoride is used concomitantly, this preparation should be administered at least three hours before the intake of Kalcipos-D chewable tablet since gastrointestinal absorption may be reduced.

Oxalic acid (found in spinach and rhubarb) and phytic acid (found in whole cereals) may inhibit calcium absorption through formation of insoluble compounds with calcium ions. The patient should not take calcium products within two hours of eating foods high in oxalic acid and phytic acid.

Calcium salts may decrease the absorption of iron, zinc and strontium ranelate. Consequently, iron, zinc or strontium ranelate preparations should be taken at least two hours before or after Kalcipos-D.

The efficacy of levothyroxine can be reduced by the concurrent use of calcium, due to decreased levothyroxine absorption. Administration of calcium and levothyroxine should be separated by at least four hours.

The absorption of quinolone antibiotics may be impaired if administered concomitantly with calcium. Quinolone antibiotics should be taken two hours before or six hours after intake of calcium.

Treatment with orlistat may potentially impair the absorption of fat-soluble vitamins (e.g. vitamin D₃).

4.6 Fertility, pregnancy and lactation

Pregnancy
During pregnancy the daily intake should not exceed 1,500 mg calcium and 600 IU vitamin D. Studies in animals have shown reproductive toxicity of high doses of vitamin D. In pregnant women, overdoses of calcium and vitamin D should be avoided as permanent hypercalcaemia has been related to adverse effects on the developing foetus. There are no indications that vitamin D at therapeutic doses is teratogenic in humans. Kalcipos-D chewable tablet can be used during pregnancy, in case of a calcium and vitamin D deficiency.

Breast-feeding
Kalcipos-D chewable tablet can be used during breast-feeding. Calcium and vitamin D₃ pass into breast milk. This should be considered when giving additional vitamin D to the child.

Fertility
Normal endogenous levels of calcium and vitamin D₃ are not expected to have any adverse effects on fertility.

4.7 Effects on ability to drive and use machines
There are no data about the effect of this product on driving capacity. An effect is, however, unlikely.
4.8 Undesirable effects

Adverse reactions frequencies are defined as:
- 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 the available data)

**Immune system disorders**
Not known (cannot be estimated from the available data): Hypersensitivity reactions such as angio-oedema or laryngeal oedema.

**Metabolism and nutrition disorders**
Uncommon: Hypercalcaemia and hypercalciuria.
Very rare: Seen usually only in overdose (see section 4.9) Milk-alkali syndrome.

**Gastrointestinal disorders**
Rare: Constipation, flatulence, nausea, abdominal pain, and diarrhoea.

**Skin and subcutaneous disorders**
Rare: Pruritus, rash and urticaria.

Patients with renal impairment are at potential risk of hyperphosphatemia, nephrolithiasis and nephrocalcinosis. See section 4.4.

**Reporting of suspected adverse reactions**
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system.

4.9 Overdose

Overdose can lead to hypervitaminosis and hypercalcaemia. Symptoms of hypercalcaemia may include anorexia, thirst, nausea, vomiting, constipation, abdominal pain, muscle weakness, fatigue, mental disturbances, polidipsia, polyuria, bone pain, nephrocalcinosis, renal calculi and in severe cases, cardiac arrhythmias. Extreme hypercalcaemia may result in coma and death. Persistently high calcium levels may lead to irreversible renal damage and soft tissue calcification. Milk-alkali syndrome may occur in patients who ingest large amounts of calcium and absorbable alkali. Symptoms are frequent urge to urinate, continuing headache, continuing loss of appetite, nausea or vomiting, unusual tiredness or weakness, hypercalcaemia, alkalosis and renal impairment.

Treatment of hypercalcaemia: The treatment with calcium and vitamin D must be discontinued. Treatment with thiazide diuretics, lithium, vitamin A, vitamin D and cardiac glycosides must also be discontinued. Rehydration and, according to severity, isolated or combined treatment with loop diuretics, bisphosphonates, calcitonin and corticosteroids.
Serum electrolytes, renal function and diuresis must be monitored. In severe cases, ECG and CVP should be followed.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Calcium combinations with vitamin D and/or other drugs.
ATC-code: A12AX

Vitamin D increases the intestinal absorption of calcium.

Administration of calcium and vitamin D$_3$ counteracts the increase of parathyroid hormone (PTH) which is caused by calcium deficiency and which cause increased bone resorption.

A clinical study of institutionalised patients suffering from vitamin D deficiency indicated that a daily intake of two tablets of calcium 500 mg/vitamin D 400 IU for six months normalised the value of the 25-hydroxylated metabolite of vitamin D$_3$ and reduced secondary hyperparathyroidism and alkaline phosphatases.

An 18 month double-blind, placebo controlled study including 3270 institutionalised women aged 84+/- 6 years who received supplementation of vitamin D (800 IU/day) and calcium phosphate (corresponding to 1200 mg/day of elemental calcium), showed a significant decrease of PTH secretion. After 18 months, an "intent-to treat" analysis showed 80 hip fractures in the calcium-vitamin D group and 110 hip fractures in the placebo group (p=0.004). A follow-up study after 36 months showed 137 women with at least one hip fracture in the calcium-vitamin D group (n=1176) and 178 in the placebo group (n=1127) (p<0.02).

5.2 Pharmacokinetic properties

Calcium
Absorption: The amount of calcium absorbed through the gastrointestinal tract is approximately 30% of the swallowed dose.
Distribution and biotransformation: 99% of the calcium in the body is concentrated in the hard structure of bones and teeth. The remaining 1% is present in the intra- and extracellular fluids. About 50% of the total blood-calcium content is in the physiologically active ionised form with approximately 10% being complexed to citrate, phosphate or other anions, the remaining 40% being bound to proteins, principally albumin.
Elimination: Calcium is eliminated through faeces, urine and sweat. Renal excretion depends on glomerular filtration and calcium tubular reabsorption.

Vitamin D
Absorption: Vitamin D is easily absorbed in the small intestine.
Distribution and biotransformation: Cholecalciferol and its metabolites circulate in the blood bound to a specific globulin. Cholecalciferol is converted in the liver by hydroxylation to the active form 25-hydroxycholecalciferol. It is then further converted in the kidneys to 1,25-hydroxycholecalciferol. 1,25-hydroxycholecalciferol is the metabolite responsible for increasing calcium absorption. Vitamin D, which is not metabolised, is stored in adipose and muscle tissues.
Elimination: Vitamin D is excreted in faeces and urine.
5.3 **Preclinical safety data**
At doses far higher than the human therapeutic range teratogenicity has been observed in animal studies. There is further no information of relevance to the safety assessment in addition to what is stated in other parts of the SPC.

6 **PHARMACEUTICAL PARTICULARS**

6.1 **List of excipients**
Liquid spray dried glucose, magnesium stearate, sodium citrate, xylitol, all-\textit{rac}-alpha-tocopherol, sucrose, starch sodium octenyl succinate E(1450), acacia, sodium laurilsulphate, sodium ascorbate, medium chain triglycerides, silicon dioxide.

6.2 **Incompatibilities**
Not applicable.

6.3 **Shelf-life**
2 years.

6.4 **Special precautions for storage**
Keep the container tightly closed in order to protect from light and moisture.

6.5 **Nature and contents of container**
90, 135 and 180 tablets in plastic containers made of polyethylene, especially adjusted packaging with an accessibility cap for people with reduced function in the hands. Not all pack sizes may be marketed.

6.6 **Special precautions for disposal and other handling**
No special requirements.

7 **MARKETING AUTHORIZATION HOLDER**
<To be completed nationally>

8 **MARKETING AUTHORIZATION NUMBER(S)**
<To be completed nationally>

9 **DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**
<To be completed nationally>

10 **DATE OF REVISION OF THE TEXT**
2018-06-28