SUMMARY OF PRODUCT CHARACTERISTICS,
LABELLING AND PACKAGE LEAFLET

1.3.1	Lansoprazole
SPC, Labeling and Package Leaflet	Common

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

<Invented name> 15 mg gastro-resistant capsules, hard
<Invented name> 30 mg gastro-resistant capsules, hard

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each capsule contains 15 mg of lansoprazole
Each capsule contains 30 mg of lansoprazole

Excipient with known effect:

Each 15 mg capsule contains 80.6 mg of sucrose
Each 30 mg capsule contains 161.2 mg of sucrose

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Gastro-resistant capsules, hard.

<Invented name> 15 mg: white/red-brownish gelatine gastro-resistant capsules. Each capsule contains white to light brown or lightly pink coloured enteric-coated pellets.

<Invented name> 30 mg: white gelatine gastro-resistant capsules. Each capsule contains white to light brown or lightly pink enteric-coated pellets.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

<Invented name> is indicated in adults.

- Treatment of duodenal and gastric ulcer
- Treatment of reflux oesophagitis
- Prophylaxis of reflux oesophagitis
- Eradication of *Helicobacter pylori* (*H. pylori*) concurrently given with appropriate antibiotic therapy for treatment of *H. pylori*-associated ulcers
- Treatment of NSAID-associated benign gastric and duodenal ulcers in patients requiring continued NSAID treatment
- Prophylaxis of NSAID-associated gastric ulcers and duodenal ulcers in patients at risk (see section 4.2) requiring continued therapy
- Symptomatic gastroesophageal reflux disease
- Zollinger-Ellison syndrome.

4.2 Posology and method of administration

Posology

For optimal effect, <Invented name> should be taken once daily in the morning, except when used for *H. pylori* eradication when treatment should be twice a day, once in the morning and once in the evening.

Treatment of duodenal ulcer:
The recommended dose is 30 mg once daily for 2 weeks. In patients not fully healed within this time, the medication is continued at the same dose for another 2 weeks.

Treatment of gastric ulcer:
The recommended dose is 30 mg once daily for 4 weeks. The ulcer usually heals within 4 weeks, but in patients not fully healed within this time, the medication may be continued at the same dose for another 4 weeks.

Reflux oesophagitis:
The recommended dose is 30 mg once daily for 4 weeks. In patients not fully healed within this time, the treatment may be continued at the same dose for another 4 weeks.

Prophylaxis of reflux oesophagitis:
15 mg once daily. The dose may be increased up to 30 mg daily as necessary.

Eradication of *Helicobacter pylori:*
When selecting appropriate combination therapy consideration should be given to official local guidance regarding bacterial resistance, duration of treatment, (most commonly 7 days but sometimes up to 14 days), and appropriate use of antibacterial agents.

The recommended dose is 30 mg of <Invented name> twice daily for 7 days in combination with one of the following:
clarithromycin 250–500 mg twice daily + amoxicillin 1 g twice daily
clarithromycin 250 mg twice daily + metronidazole 400–500 mg twice daily

H. pylori eradication rates of up to 90%, are obtained when clarithromycin is combined with <Invented name> and amoxicillin or metronidazole.

Six months after successful eradication treatment, the risk of re-infection is low and relapse is therefore unlikely.

Use of a regimen including lansoprazole 30 mg twice daily, amoxicillin 1 g twice daily and metronidazole 400–500 mg twice daily has also been examined. Lower eradication rates were seen using this combination than in regimens involving clarithromycin. It may be suitable for those who are unable to take clarithromycin as part of an eradication therapy, when local resistance rates to metronidazole are low.

Treatment of NSAID associated benign gastric and duodenal ulcers in patients requiring continued NSAID treatment:
30 mg once daily for 4 weeks. In patients not fully healed the treatment may be continued for another 4 weeks. For patients at risk or with ulcers that are difficult to heal, a longer course of treatment and/or a higher dose should probably be used.

Prophylaxis of NSAID associated gastric and duodenal ulcers in patients at risk (such as age > 65 or history of gastric or duodenal ulcer) requiring prolonged NSAID treatment:
15 mg once daily. If the treatment fails the dose 30 mg once daily should be used.

Symptomatic gastro-oesophageal reflux disease:
The recommended dose is 15 mg or 30 mg daily. Relief of symptoms is obtained rapidly. Individual adjustment of dosage should be considered. If the symptoms are not relieved within 4 weeks with a daily dose of 30 mg, further examinations are recommended.

Zollinger-Ellison syndrome:
The recommended initial dose is 60 mg once daily. The dose should be individually adjusted and the treatment should be continued for as long as necessary. Daily doses of up to 180 mg have been used. If the required daily dose exceeds 120 mg, it should be given in two divided doses.

Special populations

Renal impairment:
There is no need for a dose adjustment in patients with impaired renal function.

Hepatic impairment:
Patients with moderate or severe liver disease should be kept under regular supervision and a 50% reduction of the daily dose is recommended (see section 4.4 and 5.2).

Elderly:
Due to reduced clearance of lansoprazole in the elderly an adjustment of dose may be necessary based on individual requirements. A daily dose of 30 mg should not be exceeded in the elderly unless there are compelling clinical indications.

Paediatric population:
The use of <Invented name> is not recommended in children as clinical data are limited (see also section 5.2) and juvenile animal studies have findings of currently unknown human relevance (see section 5.3).Treatment of small children below one year of age should be avoided as available data have not shown beneficial effects in the treatment of gastro-oesophageal reflux disease.

Method of administration

<Invented name> should be taken at least 30 minutes before food (see section 5.2). Capsules should be swallowed whole with liquid.

For patients with difficulty swallowing; the capsules may be emptied, but the contents may not be chewed or ground.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for use

Gastric malignancy
In common with other anti-ulcer therapies, the possibility of malignant gastric tumour should be excluded when treating a gastric ulcer with lansoprazole because lansoprazole can mask the symptoms and delay the diagnosis.

HIV protease inhibitors
Co-administration of lansoprazole is not recommended with HIV protease inhibitors for which absorption is dependent on acidic intragastric pH, such as atazanavir and nelfinavir, due to significant reduction in their bioavailability (see section 4.5).

Influence on vitamin B_{12} absorption
Lansoprazole, as all acid-blocking medicines, may reduce the absorption of vitamin B_{12} (cyanocobalamin) due to hypo- or achlorhydria. This should be considered in patients with reduced body stores or risk factors for reduced vitamin B_{12} absorption on long term therapy or if respective symptoms are observed.

Hepatic impairment
Lansoprazole should be used with caution in patients with moderate and severe hepatic dysfunction (see sections 4.2 and 5.2).

Gastrointestinal infections caused by bacteria
Lansoprazole, like all PPIs, might increase the counts of bacteria normally present in the gastrointestinal tract. This may increase the risk of gastrointestinal infections caused by bacteria such as *Salmonell*a, *Campylobacter*, and *Clostridium difficile*.

In patients suffering from gastro-duodenal ulcers, the possibility of *H. pylori* infection as an etiological factor should be considered.

If lansoprazole is used in combination with antibiotics for eradication therapy of *H. pylori*, then the summary of product characteristics of these antibiotics should also be followed.

Long-term treatment
Because of limited safety data for patients on maintenance treatment for longer than 1 year, regular review of the treatment and a thorough risk/benefit assessment should regularly be performed in these patients.

Gastrointestinal disorders
Very rarely cases of colitis have been reported in patients taking lansoprazole. Therefore, in the case of severe and/or persistent diarrhoea, discontinuation of therapy should be considered.

Co administration with NSAIDs
The treatment for the prevention of peptic ulceration of patients in need of continuous NSAID treatment should be restricted to high risk patients (e.g. previous gastrointestinal bleeding, perforation or ulcer, advanced age, concomitant use of medication known to increase the likelihood of upper GI adverse events [e.g. corticosteroids or anticoagulants], the presence of a serious co-morbidity factor or the prolonged use of NSAID maximum recommended doses).

Hypomagnesaemia
Severe hypomagnesaemia has been rarely reported in patients treated with proton pump inhibitors (PPIs) like lansoprazole for at least three months, and in most cases for a year. Serious manifestations of hypomagnesaemia such as fatigue, tetany, delirium, convulsions, dizziness and ventricular arrhythmia can occur but they may begin insidiously and be overlooked. Hypomagnesaemia may lead to hypocalcaemia and/or hypokalaemia (see section 4.8). In most affected patients, hypomagnesaemia (and hypomagnesaemia associated hypocalcaemia and/or hypokalaemia) improved after magnesium replacement and discontinuation of the PPI.
For patients expected to be on prolonged treatment or who take PPIs with digoxin or drugs that may cause hypomagnesaemia (e.g., diuretics), health care professionals should consider measuring magnesium levels before starting PPI treatment and periodically during treatment.

Bone fractures
Proton pump inhibitors, especially if used in high doses and over long durations (>1 year), may modestly increase the risk of hip, wrist and spine fracture, predominantly in the elderly or in presence

of other recognised risk factors. Observational studies suggest that proton pump inhibitors may increase the overall risk of fracture by 10–40%. Some of this increase may be due to other risk factors. Patients at risk of osteoporosis should receive care according to current clinical guidelines and they should have an adequate intake of vitamin D and calcium.

Subacute cutaneous lupus erythematosus (SCLE)
Proton pump inhibitors are associated with very infrequent cases of SCLE. If lesions occur, especially in sun-exposed areas of the skin, and if accompanied by arthralgia, the patient should seek medical help promptly and the health care professional should consider stopping <Invented name>. SCLE after previous treatment with a proton pump inhibitor may increase the risk of SCLE with other proton pump inhibitors.

Interference with laboratory tests
Increased Chromogranin A (CgA) level may interfere with investigations for neuroendocrine tumours. To avoid this interference, <Invented name> treatment should be stopped for at least 5 days before CgA measurements (see section 5.1). If CgA and gastrin levels have not returned to reference range after initial measurement, measurements should be repeated 14 days after cessation of proton pump inhibitor treatment.

Renal impairment
Acute tubulointerstitial nephritis (TIN) has been observed in patients taking lansoprazole and may occur at any point during lansoprazole therapy (see section 4.8). Acute tubulointerstitial nephritis can progress to renal failure.
Lansoprazole should be discontinued in case of suspected TIN, and appropriate treatment should be promptly initiated.

<Invented name> contains sucrose and sodium
Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.
This medicine contains less than 1 mmol sodium (23 mg) per capsule that is to say essentially ‘sodium-free’.

4.5 Interaction with other medicinal products and other forms of interaction

Effects of lansoprazole on other medicinal products

Medicinal products with pH dependent absorption
Lansoprazole may interfere with the absorption of other medicinal products where gastric pH is an important determinant of oral bioavailability

HIV protease inhibitors:
Co-administration of lansoprazole is not recommended with HIV protease inhibitors for which absorption is dependent on acidic intragastric pH, such as atazanavir, and nelfinavir, due to significant reduction in their bioavailability (see section 4.4).

Ketoconazole and itraconazole:
The absorption of ketoconazole and itraconazole from the gastrointestinal tract is enhanced by the presence of gastric acid. Administration of lansoprazole may result in sub-therapeutic concentrations of ketoconazole and itraconazole and the combination should be avoided.

Digoxin:
Co-administration of lansoprazole and digoxin may lead to increased digoxin plasma levels. The plasma levels of digoxin should therefore be monitored and the dose of digoxin adjusted if necessary

when initiating and ending lansoprazole treatment.

Methotrexate:
Concomitant use with high-dose Methotrexate may elevate and prolong serum levels of methotrexate and/or its metabolite, possibly leading to methotrexate toxicities. Therefore, in settings where high-dose methotrexate is used a temporary withdrawal of lansoprazole may need to be considered.

Warfarin:
Co-administration of lansoprazole 60 mg and warfarin did not affect the pharmacokinetics of warfarin or INR. However, there have been reports of increased INR and prothrombin time in patients receiving PPIs and warfarin concomitantly. Increases in INR and prothrombin time may lead to abnormal bleeding and even death. Patients treated with lansoprazole and warfarin concomitantly may need to be monitored for increase in INR and prothrombin time, especially when initiating or ending concomitant treatment.

Medicinal products metabolised by P450 enzymes
Lansoprazole may increase plasma concentrations of medicinal products that are metabolised by CYP3A4. Caution is advised when combining lansoprazole with medicinal products which are metabolised by this enzyme and have a narrow therapeutic window.

Theophylline:
Lansoprazole reduces the plasma concentration of theophylline, which may decrease the expected clinical effect at the dose. Patient monitoring should be taken in coadministration of lansoprazole with theophylline.

Tacrolimus:
Co-administration of lansoprazole increases the plasma concentrations of tacrolimus (a CYP3A and P-gp substrate). Lansoprazole exposure increased the mean exposure of tacrolimus by up to 81%. Monitoring of tacrolimus plasma concentrations is advised when concomitant treatment with lanzoprazole is initiated or ended.

Medicinal products transported by P-glycoprotein
Lansoprazole has been observed to inhibit the transport protein, P-glycoprotein (P-gp) *in vitro*. The clinical relevance of this is unknown.

Effects of other medicinal products on lansoprazole

Medicinal products which inhibit CYP2C19
Fluvoxamine:
A dose reduction may be considered when combining lansoprazole with the CYP2C19 inhibitor fluvoxamine. The plasma concentrations of lansoprazole increase up to 4-fold.

Medicinal products which induces CYP2C19 and CYP3A4
Enzyme inducers affecting CYP2C19 and CYP3A4 such as rifampicin, and St John´s wort (*Hypericum perforatum*) can markedly reduce the plasma concentrations of lansoprazole.

Others
Sucralfate/Antacids:
Sucralfate/Antacids may decrease the bioavailability of lansoprazole. Therefore lansoprazole should be taken at least 1 hour after taking these medicinal products.

No clinically significant interactions of lansoprazole with nonsteroidal anti-inflammatory medicinal products have been demonstrated, although no formal interactions studies have been performed.

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4.6 Fertility, pregnancy and lactation

Pregnancy
There is limited amount of data from the use of lansoprazole in pregnant women. Animal studies do not indicate direct or indirect harmful effects with respect to pregnancy, embryonal/foetal development, parturition or postnatal development.

As a precautionary measure, it is preferable to avoid, the use of lansoprazole during pregnancy.

Breastfeeding
It is not known whether lansoprazole is excreted in human breast milk. Animal studies have shown excretion of lansoprazole in milk.

A decision on whether to continue/discontinue breast-feeding or to continue/discontinue therapy with lansoprazole should be made taking into account the benefit of breastfeeding to the child and the benefit of lansoprazole therapy to the woman.

Fertility
No human data on the effects of lansoprazole on fertility are available. In rats male and female fertility was not affected by lansoprazole.

4.7 Effects on ability to drive and use machines

Adverse drug reactions such as dizziness, vertigo, visual disturbances and somnolence may occur (see section 4.8). Under these conditions the ability to react may be decreased.

4.8 Undesirable effects

Tabulated list of adverse reactions

Frequencies are defined as common (> 1/100, < 1/10); uncommon (> 1/1,000, < 1/100); rare (>1/10,000, <1/1,000); very rare (<1/10,000); not known (cannot be estimated from the available data). For all adverse reactions reported from post marketing experience, it is not possible to apply any Adverse Reaction frequency and therefore they are mentioned with a “not known” frequency. Within each frequency grouping, adverse reactions are presented in order of decreasing seriousness.

Frequency / System Organ Class	Common	Uncommon	Rare	Very rare	Not known
Blood and lymphatic system disorders		Thrombocytopenia*, eosinophilia, leucopenia*	Anemia	Agranulocytosis*, pancytopenia*	
Immune system disorders				Anaphylactic shock*	
Metabolism and nutrition disorders					Hyponatremia*, Hypomagnesaemia* Hypocalca

					emia*† and Hypokalaemia*†
Psychiatric disorders		Depression	Insomnia, hallucination, confusion		Visual hallucinations
Nervous system	Headache, dizziness		Restlessness, vertigo, paraesthesia, somnolence, tremor		
Eye disorders			Visual disturbances		
Gastrointestinal disorders	Nausea, diarrhoea, stomach ache, constipation, vomiting, flatulence, dry mouth or throat, fundic gland polyps (benign)		Glossitis, candidiasis of the oesophagus, pancreatitis, taste disturbances	Colitis*, stomatitis	
Hepatobiliary disorders	Increase in liver enzyme levels		Hepatitis, jaundice		
Skin and subcutaneous tissue disorders	Urticaria, itching, rash		Petechiae, purpura, hair loss, erythema multiforme, photosensitivity	Stevens-Johnson syndrome*, toxic epidermal necrolysis*	Subacute cutaneous lupus erythematosus* (see section 4.4)
Musculoskeletal and connective tissue disorders		Arthralgia, myalgia, fracture of the hip, wrist or spine (*see section 4.4*)			
Renal and urinary disorders			Tubulointerstitial nephritis (with possible progression to renal failure)		
Reproductive system and breast disorders			Gynecomastia		
General disorders and administration site	Fatigue	Oedema	Fever, hyperhidrosis, angioedema, anorexia,		

conditions			impotence		
Investigations				Increase in cholesterol and triglyceride levels, hyponatremia	

* Adverse reactions that have been observed during post approval of dexlansoprazole (as these reactions are reported voluntarily from a population of uncertain size, frequency cannot be estimated from the available data)
† Hypocalcaemia and/or hypokalaemia may be related to the occurrence of hypomagnesaemia (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 listed in Appendix V*.

4.9 Overdose

The effects of overdose on lansoprazole in humans are not known (although the acute toxicity is likely to be low) and, consequently, instruction for treatment cannot be given. However, daily doses of up to 180 mg of lansoprazole orally and up to 90 mg of lansoprazole intravenously have been administered in trials without significant undesirable effects.

Please refer to section 4.8 for possible symptoms of lansoprazole overdose.

In the case of suspected overdose the patient should be monitored. Lansoprazole is not significantly eliminated by haemodialysis. If necessary, gastric emptying, charcoal and symptomatic therapy is recommended.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Proton pump inhibitors, ATC code: A02BC03

Lansoprazole is a gastric proton pump inhibitor. It inhibits the final stage of gastric acid formation by inhibiting the activity of H+/K+ ATPase of the parietal cells in the stomach. The inhibition is dose-dependent and reversible, and the effect applies to both basal and stimulated secretion of gastric acid. Lansoprazole is concentrated in the parietal cells and becomes active in their acidic environment, whereupon it reacts with the sulphydryl group of H+/K+ATPase causing inhibition of the enzyme activity.

Effect on gastric acid secretion:
Lansoprazole is a specific inhibitor of the parietal cell proton pump. A single oral dose of lansoprazole inhibits pentagastrin-stimulated gastric acid secretion by about 80%. After repeated daily administration for seven days, about 90% inhibition of gastric acid secretion is achieved. It has a corresponding effect on the basal secretion of gastric acid. A single oral dose of 30 mg reduces basal secretion by about 70%, and the patients' symptoms are consequently relieved starting from the very first dose. After eight days of repeated administration the reduction is about 85%. A rapid relief of symptoms is obtained by one capsule (30 mg) daily, and most patients with duodenal ulcer recover within 2 weeks, patients with gastric ulcer and reflux oesophagitis within 4 weeks. By reducing gastric acidity, lansoprazole creates an environment in which appropriate antibiotics can be effective against *H. pylori.*

During treatment with antisecretory medicinal products, serum gastrin increases in response to the decreased acid secretion. Also CgA increases due to decreased gastric acidity. The increased CgA level may interfere with investigations for neuroendocrine tumours.
Available published evidence suggests that proton pump inhibitors should be discontinued between 5 days and 2 weeks prior to CgA measurements. This is to allow CgA levels that might be spuriously elevated following PPI treatment to return to reference range.

5.2 Pharmacokinetic properties

Lansoprazole is a racemate of two active enantiomers that are biotransformed into the active form in the acidic environment of the parietal cells. As lansoprazole is rapidly inactivated by gastric acid, it is administered orally in enteric-coated form(s) for systemic absorption.

Absorption and distribution

Lansoprazole exhibits high (80-90%) bioavailability with a single dose. Peak plasma levels occur within 1.5 to 2.0 hours. Intake of food slows the absorption rate of lansoprazole and reduces the bioavailabilty by about 50%. The plasma protein binding is 97%.

Biotransformation and elimination

Lansoprazole is extensively metabolised by the liver and the metabolites are excreted by both the renal and biliary route. The metabolism of lansoprazole is mainly catalysed by the enzyme CYP2C19. The enzyme CYP3A4 also contributes to the metabolism. The plasma elimination half-life ranges from 1 to 2 hours following single or multiple doses in healthy subjects. There is no evidence of accumulation following multiple doses in healthy subjects. Sulphone, sulphide and 5-hydroxyl derivatives of lansoprazole have been identified in plasma. These metabolites have very little or no antisecretory activity.

A study with 14C labelled lansoprazole indicated that approximately one-third of the administered radiation was excreted in the urine and two-thirds was recovered in the faeces.

Special patient populations

Elderly

The clearance of lansoprazole is decreased in the elderly, with elimination half-life increased approximately 50% to 100%. Peak plasma levels were not increased in the elderly.

Paediatric population

The evaluation of the pharmacokinetics in children aged 1–17 years of age showed a similar exposure as compared to adults with doses of 15 mg for those below 30 kg of weight and 30 mg for those above. The investigation of a dose of 17 mg/m^2 body surface or 1 mg/kg body weight also resulted in comparable exposure of lansoprazole in children aged 2–3 months up to one year of age compared to adults.

Higher exposure to lansoprazole in comparison to adults has been seen in infants below the age of 2–3 months with doses of both 1.0 mg/kg and 0.5 mg/kg body weight given as a single dose.

Hepatic impairment

The exposure of lansoprazole is doubled in patients with mild hepatic impairment and much more increased in patients with moderate and severe hepatic impairment.

CYP2C19 poor metabolisers

CYP2C19 is subject to genetic polymorphism and 2–6 % of the population, called poor metabolisers (PMs), are homozygote for a mutant CYP2C19 allele and therefore lacks a functional CYP2C19 enzyme. The exposure of lansoprazole is several-fold higher in PMs than in extensive metabolisers (EMs).

5.3 Preclinical safety data

Non-clinical data reveal no special hazards for humans based on conventional studies of safety pharmacology, repeated dose toxicity, toxicity to reproduction or genotoxicity.

In two rat carcinogenicity studies, lansoprazole produced dose-related gastric ECL cell hyperplasia and ECL cell carcinoids associated with hypergastrinaemia due to inhibition of acid secretion. Intestinal metaplasia was also observed, as were Leydig cell hyperplasia and benign Leydig cell tumours. After 18 months of treatment retinal atrophy was observed. This was not seen in monkeys, dogs or mice.

In mouse carcinogenicity studies dose-related gastric ECL cell hyperplasia developed as well as liver tumours and adenoma of rete testis.

The clinical relevance of these findings is unknown.

Juvenile Animal Studies:

Studies in juvenile rats (8-week study, 6-week toxicokinetic dose titration study, developmental sensitivity study) covering the paediatric population less than 12 years of age have shown an increased incidence of cardiac valve thickening. The findings reversed or trended towards reversibility after a 4-week drug free recovery period. Juvenile rats younger than postnatal day 21 (age equivalent to approximately 2 years in humans) were more sensitive to the development of cardiac valve thickening. The safety margin to the expected human exposure is in the range of 3- to 6-fold the exposure in juvenile studies based on the AUC at the no-observed-effect level (NOEL) (8-week study, 6-week toxicokinetic dose titration study) or lowest-observed-effect level (LOEL) (developmental sensitivity study).
The relevance of these findings to paediatric patients less than 12 years of age is unknown.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sugar spheres (sucrose and maize starch)
Povidone
Disodium hydrogen phosphate dihydrate
Sodium laurylsulphate
Methacrylic acid – ethyl acrylate copolymer (1:1) dispersion 30 per cent
Talc
Macrogol
Titanium dioxide (E171)
Polysorbate 80

Capsule shell:
Gelatine
Titanium dioxide (E171)
Red iron oxide (15mg only) (E172)

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

3 years

The shelf life after first opening the container is 4 months.

6.4 Special precautions for storage

Blisters:
Do not store above 25°C.
Store in the original package.

Containers:
Do not store above 25°C.
Store in the original package.
Keep the container (bottle) tightly closed, in order to protect from moisture.

6.5 Nature and contents of container

Polyethylene (HDPE) plastic container with a polypropylene cap. Containers for 14, 28 and 56 capsules contain a 2 g silica gel desiccant capsule. The container for 98 capsules contains one (1 × 2 g) silica gel desiccant capsule.
Pack sizes: 14, 28, 56 and 98 capsules.

Blister (laminated OPA/Alu/PVC foil - aluminium foil)
Pack sizes of 7, 14, 28, 49, 56 and 98.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

No special requirements.

7. MARKETING AUTHORISATION HOLDER

[To be completed nationally]

8. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

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9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

[To be completed nationally]

10. DATE OF REVISION OF THE TEXT

Detailed information on this medicinal product is available on the website of {name of Member State Agency (link)}

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LABELLING

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PARTICULARS TO APPEAR ON THE OUTER PACKAGING

CARTON

1. NAME OF THE MEDICINAL PRODUCT

< Invented name> 15 mg gastro-resistant capsules, hard
< Invented name> 30 mg gastro-resistant capsules, hard

lansoprazole

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each capsule contains 15 mg of lansoprazole.
Each capsule contains 30 mg of lansoprazole.

3. LIST OF EXCIPIENTS

Contains also sucrose. See leaflet for further information.

4. PHARMACEUTICAL FORM AND CONTENTS

gastro-resistant capsule, hard

Blisters:
7 gastro-resistant capsules, hard
14 gastro-resistant capsules, hard
28 gastro-resistant capsules, hard
49 gastro-resistant capsules, hard
56 gastro-resistant capsules, hard
98 gastro-resistant capsules, hard

Containers:
14 gastro-resistant capsules, hard
28 gastro-resistant capsules, hard
56 gastro-resistant capsules, hard
98 gastro-resistant capsules, hard

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Do not crush or chew the capsules.
Read the package leaflet before use.
Oral use

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

Containers:
The shelf life after first opening is 4 months.

9. SPECIAL STORAGE CONDITIONS

Blisters:
Do not store above 25°C.
Store in the original package.

Containers:
Do not store above 25°C.
Store in the original package.
Keep the container (bottle) tightly closed, in order to protect from moisture.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

To be completed nationally

12. MARKETING AUTHORISATION NUMBER(S)

To be completed nationally

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

Medicinal product subject to medical prescription.

15. INSTRUCTIONS ON USE

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16. INFORMATION IN BRAILLE

To be completed nationally

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC
SN
NN: To be completed nationally

MINIMUM PARTICULARS TO APPEAR ON BLISTERS OR STRIPS

BLISTER

1. NAME OF THE MEDICINAL PRODUCT

< Invented name> 15 mg gastro-resistant capsules, hard
< Invented name> 30 mg gastro-resistant capsules, hard

lansoprazole

2. NAME OF THE MARKETING AUTHORISATION HOLDER

To be completed nationally

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. OTHER

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS

LABEL FOR CONTAINER

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

< Invented name> 15 mg gastro-resistant capsules, hard
< Invented name> 30 mg gastro-resistant capsules, hard

lansoprazole

Oral use

2. METHOD OF ADMINISTRATION

Do not crush or chew the capsules.
Read the package leaflet before use.

3. EXPIRY DATE

EXP

The shelf life after first opening is 4 months.

4. BATCH NUMBER

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

14 gastro-resistant capsules, hard
28 gastro-resistant capsules, hard
56 gastro-resistant capsules, hard
98 gastro-resistant capsules, hard

6. OTHER

PACKAGE LEAFLET

Package leaflet: Information for the patient

<Invented name> 15 mg gastro-resistant capsules, hard
<Invented name> 30 mg gastro-resistant capsules, hard
lansoprazole

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor or pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What <Invented name> is and what it is used for

The active ingredient in <Invented name> is lansoprazole, which is a proton pump inhibitor. Proton pump inhibitors reduce the amount of acid that your stomach makes.

Your doctor may prescribe <Invented name> for the following indications in adults:
- Treatment of duodenal and stomach ulcer
- Treatment of inflammation in your oesophagus (reflux oesophagitis)
- Prevention of reflux oesophagitis
- Treatment of heartburn and acid regurgitation
- Treatment of infections caused by the bacteria *Helicobacter pylori* when given in combination with antibiotic therapy
- Treatment or prevention of duodenal or stomach ulcer in patients requiring continued NSAID (nonsteroidal anti-inflammatory drugs) treatment (NSAID treatment is used against pain or inflammation)
- Treatment of Zollinger-Ellison syndrome.

Your doctor may have prescribed <Invented name> for another indication or with a dose different from that which is written in this information leaflet. Please take your medicine in consultation with your doctor.

You must talk to a doctor if you do not feel better or if you feel worse after 14 days.

2. What you need to know before you take <Invented name>

Do not take <Invented name>

- if you are allergic (hypersensitive) to lansoprazole or any of the other ingredients of this medicine (listed in section 6).

Warnings and precautions

Talk to your doctor or pharmacist before taking <Invented name>.

Please tell your doctor if you have serious liver disease. The doctor may have to adjust your dosage.

Your doctor may perform or have performed an additional investigation called an endoscopy in order to diagnose your condition and/or exclude malignant disease.

If diarrhoea occurs during the treatment with <Invented name> contact your doctor immediately, as <Invented name> has been associated with a small increase in infectious diarrhoea.

If your doctor has given you <Invented name> in addition to other medicines intended for the treatment of *Helicobacter pylori* infection (antibiotics) or together with anti-inflammatory medicines to treat your pain or rheumatic disease: please also read the package leaflets of these medicines carefully.

If you take <Invented name> on a long-term basis (longer than 1 year) your doctor will probably keep you under regular surveillance. You should report any new and exceptional symptoms and circumstances whenever you see your doctor.

Taking a proton pump inhibitor like < Invented name >, especially over a period of more than one year, may slightly increase your risk of fracture in the hip, wrist or spine. Tell your doctor if you have osteoporosis (reduced bone density) or if your doctor has told you that you are at risk of getting osteoporosis (for example, if you are taking steroids).

When taking lansoprazole, inflammation in your kidney may occur. Signs and symptoms may include decreased volume of urine or blood in your urine and/or hypersensitivity reactions such as fever, rash, and joint stiffness. You should report such signs to the treating physician.

Talk to your doctor before taking lansoprazole:
- if you have low vitamin B_{12} levels or have risk factors for low vitamin B_{12} levels and receive long-term treatment with lansoprazole. As with all acid reducing agents, lansoprazole may lead to a reduced absorption of vitamin B_{12}.
- If you are due to have a specific blood test (Chromogranin A).
- If you have ever had a skin reaction after treatment with a medicine similar to <Invented name> that reduces stomach acid talk to your doctor before taking <Invented name>.
- If you get a rash on your skin, especially in areas exposed to the sun tell your doctor as soon as you can, as you may need to stop your treatment with <Invented name>. Remember to also mention any other ill-effects like pain in your joints.

Other medicines and <Invented name>

Tell your doctor or pharmacist if you are taking or have recently taken or might take any other medicines.

In particular tell your doctor or pharmacist if you are taking medicines containing any of the following active substances as <Invented name> may affect the way these medicines work:

- HIV protease inhibitors such as atazanavir and nelfinavir (used to treat HIV)
- methotrexate (used to treat autoimmune disease and cancer)
- ketoconazole, itraconazole, rifampicin (used to treat infections)
- digoxin (used to treat heart problems)
- warfarin (used to treat blood clots)
- theophylline (used to treat asthma)
- tacrolimus (used to prevent transplant rejection)
- fluvoxamine (used to treat depression and other psychiatric diseases)
- antacids (used to treat heartburn or acid regurgitation)
- sucralfate (used for healing ulcers)
- St John´s wort (*Hypericum perforatum*) (used to treat mild depression)

Taking <Invented name> with food and drink and alcohol

For the best results from your medicine you should take <Invented name> at least 30 minutes before food with a glass of water.

Pregnancy and breast-feeding and fertility

If you are pregnant, breast-feeding, think you may be pregnant or are planning to have a baby,ask your doctor or pharmacist for advice before taking this medicine.

Driving and using machines

Side effects such as dizziness, vertigo, tiredness and visual disturbances sometimes occur in patients taking <Invented name>. If you experience side effects like these you should take caution as your ability to react may be decreased.

You alone are responsible to decide if you are in a fit condition to drive a motor vehicle or perform other tasks that demand increased concentration. Because of their effects or undesirable effects, one of the factors that can reduce your ability to do these things safely is your use of medicines.
Descriptions of these effects can be found in other sections.
Read all the information in this leaflet for guidance.

Discuss with your doctor, nurse or pharmacist if you are unsure about anything.

Invented name contains sucrose and sodium
If you have been told by your doctor that you have an intolerance to some sugars, contact your doctor before taking this medicine.
This medicine contains less than 1 mmol sodium (23 mg) per capsule that is to say essentially ‘sodium-free’.

3. How to take <Invented name>

Always take this medicine exactly as your doctor or pharmacist has told you. Check with your doctor or pharmacist if you are not sure.

Swallow the capsule whole with a glass of water. If you find the capsules difficult to swallow your doctor may advise on alternative ways to take your medicine. Do not crush or chew these capsules or the content of an emptied capsule because this will stop them from working properly.

If you are taking <Invented name> once a day, try to take it at the same time each day. You may get best results if you take <Invented name> first thing in the morning.

If you are taking <Invented name> twice a day, you should have the first dose in the morning and the second dose in the evening.

The dose of <Invented name> depends on your condition. The usual doses of <Invented name> for adults are given below. Your doctor will sometimes prescribe you a different dose and will tell you how long your treatment will last.

Treatment of heartburn and acid regurgitation: one 15 mg or 30 mg capsule for 4 weeks. If your symptoms are not relieved within 4 weeks, please contact your doctor.

Treatment of duodenal ulcer: one 30 mg capsule every day for 2 weeks

Treatment of stomach ulcer: one 30 mg capsule every day for 4 weeks

Treatment of inflammation in your oesophagus (reflux oesophagitis): one 30 mg capsule every day for 4 weeks

Long-term prevention of reflux oesophagitis: one 15 mg capsule every day, your doctor may adjust your dose to one 30 mg capsule every day

Treatment of infection of *Helicobacter pylori*: The usual dose is one 30 mg capsule in combination with two different antibiotics in the morning and one 30 mg capsule in combination with two different antibiotics in the evening. Treatment will usually be every day for 7 days.

The recommended combinations of antibiotics are:
- 30 mg <Invented name> together with 250–500 mg clarithromycin and 1000 mg amoxicillin
- 30 mg <Invented name> together with 250 mg clarithromycin and 400–500 mg metronidazole

If you are being treated for infection because you have an ulcer, it is unlikely that your ulcer will return if the infection is successfully treated. To give your medicine the best chance of working, take it at the right time and **do not miss a dose.**

Treatment of duodenal or stomach ulcer in patients requiring continued NSAID treatment: one 30 mg capsule every day for 4 weeks.

Prevention of duodenal or stomach ulcer in patients requiring continued NSAID treatment: one 15 mg capsule every day, your doctor may adjust your dose to one 30 mg capsule every day.

Zollinger-Ellison syndrome: The usual dose is two 30 mg capsules every day to start with, then depending on how you respond to <Invented name> the dose that your doctor decides is best for you.

Use in children
<Invented name> should not be given to children.

If you take more <Invented name> than you should

If you take more <Invented name> than you have been told to, seek medical advice quickly <or quickly consult the Toxicological Information Service.>

[To be completed nationally - Statement and phone number to be inserted based on national requirement for information on a toxicological service.]

If you forget to take <Invented name>

If you forget to take a dose, take it as soon as you remember unless it is nearly time for your next dose. If this happens skip the missed dose and take the remaining capsules as normal. Do not take a double dose to make up for a forgotten capsule.

If you stop taking <Invented name>

Do not stop treatment early because your symptoms have got better. Your condition may not have been fully healed and may reoccur if you do not finish your course of treatment.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, <Invented name> can cause side effects, although not everybody gets them.

The following side effects are common (occur in more than 1 in 100 patients):
- headache, dizziness
- feeling or being sick, diarrhoea, stomach pains, constipation, wind, dry or sore mouth or throat, benign polyps in the stomach
- changes in liver function test values
- skin rash, itching
- tiredness.

The following side effects are uncommon (occur in less than 1 in 100 patients):
- changes in blood cell counts
- depression
- joint or muscle pain
- fluid retention or swelling.

The following side effects are rare (occur in less than 1 in 1000 patients):
- anaemia (paleness)
- insomnia, hallucinations, confusion
- restlessness, vertigo, feelings of ants creeping over the skin (paraesthesia), drowsiness, trembling
- visual disturbances
- inflammation of your tongue (glossitis), candidiasis (fungal infection, may affect skin or the mucosa), pancreatitis, a change in the way things taste
- inflammation of the liver (may be seen as yellow skin or eyes)
- skin reactions such as burning or pricking feeling under the skin, bruising, reddening, hair loss, sensitivity to light
- kidney problems
- breast swelling in males
- fever, excessive sweating, angioedema, loss of appetite, impotence; You should see your doctor immediately if you experience symptoms of angioedema, such as swollen face, tongue or pharynx, difficulty to swallow, hives and difficulties to breath.

The following side effects are very rare (occur in less than 1 in 10000 patients):

- very rarely <Invented name> may cause a reduction in the number of white blood cells and your resistance to infection may be decreased. If you experience an infection with symptoms such as fever and serious deterioration of your general condition, or fever with local infection symptoms such as sore throat/pharynx/mouth or urinary problems you should see your doctor immediately. A blood test will be taken to check possible reduction of white blood cells (agranulocytosis)
- bowel inflammation (colitis), inflammation of your mouth (stomatitis)
- very severe skin reactions with reddening, blistering, severe inflammation and skin loss
- severe hypersensitivity reactions including shock. Symptoms of a hypersensitivity reaction may include fever, rash, swelling and sometimes a fall in blood pressure
- changes in test values such as sodium, cholesterol and triglyceride levels.

The occurrence of following side effects is not known (cannot be estimated from the available data):
- If you are on lansoprazole for more than three months it is possible that the levels of magnesium in your blood may fall. Low levels of magnesium can be seen as fatigue, involuntary muscle contractions, disorientation, convulsions, dizziness, increased heart rate. If you get any of these symptoms, please tell your doctor promptly. Low levels of magnesium can also lead to a reduction in potassium or calcium levels in the blood. Your doctor may decide to perform regular blood tests to monitor your levels of magnesium.
- Low levels of sodium in the blood. Common symptoms include nausea and vomiting, headache, drowsiness and fatigue, confusion, muscle weakness or spasms, irritability, seizures, coma.
- Visual hallucinations.
- Rash, possibly with pain in the joints.

If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in Appendix V*. By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store <Invented name>

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the packaging after EXP. The expiry date refers to the last day of that month.

Blisters:
Do not store above 25 C. Store in the original package.

Containers:
Do not store above 25 C. Store in the original package. Keep the container (bottle) tightly closed, in order to protect from moisture.

Use the contents within 4 months of opening the container.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What <Invented name> contains

- The active substance is lansoprazole.

Each capsule contains 15 milligram or 30 milligram of lansoprazole.
- The capsules also contain sugar granules (sucrose, maize starch), povidone, disodium hydrogen phosphate dihydrate, sodium laurylsulphate, methacrylic acid - ethyl acrylate copolymer (1:1) dispersion 30 per cent, talc, macrogol, titanium dioxide (E 171), polysorbate 80.
- Capsule shell: gelatine, titanium dioxide (E171). The 15 mg capsule also contains red iron oxide (E172). See section 2: » <Invented name> contains sucrose and sodium«.

What <Invented name> looks like and contents of the pack

Capsules 15 mg: white/red-brownish gelatine capsule containing white or light brown or lightly pink enteric-coated pellets.
Capsules 30 mg: white gelatine capsule containing white, light brown or lightly pink enteric-coated pellets.

Pack sizes:
A plastic container of 14, 28, 56 and 98 capsules. Containers for 14, 28 or 56 capsules contain a desiccant. The container for 98 capsules contains one desiccant.
Boxes of 7, 14, 28, 49, 56 and 98 capsules in blister packs.

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer

To be completed nationally

This leaflet was last revised in

To be completed nationally

Detailed information on this medicinal product is available on the website of {name of Member State Agency (link)}