

## SUMMARY OF PRODUCT CHARACTERISTICS

### 1 NAME OF THE MEDICINAL PRODUCT

Moviprep ®, powder for oral solution

### 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

The ingredients of Moviprep are contained in two separate sachets.

**Sachet 1** contains the following active substances:

Macrogol 3350	100g
Sodium sulfate anhydrous	7.500g
Sodium chloride	2.691g
Potassium chloride	1.015g

**Sachet 2** contains the following active substances:

Ascorbic acid	4.700g
Sodium ascorbate	5.900g

The concentration of electrolyte ions when both sachets are made up to one litre of solution is as follows:

Sodium	181.6 mmol/L (of which not more than 56.2 mmol is absorbable)
Sulfate	52.8 mmol/L
Chloride	59.8 mmol/L
Potassium	14.2 mmol/L
Ascorbate	56.5 mmol/L

Excipient(s) with known effect:

This product contains 0.233g of aspartame per sachet 1.

For the full list of excipients, see section 6.1.

### 3 PHARMACEUTICAL FORM

Powder for oral solution.

Free flowing white to yellow powder in Sachet 1.

Free flowing white to light brown powder in Sachet 2.

### 4 CLINICAL PARTICULARS

#### 4.1 Therapeutic indications

Moviprep is indicated for bowel cleansing prior to any clinical procedures requiring a clean bowel e.g. bowel endoscopy or radiology.

## 4.2 Posology and method of administration

### Posology

**Adults and Older people:** A course of treatment consists of two litres of Moviprep. It is strongly recommended that one liter of clear liquid, which may include, water, clear soup, fruit juice without pulp, soft drinks, tea and/or coffee without milk, is also taken during the course of treatment.

A litre of Moviprep consists of one ‘sachet 1’ and one ‘sachet 2’ dissolved together in water to make onelitre of solution. The reconstituted solution should be drunk over a period of one to two hours. This process should be repeated with a second litre of Moviprep to complete this course.

This course of treatment can be taken either as divided doses, or as a single dose and timing is dependent on whether the clinical procedure is conducted with or without general anaesthesia as specified below:

### **For procedures conducted under general anaesthesia:**

1. **Divided doses:** One litre of Moviprep in the evening before and one litre of Moviprep in the early morning of the day of the clinical procedure. Ensure consumption of Moviprep as well as any other clear fluids has finished at least two hours before the start of the clinical procedure.
2. **Single dose:** Two litres of Moviprep in the evening before the clinical procedure or two litres of Moviprep in the morning of the clinical procedure. Ensure consumption of Moviprep as well as any other clear fluids has finished at least two hours before the start of the clinical procedure.

### **For procedures conducted without general anaesthesia:**

1. **Divided doses:** One litre of Moviprep in the evening before and one litre of Moviprep in the early morning of the day of the clinical procedure. Ensure consumption of Moviprep as well as any other clear fluids has finished at least one hour before the start of the clinical procedure.
2. **Single dose:** Two litres of Moviprep in the evening before the clinical procedure or two litres of Moviprep in the morning of the clinical procedure. Ensure consumption of Moviprep has finished at least two hours before the start of the clinical procedure. Ensure consumption of any clear fluids has finished at least one hour before the clinical procedure.

Patients should be advised to allow for appropriate time to travel to the colonoscopy unit.

No solid food should be taken from the start of the course of treatment until after the clinical procedure.

***Paediatric population:*** Not recommended for the use in children below 18 years of age, as Moviprep has not been studied in the paediatric population.

### Method of administration

The route of administration is oral use. A litre of Moviprep consists of one sachet 1 and one sachet 2 dissolved together in water to make a one litre solution.

Precautions to be taken before handling or administering the medicinal product.

For instructions on reconstitution of the medicinal product before administration, see section 6.6.

### 4.3 Contraindications

Do not use in patients with known or suspected:

- hypersensitivity to the active substances or to any of the excipients listed in section 6.1
- gastrointestinal obstruction or perforation
- disorders of gastric emptying (e.g. gastroparesis)
- ileus
- phenylketonuria (due to presence of aspartame)
- glucose-6-phosphate dehydrogenase deficiency (due to presence of ascorbate)
- toxic megacolon, which complicates very severe inflammatory conditions of the intestinal tract including Crohn's disease and ulcerative colitis.

Do not use in unconscious patients.

### 4.4 Special warnings and precautions for use

Diarrhoea is an expected effect resulting from the use of Moviprep.

Moviprep should be administered with caution to fragile patients in poor health or patients with serious clinical impairment such as:

- impaired gag reflex, or with a tendency to aspiration or regurgitation
- impaired consciousness
- severe renal insufficiency (creatinine clearance <30mL/min)
- cardiac impairment (NYHA grade III or IV)
- those at risk of arrhythmia, for example those on treatment for cardiovascular disease or who have thyroid disease
- dehydration
- severe acute inflammatory bowel disease

The presence of dehydration should be corrected before the use of Moviprep.

The fluid content of Moviprep when re-constituted with water does not replace regular fluid intake and adequate fluid intake must be maintained.

Semi-conscious patients or patients prone to aspiration or regurgitation should be closely observed during administration, especially if this is via a nasogastric route.

In patients with swallowing problems, who need the addition of a thickener to solutions to enhance an appropriate intake, interactions should be considered, see section 4.5.

If patients develop any symptoms indicating arrhythmia or shifts of fluid/electrolytes (e.g. oedema, shortness of breath, increasing fatigue, cardiac failure), plasma electrolytes should be measured, ECG monitored and any abnormality treated appropriately.

In debilitated fragile patients, patients with poor health, those with clinically significant renal impairment, arrhythmia and those at risk of electrolyte imbalance, the physician should consider performing a baseline and post-treatment electrolyte, renal function test and ECG as appropriate.

There have been rare reports of serious arrhythmias including atrial fibrillation associated with the use of ionic osmotic laxatives for bowel preparation. These occur predominantly in patients with underlying cardiac risk factors and electrolyte disturbance.

If patients experience symptoms such as severe bloating, abdominal distention, abdominal pain or any other reaction which makes it difficult to continue the preparation, they may slow down or temporarily stop consuming Moviprep and should consult their doctor.

#### Ischaemic colitis

Post-marketing cases of ischaemic colitis, including serious, have been reported in patients treated with macrogol for bowel preparation. Macrogol should be used with caution in patients with known risk factors for ischaemic colitis or in case of concomitant use of stimulant laxatives (such as bisacodyl or sodium picosulfate). Patients presenting with sudden abdominal pain, rectal bleeding or other symptoms of ischaemic colitis should be evaluated promptly.

This medicinal product contains 363.2 mmol (8.4 g) sodium per course of treatment equivalent to 420% of the of the WHO recommended maximum daily intake of 2 g sodium for an adult. (A course of treatment consists of two litres of Moviprep). To be taken into consideration by patients on a controlled sodium diet. Only a proportion (up to 112.4 mmol (2.6 g) per course treatment) of sodium is absorbed.

This medicinal product contains 28.4 mmol (1.1 g) potassium per course of treatment. (A course of treatment consists of two litres of Moviprep). To be taken into consideration by patients with reduced kidney function or patients on a controlled potassium diet.

The medicinal product contains aspartame, which is a source of phenylalanine. This may be harmful for people with phenylketonuria.

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

Medicinal products taken orally (e.g. oral contraceptive pill) one hour before, during and one hour after Moviprep administration may be flushed from the gastrointestinal tract unabsorbed.

Moviprep may result in a potential interactive effect if used with starch-based food thickeners. The Macrogol ingredient counteracts the thickening effect of starch, effectively liquefying preparations that need to remain thick for people with swallowing problems.

## 4.6 Fertility, pregnancy and lactation

### Pregnancy

There are no data on the use of Moviprep during pregnancy.

The preparation should only be used during pregnancy if considered essential by the physician.

### Breastfeeding

There are no data on the use of Moviprep during lactation.

The preparation should only be used during lactation if considered essential by the physician.

## Fertility

There are no data on the effects of Moviprep on fertility.

### **4.7 Effects on ability to drive and use machines**

Moviprep has no influence on the ability to drive and use machines.

### **4.8 Undesirable effects**

Diarrhoea is an expected outcome of bowel preparation. Due to the nature of the intervention, undesirable effects occur in the majority of patients during the process of bowel preparation. Whilst these vary between preparations, nausea, vomiting, bloating, abdominal pain, anal irritation and sleep disturbance commonly occur in patients undergoing bowel preparation. Dehydration may occur as a result of diarrhoea and/or vomiting.

As with other macrogol containing products, allergic reactions including rash, urticaria, pruritus, dyspnoea, angioedema and anaphylaxis are a possibility.

Data from clinical studies are available in a population of 825 patients treated with Moviprep in which undesirable effect data were actively elicited. Additionally, adverse events reported in post marketing are included.

The frequency of adverse reactions to Moviprep is defined using the following convention:

Very common ( $\geq 1/10$ )

Common ( $\geq 1/100$  to  $< 1/10$ )

Uncommon ( $\geq 1/1000$  to  $< 1/100$ )

Rare ( $\geq 1/10,000$  to  $< 1/1,000$ )

Very rare ( $< 1/10,000$ )

Not known (cannot be estimated from the available data)

<b>System Organ Class</b>	<b>Frequency</b>	<b>Adverse Drug Reaction</b>
Immune system disorders	Not known	Allergic reaction including anaphylactic reaction, dyspnoea and skin reactions (see below).

Metabolism and Nutrition Disorders	Not known	Electrolyte disturbances including blood bicarbonate decreased, hyper and hypocalcaemia, hypophosphataemia, hypokalaemia and hyponatremia and changes in the blood chloride levels. Dehydration
Psychiatric Disorders	Common	Sleep disorder.
Nervous System Disorders	Common	Dizziness, headache.
	Not known	Convulsions associated with severe hyponatraemia.
Cardiac Disorders	Not known	Transient increase in blood pressure. Arrhythmia, palpitations
Gastrointestinal Disorders	Very common	Abdominal pain, nausea, abdominal distension, anal discomfort.
	Common	Vomiting, dyspepsia.
	Uncommon	Dysphagia.
	Not known	Flatulence, retching.
Hepatobiliary disorders	Uncommon	Abnormal liver function tests
Skin and Subcutaneous Tissue Disorders	Not known	Allergic skin reactions including angioedema, urticaria, pruritus, rash, erythema.
General Disorders and Administration Site Conditions	Very common	Malaise, pyrexia
	Common	Rigors, thirst, hunger.
	Uncommon	Discomfort.

#### 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.

Any suspected adverse events should be reported to the Ministry of Health according to the National Regulation by using an online form: <https://sideeffects.health.gov.il>.

In addition, you can report to Padagis via the following address: [www.padagis.co.il](http://www.padagis.co.il)

#### **4.9 Overdose**

In case of gross accidental overdosage, where diarrhoea is severe, conservative measures are

usually sufficient; generous amounts of fluid, especially fruit juices, should be given. In the rare event of overdose provoking severe metabolic derangement, intravenous rehydration may be used.

## **5 PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: Osmotically acting laxative.

ATC code: A06A D

The oral administration of macrogol-based electrolyte solutions causes moderate diarrhoea and results in rapid emptying of the colon.

Macrogol 3350, sodium sulfate and high doses of ascorbic acid exert an osmotic action in the gut, which induce a laxative effect.

Macrogol 3350 increases the stool volume, which triggers colon motility via neuromuscular pathways.

The physiological consequence is a propulsive colonic transportation of the softened stools.

The electrolytes present in the formulation and the supplementary clear liquid intake are included to prevent clinically significant variations of sodium, potassium or water, and thus reduce dehydration risk.

### **5.2 Pharmacokinetic properties**

Macrogol 3350, is unchanged along the gut. It is virtually unabsorbed from the gastro-intestinal tract. Any macrogol 3350 that is absorbed is excreted via the urine.

Ascorbic acid is absorbed mainly at the small intestine level by a mechanism of active transport, which is sodium dependant and saturable. There is an inverse relationship between the ingested dose and the percentage of the absorbed dose. For oral doses between 30 and 180mg an amount of about 70-85% of the dose is absorbed. Following oral intake of up to 12g ascorbic acid, it is known that only 2 g is absorbed.

After high oral doses of ascorbic acid and when plasma concentrations exceed 14mg/litre, the absorbed ascorbic acid is mainly eliminated unchanged in the urine.

Osmotically-acting bowel preparations lead to a copious diarrhoea, resulting in extensive elimination of most of the product via the faeces. They can also lead to changes in electrolyte balance in the body, often with depletion of sodium and potassium. The additional sodium and potassium included in the MOVIPREP formulation help to balance the electrolytes. While some absorption of sodium takes place, the bulk of sodium is expected to be excreted in the faeces as the sodium salts of sulfate and ascorbate, the osmotic active ingredients included in the MOVIPREP composition.

### **5.3 Preclinical safety data**

Preclinical studies provide evidence that macrogol 3350, ascorbic acid and sodium sulfate have no significant systemic toxicity potential, based on conventional studies of pharmacology, repeated dose toxicity, genotoxicity and carcinogenicity.

No studies have been carried out on the genotoxicity, carcinogenicity or toxic effect on reproduction with this product.

In reproductive toxicity studies with macrogol 3350 + electrolytes there were no direct embryotoxic or teratogenic effects in rats even at maternally toxic levels that are a multiple of 14x the maximum recommended dose of Moviprep in humans. Indirect embryofetal effects, including reduction in fetal and placental weights, reduced fetal viability, increased limb and paw hyperflexion and abortions, were noted in the rabbit at a maternally toxic dose that are 0.7 fold of the maximum recommended dose of Moviprep in humans. Rabbits are a sensitive animal test species to the effects of GI-acting substances and the studies were conducted under exaggerated conditions with high dose volumes administered, which are not clinically relevant. The findings may have been a consequence of an indirect effect of macrogol 3350 + electrolytes related to poor maternal condition as the result of an exaggerated pharmacodynamic response in the rabbit. There was no indication of a teratogenic effect.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Lemon flavour  
Aspartame  
Acesulfame Potassium

### **6.2 Incompatibilities**

Not applicable

### **6.3 Shelf life**

The expiry date of the product is indicated on the packaging materials.

The sachet should be used immediately after opening.

Reconstituted solution                      24 hours

### **6.4 Special precautions for storage**

Sachets: Store below 25°C.

Reconstituted Solution: Store below 25°C. The solution may be refrigerated. Keep the solution covered.

After dissolving the two sachets in 1 litre of water to make the solution for drinking, it is possible to store for 24 hours at a temperature below 25°C or in the refrigerator (2-8°C).

### **6.5 Nature and contents of container**

A paper / low density polyethylene / aluminium / low density polyethylene sachet containing 112 g of powder ('sachet 1') and a paper / low density polyethylene / aluminium / low density polyethylene sachet containing 11 g of powder ('sachet 2'). Both sachets are contained in a transparent bag. One pack of Moviprep contains a single treatment of two bags.

Pack sizes of 1 pack of a single treatment.

## **6.6 Special precautions for disposal**

Reconstitution of Moviprep in water may take up to 5 minutes and is best performed by adding the powder to the mixing vessel first followed by the water. The patient should wait until all the powder has dissolved before drinking the solution.

After reconstitution in water Moviprep consumption may begin immediately or if preferred it may be cooled before use.

## **7 Manufacturer:**

Norgine Limited, Norgine house, Widewater place, Moorhall Rd., Harefield, Uxbridge, Middlesex, UB9 6NS, UK

## **8 Registration Holder:**

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## **9 Registration number: 14538.33156.00**

Revised in May 2023 according to MOHs guidelines.