

## SUMMARY OF PRODUCT CHARACTERISTICS

### 1. NAME OF THE MEDICINAL PRODUCT

**Ardeaelytosol EL 1/1** infusion solution

### 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1000 ml of infusion solution contains:

Natrii chloridum	5.40 g
Kalii chloridum	0.30 g
Calcii chloridum hexahydricum (or 0.37 g calcii chloridum dihydricum)	0.55 g
Magnesiii chloridum hexahydricum	0.20 g
Natrii lactas	5.38 g

Electrolyte content:

Na <sup>+</sup> [mmol/l]	140.0
K <sup>+</sup> [mmol/l]	4.0
Ca <sup>2+</sup> [mmol/l]	2.5
Mg <sup>2+</sup> [mmol/l]	1.0
Cl <sup>-</sup> [mmol/l]	104.0
Lactate (C <sub>3</sub> H <sub>5</sub> O <sub>3</sub> <sup>-</sup> ) [mmol/l]	48.0
Osmotic pressure [kPa]	663
pH	4.8-6.5

For the full list of excipients, see the section 6.1.

### 3. PHARMACEUTICAL FORM

Infusion solution

Description of the product: clear, colorless solution

### 4. CLINICAL PARTICULARS

#### 4.1. Therapeutic indications

Isotonic dehydration from various reasons, vehiculum for administration of other medicaments.

#### 4.2. Posology and method of administration

The posology is individual according to the losses. Dosage rate about 5-10 ml/kg/hour.

Average daily dose: 500 – 1, 500 ml

Method of administration:

Intravenous drop infusion in the closed system. It is usually administered into peripheral vein.

#### 4.3. Contraindications

Hypertonic dehydration

Hypotonic dehydration

Hypernatremia

Severe alkalosis

#### 4.4. Special warnings and precautions for use

The application of the product should be carefully considered in cases of renal failure, cardiac insufficiency and pulmonary oedema.

Fluid balance, serum electrolytes and acid base balance may need to be monitored before and during administration. Sodium serum levels should be monitored very carefully, especially in patients with increased non-osmotic vasopressin release (syndrome of inappropriate antidiuretic hormone secretion, SIADH) and in patients co-medicated with vasopressin agonist drugs due to the risk of hyponatraemia (see sections 4.4, 4.5 and 4.8).

High volume infusions must be used under specific monitoring in patients with cardiac or pulmonary failure, and in patients with non-osmotic vasopressin release (including SIADH), due to the risk of hyponatraemia (see below).

#### Hyponatremia

Acute hyponatremia can lead to acute hyponatremic encephalopathy (cerebral oedema).

Children, women in the fertile age and patients with reduced cerebral compliance (e.g. meningitis, intracranial bleeding, cerebral contusion and cerebral oedema) are at particular risk of the severe and life-threatening brain swelling caused by acute hyponatraemia.

It is necessary to maintain an adequate infusion flow rate.

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

Drugs leading to an increased vasopressin effect

The below listed drugs increase the vasopressin effect, leading to reduced renal electrolyte free water excretion and an increased risk of hyponatremia following inappropriately balanced treatment with i.v. solutions (see sections 4.2, 4.4 and 4.8).

- Drugs stimulating vasopressin release include:  
chlorpropamide, clofibrate, carbamazepine, vincristine, selective serotonin reuptake inhibitors, 3,4-methylenedioxy-N-methamphetamine, ifosfamide, antipsychotics, narcotics.
- Drugs potentiating vasopressin action include:  
chlorpropamide, NSAIDs, cyclophosphamide.
- Vasopressin analogues include:  
desmopressin, oxytocin, vasopressin, terlipressin.

Other medicinal products increasing the risk of hyponatremia also include diuretics in general and antiepileptics such as oxcarbazepine.

### **4.6. Fertility, pregnancy and lactation**

The medicinal product of Ardeaelytosol EL 1/1 should be administered with special caution in pregnant women during labour particularly as to serum-sodium if administered in combination with oxytocin (see sections 4.4, 4.5 and 4.8).

The product should be used with caution in cases of pregnancy toxemia.

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

With regard to the character of the product and its indication is not relevant.

### **4.8. Undesirable effects**

No direct undesirable effects are given with the product of Ardeaelytosol EL 1/1; there is a possibility of general undesirable effects connected with an unsuitable management of the infusion therapy.

Frequency of undesirable effects, as given below, is defined according to the following convention:

Very common ( $\geq 1/10$ ); common ( $\geq 1/100$ ,  $< 1/10$ ); uncommon ( $\geq 1/1,000$ ,  $< 1/100$ ); rare ( $\geq 1/10,000$ ,  $< 1/1,000$ ); very rare ( $< 1/10,000$ ); not known (cannot be established from the available data).

Organ system class according to MedDRA database	Character of undesirable effect	Frequency of occurrence
Blood and lymphatic system disorders	Ion balance breakdown	Not known
Metabolism and nutrition disorders	Hyperlactatemia	Not known
	Hyponatremia*	Not known
Nervous system disorders	Acute hyponatremic encephalopathy *	Not known
Cardiac disorders	Oedemas	Not known
	Cardiac failure	Not known
Renal and urinary disorders	Dehydration	Not known

\* Hyponatremia may cause irreversible brain injury and death due to development of acute hyponatremic encephalopathy (see sections 4.2, 4.4 and 4.5).

### **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 to the address:

Státní ústav pro kontrolu léčiv (State Institute for Drug Control)

Šrobárova 48

100 41 Praha 10

Website: [www.sukl.cz/nahlasit-nezadouci-ucinek](http://www.sukl.cz/nahlasit-nezadouci-ucinek)

### **4.9. Overdose**

In case of accidental overdose, overhydration with subsequent overload of the circulation, hyponatremia, oedema formation can occur. Primary therapy consists in immediate stop of infusion. If necessary, the therapy with diuretics can be started. Parameters of internal environment and electrolyte levels should be monitored and adjusted in case of their imbalance.

## **5. PHARMACOLOGICAL PROPERTIES**

### **5.1. Pharmacodynamic properties**

Pharmacotherapeutic group: infundabilium, ATC code: B05BB01 (Intravenous solutions – solutions affecting the electrolyte balance - electrolytes).

Basic, almost iso-osmotic infusion solution containing basic ions and lactate.

Electrolyte composition of the product of Ardealytosol EL 1/1 is similar to electrolyte composition of extracellular fluid. That is why it is used for achievement and maintaining of common osmotic conditions in extracellular and intracellular spaces.

### **5.2. Pharmacokinetic properties**

- a) General information – active metabolites are not generated
- b) Characterization of the active substances – it contains simple inorganic salts – body natural ions. They are water-soluble, fat-insoluble.
- c) Characterization after the administration in patients – it is a product intended for intravenous use. It persists in the blood circulation only for a few tens of minutes after i.v. administration; it leaks into extravascular compartment very easily.

Electrolytes are distributed in the body according to concentration gradients in extracellular fluid, free water is distributed according to the concentration gradient in all compartments.

Ionic balance is dependent on excretion of individual ions by kidneys and is subordinated especially to mineralocorticoids regulation. Water homeostasis is regulated by antidiuretic hormone.

Lactate is changed into pyruvate and then into bicarbonate provided that the liver cells are undamaged having a sufficient oxygen supply.

### **5.3. Preclinical safety data**

It is a product with a long-term usage (“well implemented therapeutic use”) in which no preclinical studies had been performed with its introduction into the therapy.

The product has been used in clinical practice for many years and no case of cancerogenic or mutagenic effects has been noted for the period.

There have been no undesirable effects known from the literature. The product used according to the recommended method for use is entirely safe.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1. List of excipients**

Aqua pro iniectio

### **6.2. Incompatibilities**

The product is compatible with the most of commonly used medicaments.

No physical or chemical incompatibilities are known except of those with solutions with oxidants content or solutions showing a different pH value. When mixed with the products containing oxalates, phosphates or bicarbonates, a precipitate can develop.

### **6.3. Shelf life**

2 years provided that the package is intact.

The shelf life after the first opening:

Chemical and physical stability before the use after the opening was confirmed for 48 hours at 25°C.

From microbiological point of view, the product should be used immediately. If it is not used immediately, then the period and storage conditions of the product after the opening before the use are within the reliability of the user and in common case it should not be longer than 24 hours at 2-8 °C as far as the opening was not performed under the controlled and validated aseptic conditions.

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

Protect from frost.

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

Infusion glass bottle with a rubber stopper and a metallic closure, carton box.

Package size: 1x 80 ml, 1x 100 ml, 1x 250 ml, 1x 500 ml

20x 80 ml, 20x 100 ml, 10x 250 ml, 10x 500 ml

Not all package sizes may be marketed.

### **6.6. Special precautions for use, disposal and other handling**

This medicinal product is dispensed entirely on the base of medical prescription.

It is administered by an infusion set usually into peripheral vein.

Parenteral products should be checked up visually before the use. The product must not be administered if visible solid particles are present or the package is not intact.

The preparation is intended only for a single use.

Any unused product or waste should be disposed of in accordance with local requirements.

## **7. MARKETING AUTHORISATION HOLDER**

ARDEAPHARMA, a.s., Třeboňská 229, 373 63 Ševětín, Česká republika (Czech Republic)

**8. MARKETING AUTHORISATION NUMBER(S)**

76/925/95-C

**9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of the first authorization: 22<sup>nd</sup> November 1995

Date of the last renewal of the authorization: 8<sup>th</sup> February 2017

**10. DATE OF REVISION OF THE TEXT**

13<sup>th</sup> April 2018