SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Infutraze concentrate for solution for infusion

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Infutraze composition quantities of trace elements salts per ml and per 10 ml ampoule:

Infutraze	1 ml	1 ampoule (10 ml)
Zinc chloride	1042 micrograms	10420 micrograms
Copper chloride dihydrate	107.4 micrograms	1074 micrograms
Manganese chloride tetrahydrate	3.600 micrograms	36.00 micrograms
Sodium selenite	15.33 micrograms	153.3 micrograms
Potassium iodide	2.567 micrograms	25.67 micrograms

The active ingredients in 1 ml of Infutraze correspond to:

Zinc (Zn)	7.64 micromol	500 micrograms
Copper (Cu)	0.630 micromol	40.0 micrograms
Manganese (Mn)	0.0182 micromol	1.00 micrograms
Selenium (Se)	0.0887 micromol	7.00 micrograms
Iodine (I)	0.0155 micromol	1.96 micrograms

For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Concentrate for solution for infusion.

Clear solution, almost colourless.

- Osmolality: approx. 40 mosm/kg water
- pH: 2.0

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Infutraze is indicated in preterm and term neonates, infants, children, and adolescents in need of intravenous nutrition to supply the basal requirements of trace elements.

4.2 Posology and method of administration

Posology

Preterm neonates:

A recommended maximum daily dose of 1.0 mL Infutraze per kg body weight covers basal requirements of the included trace elements.

Term neonates, infants, and children weighing less than 20 kg:

A recommended maximum daily dose of 0.5 mL Infutraze per kg body weight covers basal requirements of the included trace elements.

Children weighing more than 20 kg and adolescents:

A recommended maximum daily dose of 10 mL Infutraze covers basal requirements of the included trace elements.

The following trace element amounts are contained in 0.5 ml, 1.0 ml, and 10 ml Infutraze:

	0.5 ml	1.0 ml	10 ml
Zn	250 micrograms	500 micrograms	5000 micrograms
Cu	20.0 micrograms	40.0 micrograms	400 micrograms
Mn	0.50 micrograms	1.00 micrograms	10.0 micrograms
Se	3.50 micrograms	7.00 micrograms	70.0 micrograms
I	0.98 micrograms	1.96 micrograms	19.6 micrograms

In addition to the trace elements contained in Infutraze, daily iron infusions are recommended if patients receive parenteral nutrition for more than 3 weeks. Addition of molybdenum to parenteral nutrition is recommended if patients receive parenteral nutrition for more than 4 weeks.

For instructions on dose adjustments in specific patient groups, see section 4.4

Method of administration

Infutraze must not be given undiluted. Infutraze shall be given as an intravenous infusion, diluted in a parenteral nutrition solution/emulsion. The rate and duration of infusion is determined by the rate and duration of infusion of the parenteral nutrition solution.

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

4.3 Contraindications

- Hypersensitivity to the active substances or to any of the excipients listed in section 6.1.
- Wilson's disease.

4.4 Special warnings and precautions for use

Infutraze should be used with caution in patients with impaired renal function, in whom the excretion of selenium, zinc and iodine may be significantly decreased. There is an increased risk of trace element accumulation in those patients.

Infutraze should be used with caution in patients with liver dysfunction (especially cholestasis) in whom excretion of copper and manganese may be decreased.

In patients with impaired biliary excretion, elimination of manganese, copper, and zinc may be reduced. Clinical signs of trace element accumulation may require dose reduction or interruption of Infutraze use in those patients.

Dose adjustments might be needed in patients with impaired renal function and impaired liver function or mild cholestasis.

Infutraze should be used with caution in patients with hyperthyroidism. In those patients, iodine may increase symptoms of hyperthyroidism (e.g., goitre).

No adjustment of Infutraze is required in case of additional intake of iodine through iodine-based antiseptic.

Infutraze contains less than 1 mmol sodium (23 mg) per 10 ml ampoule, i.e., essentially ‘sodium-free’.

Infutraze contains less than 1 mmol potassium (39 mg) per 10 ml ampoule, i.e., essentially ‘potassium-free’.

Long-term parenteral nutrition

In patients receiving long-term parenteral nutrition, accumulation of trace elements might occur, especially of manganese. If the treatment is continued for more than 4 weeks, manganese levels should be monitored. The occurrence of neurological signs (e.g., anxiety, rapid eye movements) may indicate possible manganese overload, which may also arise from certain medical conditions and from parenteral nutrition. Manganese accumulation may require dose reduction or interruption of Infutraze use.

In patients receiving long-term parenteral nutrition, trace element deficiency might occur, especially for copper, zinc, and selenium. In case of deficiency, those individual trace elements should be supplied separately.

4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies have been performed.

4.6 Fertility, Pregnancy and lactation

Pregnancy

There are no data on exposure of Infutraze to pregnant women. Pregnant women´s requirements for trace elements are slightly increased compared to non-pregnant women.

Breastfeeding

There are no data on exposure to Infutraze in breast-feeding women. The active substances in Infutraze are secreted into human milk.

Fertility

There are no data on fertility available.

4.7 Effects on ability to drive and use machines

Not relevant.

4.8 Undesirable effects

No adverse effects related to infusion of a similar trace element product by Fresenius have been reported.

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 Yellow Card Scheme Website: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store

4.9 Overdose

If overdose is suspected, treatment with Infutraze should be interrupted and overdose confirmed by appropriate laboratory tests.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Electrolytes in combination with other drugs

ATC code: B05X A31

Infutraze is a mixture of trace elements in amounts normally absorbed from the oral diet. It should have no pharmacodynamic effect besides maintaining or restoring nutritional status.

5.2 Pharmacokinetic properties

When infused intravenously the trace elements in Infutraze are metabolized similarly to trace elements from an oral diet. Individual trace elements will be taken up by tissues to different extents, depending on the requirement within each tissue to maintain or restore the concentration of each element for the metabolic requirement of that tissue.

In the blood, trace elements mainly bind to albumin (manganese, copper, zinc, selenium), ceruloplasmin (copper), and selenomethionine (selenium). Storage of trace elements involves binding to thyroid hormones (iodine), selenoproteins (selenium), or non-specific proteins like metallothioneins (copper, zinc, manganese).

Copper, manganese, and zinc are normally excreted via the bile or faeces, whereas iodine and selenium are mainly excreted via the urine, particularly in patients receiving intravenous nutrition. A fraction of zinc is also excreted via urine.

5.3 Preclinical safety data

There are no preclinical data of relevance to the safety evaluation beyond those already included in the SmPC.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Hydrochloric acid (for pH-adjustment)

Water for injections

6.2 Incompatibilities

Infutraze may only be mixed with other nutritional products for which compatibility has been documented, see section 6.6

6.3 Shelf life

Shelf life of the medicinal product as packaged for sale

3 years

Shelf life after mixing

In-use stability after mixing (see section 6.6) has been demonstrated for 7 days at 2-8°C followed by 48 hours at 20°C-25°C, including duration of administration. From a microbiological point of view, the product should be used immediately. If not used immediately, the in-use storage time and conditions prior to use are the responsibility of the user and should normally not be longer than 24 hours at 2-8°C.

6.4 Special precautions for storage

Do not store above 25°C. Do not freeze.

For storage conditions after mixing of the medicinal product, see section 6.3.

6.5 Nature and contents of container

Ampoule (polypropylene) 20 x 10 ml in a cardboard box.

6.6 Special precautions for disposal

Polypropylene colourless transparent ampoule from which the content is withdrawn using a syringe equipped with a cannula or needle-free, using a syringe equipped with Luer-Lock connector.

Before use, visually check that the concentrate for solution for infusion is clear and free of particles.

Compatibility

Dilute before use.

Infutraze is used as an additive to parenteral nutrition admixtures where compatibility data are available.

Compatibility data are available with the named branded products Aminoven Infant, Vaminolact, and Soluvit N, combined with generics of glucose 10-50 %. Infutraze can also be added to SmofKabiven and SmofKabiven EF with or without Vitalipid N

Infant/Adult and Soluvit N. Generated data supports additions according to the summary table below:

Infutraze	**Admixture**
0-10 ml/L	Aqueous PN admixtures with the aqueous components listed above
0-10 mL	SmofKabiven and SmofKabiven EF (activated 986 mL, 1477 mL, 1970 mL or 2463 mL bag)
0-5 mL	SmofKabiven and SmofKabiven EF (activated 493 mL bag)

Infutraze should never be added directly to a lipid emulsion because of the destabilising effects. It is recommended that the macronutrients (amino acid solution and glucose with or without lipid emulsion) are mixed first, before adding the micronutrients. Additions should be made aseptically.

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

7 MARKETING AUTHORISATION HOLDER

Fresenius Kabi Limited

Cestrian Court, Eastgate Way

Manor Park

Runcorn, Cheshire

WA7 1NT

United Kingdom

8 MARKETING AUTHORISATION NUMBER(S)

PL 08828/0372

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

18/10/2023

10 DATE OF REVISION OF THE TEXT

18/10/2023