SUMMARY OF PRODUCT CHARACTERISTICS

1. Name of the medicinal product

Ketospray 10% - Dermal Spray

2. Qualitative and quantitative composition

1 g contains 100 mg of ketoprofen.
1 spray puff (0.2 ml) contains 20 mg ketoprofen.
Excipient with known effect: propylene glycol.
For excipients see 6.1.

3. Pharmaceutical form

Cutaneous spray, yellowish, transparent solution.

4. Clinical particulars

4.1 Therapeutic indications

Topical treatment for the symptomatic relief of soft tissue pain and inflammation due to strains, sprains, distortions, and contusions.

4.2 Posology and method of administration

Adults and children over 12 years:
Posology

Paediatric population *:* Ketospray 10% – Spray should not be used in children below 12 years of age because of safety and efficacy concerns.

Method of administration
Adults and children over 12 years of age:

A sufficient amount of solution should be applied on the skin in order to cover the affected area with Ketospray 10% - Spray. The number of spray puffs depends on the size of the area to be treated: 2 spray puffs for small joints (fingers, toes), 4 spray puffs for medium-sized joints (wrist, ankle) and up to 6 spray puffs for larger joints (shoulder, knee) or larger areas (f.i. on the back). Therefore 0.4 – 1.2 g spray are applied per application, which equals 40 – 120 mg ketoprofen. Treatment should be carried out 3 times per day. The maximum daily dose should not exceed 18 spray puffs (equals 3.6 g spray, or 360 mg ketoprofen).
The solution is gently spread over the affected area after 1 – 2 spray puffs each and let dry.
Do not apply occlusive dreesing to the treated area
Hands should be washed subsequently, unless they are also included in the treatment. The treatment may be stopped after the symptoms (pain and swellings) have eased. 7 days duration of treatment is sufficient in most cases.

Elderly:
The same dosage as for adults may be applied.

4.3 Contraindications

Children under 12 years of age.

Ketospray 10% – Spray must not be used in the following cases:

- known hypersensitivity reactions, such as symptoms of asthma, allergic rhinitis to ketoprofen, fenofibrate, tiaprofenic acid, acetylsalicylic acid, or to other NSAIDs;
- history of hypersensitivity to any of the excipients listed in section 6.1;
- history of any photosensitivity reaction;
- history of skin allergy to ketoprofen, tiaprofenic acid, fenofibrate, UV blocker or perfumes;

- sun exposure, even in case of hazy sun, including UV light from solarium, during the treatment and for 2 weeks after its discontinuation;
- on pathological skin changes such as eczema or acne; or in infected skin or open wounds;
- third trimester of pregnancy (see section 4.6);

4.4 Special warning and precautions for use

- Ketospray 10% – Spray should be used with caution in patients with reduced heart, liver or renal function: isolated cases of systemic adverse reactions consisting of renal affections have been reported.
- Ketospray 10% – Spray must not be used with occlusive dressings.
- Ketospray 10% – Spray must not come into contact with mucous membranes (in the oral, genital, or anal area) or the eyes.
- Treatment should be discontinued immediately upon development of any skin reaction including cutaneous reactions after co-application of octocrylene containing products.
- It is recommended to protect treated areas by wearing clothing during all the application of the product and two weeks following its discontinuation to avoid the risk of photosensitization.
- Hands should be washed thoroughly after each application of Ketospray 10% – Spray.
- The recommended length of treatment should not be exceeded because the risk of developing contact dermatitis and photosensitivity reactions increases over time.
- Patients with asthma combined with chronic rhinitis, chronic sinusitis, and/or nasal polyposis have a higher risk of allergy (e.g. asthma, Quincke edema, urticaria) to aspirin and/or NSAIDs than the rest of the population.

Paedriatic population

The safety and efficacy of Ketospray 10% – Spray in children have not been established.

4.5 Interactions with other medicinal products

Interactions are unlikely as serum concentrations following topical administration are low. Serious interactions have been recorded after use of high dose methotrexate with non-steroidal anti-inflammatory agents, including ketoprofen, when administered by the systemic route. It is advisable to monitor patients under treatment with anticoagulants such as coumarinic substances.

4.6 Fertility, Pregnancy and lactation

In absence of clinical experience with the cutaneous form and by reference to the systemic forms:

Pregnancy
During the first and second trimester:
As the safety of ketoprofen in pregnant women has not been evaluated, the use of Ketospray 10% – Spray during the first and second trimester of pregnancy should be avoided.

During the third trimester:
During the third trimester of pregnancy, all prostaglandin synthetase inhibitors including ketoprofen may induce cardiopulmonary and renal toxicity in the fetus. At the end of the pregnancy, prolonged bleeding time in both mother and child may occur. Therefore, Ketospray 10% – Spray should not be used during the last trimester of pregnancy.

Breastfeeding
No data is available on the excretion of ketoprofen in human milk. Ketospray 10% – Spray is not recommended in nursing mothers.

4.7. Effects on ability to drive and use machines

None expected if administered accordingly.

4.8 Undesirable effects

Frequencies of undesirable effects are given as follows:

Very common (>1/10); common (>1/100, <1/10); uncommon (>1/1000, <1/100); rare (>1/10000, <1/1000); very rare (<1/10000).

Uncommon (1/100 – 1/1000)	Skin: Erythema, pruritus, eczema
Rare (1/1000 – 1/10000)	Skin: Photodermatitis, urticaria
Very rare (< 1/10000)	Immunological: Quincke oedema

Immune System disorders	*Not known*	Anaphylactic shock, angioedema (Quincke-oedema), hypersensitivity reactions.
Skin and subcutaneous tissue disorders	*Uncommon*	Local skin reactions such as erythema, eczema, pruritus and burning sensations.
	Rare	Dermatological: Photosensitisation, urticaria. Cases of more severe reactions such as bullous or phlyctenular eczema which may spread or become generalized have occurred rarely.
Renal and urinary disorders	*Very rare*	Cases of aggravation of previous renal insufficiency.

When Ketospray is applied on a large area over a prolonged period of time, adverse events affecting the whole body (mainly gastrointestinal disorders) cannot be excluded with certainty.

4.9 Overdose

Due to the low systemic burden after topical administration no symptoms of overdose are to be expected.
If accidentally ingested, the spray may cause systemic adverse effects depending on the amount ingested. However, if they occur, treatment should be supportive and symptomatic in accordance with overdose of oral antiphlogistics.

5. Pharmacological Properties

5.1 Pharmacodynamic Properties

Pharmacotherapeutic group: Topical products for joint and muscular pain.
ATC Code: M02AA10
Ketospray 10% - Spray contains ketoprofen, a non-steroidal antiphlogistic. As such it has analgesic, anti-inflammatory and anti-rheumatic properties. These effects are mainly due to the inhibition of prostaglandine synthesis.

5.2 Pharmacokinetic Properties

The percutaneous resorption of ketoprofen is slow. Bioavailability of ketoprofen after topical administration has been estimated to be approximately 5% of the level obtained after a similar dose administered orally. Due to the low rate of resorption a local antiphlogistic and analgetic effect is achieved without systemic burden.
After metabolism in the liver the pharmacologically inactive metabolites are mainly excreted through the kidneys as glucuronide conjugate.

5.3 Preclinical Safety Data

After chronic oral administration of ketoprofen in animals, gastrointestinal lesions and renal changes typical of non-steroidal antiphlogistic drugs have been observed. Animal experiments have not indicated any mutagenic, carcinogenic or teratogenic effects of ketoprofen.

Based on conventional pharmacologic studies concerning safety, toxicity at repeated administration, reproduction toxicity, genotoxicity and cancerogenic potential did not reveal any potential harmful effect for humans.

6. Pharmaceutical Particulars

6.1 Excipients

Soy bean lecithin
Propylene glycol
Isopropyl alcohol
Ethanol anhydrous
Sodium dihydrogen phosphate dihydrate
Disodium phosphate dodecahydrate
Sodium Hydroxide
Peppermint oil
Purified Water

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

48 months.
1 year after first opening.

6.4 Special precautions for storage

Store below 25°C. Keep the bottle in the outer carton in order to protect from light

6.5 Nature and contents of the container

Amber glass bottle with spray pump and protective cap; cardboard carton; bottles of 12.5 g or 25 g solution.

6.6 Instructions for use and handling

No special requirements.

7. Marketing authorisation holder

CYATHUS Exquirere PharmaforschungsGmbH
Rudolfsplatz 2/1/8
1010 Wien

8. Manufacturer:

Phabril Waltrop GmbH, Germany
For
CYATHUS Exquirere Pharmafoschungs GmbH
Rudolfsplatz 2/1/8, AT – 1010 Wien, AUSTRIA

9. License Holder:

MegaPharm Ltd. P.O. Box 519, Hod Ha`Sharon 45105, Israel

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