







Arda Thermal Infusion is a line of plant-based infusions that combines the beneficial properties of thermal water with the cosmetic qualities of selected Italian plants.

The thermal water is the real star of the show. It's not just an extraction solvent – it's an ingredient able to enhance the composition of the botanical extracts.





Both the plants and the thermal water used are of Italian origin.

We've chosen to rely on the Terme Reali di Valdieri. It's the highest spa in Italy and its waters are recognized in the curative field by the National Health System (NHS).





### **Table of Contents**









### Localisation

The Maritime Alps are the extreme southern sector of the Alpine chain and mark the border between the Piedmontese plain in the province of Cuneo and the southern coast of France.

Beyond the Italian side lies the Maritime Alps Natural Park, the largest protected natural area in Piedmont, in which the upper Gesso Valley is found.

The preserved area has an extraordinary varied landscape, featuring a succession of rocky peaks, grasslands, small glaciers and hundreds of lakes.



### Localisation

In the heart of the upper Gesso Valley, at the foot of Mount Matto, the minero-thermal springs of Valdieri gush forth, renowned and known since ancient times for their therapeutic properties.

The spa treats rheumatic, otorhinolaryngological, dermatological (such as eczema and some types of psoriasis), liver and gynaecological diseases.

Not far from the plant is the Valderia botanical garden, a 1 km stretch of nature which hosts about 450 plants gathered in 14 environments, representative of the main ecosystems of the Maritime Alps.





# History and present day

The territory of Valdieri and its thermal springs intertwine their history with that of the **rulers of the House of Savoy**, who showed a particular fondness for this picturesque place from generation to generation.

Thanks to the interest of the Savoy monarchy, the spa was built by the municipality of Valdieri in 1588. It was developed in the second half of the eighteenth century, gaining great prestige and earning the name of Terme Reali (Royal Baths).





# History and present day

An important step in the development of the baths occurred in 1855, when King Vittorio Emanuele II visited the establishment and was fascinated by the natural beauty of the place and by its wealth of game.

At that time, the royal summer residence, the hunting houses and four chalets (two of which still existing) were built: the "Casino di Caccia" and the "Casa della Bela Rosin", the love of Vittorio Emanuele II's life opposed by Cavour.

In 1857, once more at the behest of the King, the construction of the current Hotel Royal, Wellness Centre of the Terme Reali di Valdieri began.





# History and present day

Today, the Terme Reali di Valdieri represent **the highest spa in Italy**, at an altitude of 1370 m above sea level.

In addition, they are the only ones in Italy to cultivate and use the thermal algae or "moulds" assimilated to natural organic peloids, widely for therapeutic purposes.

In their composition, algae mixed to bacteria and protozoa prevail. That's why the word "moulds" is replaced by the term "algae", which is considered to be more relevant.



# Thermal water

# **Features**

Valdieri is an area rich in minero-thermal springs, which flow one next to the other at the foot of Mount Matto.

Among the main springs there is the sulphurous thermal spring of San Martino and Lorenzo, from which **sulphurous water** flows, and just a few meters away the **Magnesium** spring.





### **Features**



CLASS: hyperthermal sodium sulphate chloride sulphides pH: alkaline - 9.2 at 20°C DEEP AQUIFER TEMPERATURE: **130°C** TEMPERATURE AT THE SOURCE OF THE MAIN SPRINGS: about 60°C. FIXED RESIDUE AT 180°C: 275 mg/litre. HYDROGEN SULPHIDE LEVEL: 4.05 mg/l hydrogen sulphide.





# Thermal water in personal care

There are several studies on the beneficial action that thermal waters can have on the skin.

Even when included in cosmetic formulations, thermal waters can favour the restoration of physiological skin balance.



# Thermal water in personal care

The biological mechanisms underlying the efficacy of thermal waters are not yet fully understood; however, it is possible to associate the beneficial effects of these waters to their hypertonic nature, that is to say the presence of a high concentration of minerals.

PREVALENT WATER TYPE **BENEFICIAL EFFECTS MINERALS** Sulphate, Stimulate skin regeneration, anti-inflammatory Sulphurous, Magnesium, Sulphide and anti-bacterial action **Bicarbonate** lodine-bromine-Calcium Strengthen the skin barrier saline Manganese, Iodine, Saline Antioxidant effect Bromine Carbonate Potassium Improve tissue hydration and elasticity Arsenical-Promote cell oxygenation Iron, Zinc ferruginous

Table 1: Potential effects on the skin of chemical elements present in thermal waters.



## **Thermal water in personal care**

Mineral waters are particularly suitable for dermatological therapeutic applications due to their keratolytic, regenerating and antioxidant effects.

MINERAL	BIOLOGICAL EFFECTS/THERAPEUTIC USES
Aluminium	Acute dermatitis
Arsenic	Psoriasis
Boron	Cell renewal, wound healing
Calcium	Regulation of epidermal growth, anti-inflammatory action
Sodium chloride	Keratin layer hydration in hyperkeratotic disorders
Copper	Antioxidant, skin barrier restoration
Sulphide	Anti-inflammatory, antibacterial, anti-fungal
Magnesium	Acute dermatitis, cell renewal
Manganese	Cell renewal, wound healing, skin barrier reinforcement
Selenium	Seborrheic dermatitis, tinea versicolor, antioxidant action, protection from UVB rays
Sodium	Cell renewal
Zinc	Antioxidant, cell replacement, modulation of inflammation

Table 2: Biological effects and therapeutic uses of the main minerals contained in thermal waters.





# Crenocosmetics

The thermal cosmetics based on mineral-rich waters and trace elements is called **crenocosmetics**, from the Greek "*crenos*", i.e. source.

This category of thermal products is flanked by **peloidocosmetics**, characterised by the use of thermal waters combined with the action of muds, moulds and algae.

In both cases, these are cosmetics inspired by thermal rituals, but without the "experiential" component of the therapy, which is very important in the thermal environment due to the mental predisposition and the sense of relaxation created in these places.





# Crenocosmetics

According to the data collected through 2018 by the *Global Wellness Economy Monitor*, the trend of cosmetics based on thermal active ingredients is growing strongly.

The fascination of thermal cosmetics lies precisely in the idea of being able to reproduce at home the ancestral and natural pampering reminiscent of a relaxing weekend at a spa.

In this context, Italy and its territory rich in thermal springs have a lot to offer.



### Market



Among the most famous cosmetic products based on minero-thermal waters, we can find the following brands:











### Market

#### Vichy Mineral 89

Booster of Hyaluronic Acid and Vichy Volcanic Water at 89%.

Hydrates and strengthens the skin barrier.

INCI: AQUA/WATER, PEG/PPG/POLYBUTYLENE GLYCOL-8/5/3 GLYCERIN, GLYCERIN, BUTYLENE GLYCOL, METHYL GLUCETH-20, CARBOMER, SODIUM HYALURONATE, PHENOXYETHANOL, CAPRYLYL GLYCOL, CITRIC ACID, BIOSACCHARIDE GUM-1.





#### Avène - Cream for intolerant skin types

Specific facial treatment for naturally sensitive or irritable skin types.

Soothes and restores the skin barrier.

INCI: AVENE THERMAL SPRING WATER (AVENE AQUA), MINERAL OIL (PARAFFINUM LIQUIDUM), GLYCERIN, GLYCERYL STEARATE, SQUALANE, CYCLOPENTASILOXANE, CYCLOHEXASILOXANE, SERINE, CARBOMER, TETRASODIUM EDTA, TRIETHANOLAMINE, WATER (AQUA).





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### Market

#### La Roche-Posay - HYDREANE RICHE

Essential facial treatment for sensitive and dry skin types.

#### Soothes and moisturises.

INCI: AQUA / WATER , GLYCERIN, CETEARYL ALCOHOL, ISOHEXADECANE, GLYCERYL STEARATE, CYCLOHEXASILOXANE, CAPRYLIC/CAPRIC/SUCCINIC TRIGLYCERIDE, PETROLATUM, BUTYROSPERMUM PARKII BUTTER/SHEA BUTTER, PEG-100 STEARATE, GLYCINE SOJA OIL/SOY BEAN OIL, CETEARETH-20, CAPRYLYL GLYCOL, CITRIC ACID, POLYPHOSPHORYLCHOLINE GLYCOL ACRYLATE, TOCOPHEROL, PHENOXYETHANOL, CHLORHEXIDINE DIGLUCONATE, PARFUM/FRAGRANCE





### Market

#### L'Occitane - Ultra-Moisturising Cream

Moisturising face cream enriched with eau de Réotier and hyaluronic acid.

#### Moisturises and softens.

INCI: AQUA/WATER, OCTYLDODECANOL, GLYCERIN, PROPANEDIOL, COCO-C APRYLATE/CAPRATE, CORN STARCH MODIFIED, HYDROXYETHYLACRYLATE/SODIUM ACRYLOYLDIMETHYL TAURATE COPOLYMER, HELIANTHUSANNUUS (SUNFLOWER) SEED OIL, SODIUM HYALURONATE, ARACHIDYL ALCOHOL, BEHENYL ALCOHOL, XYLITYLGLUCOSIDE, ANHYDROXYLITOL, ARACHIDYL GLUCOSIDE, ETHYLHEXYLGLYCERIN, XYLITOL, DISODIUM EDTA, XANTHAN GUM, SORBITAN ISOSTEARATE, POLYSORBATE 60, SODIUM HYDROXIDE, CITRIC ACID, TOCOPHEROL, PHENOXYETHANOL, SODIUM BENZOATE, PARFUM/FRAGRANCE, LINALOOL, HEXYL CINNAMAL, CITRONELLOL, GERANIOL, CITRAL, CI 42090/BLUE 1.











### **Arda Thermal Infusion Sulfurea**



#### Arda Thermal Infusion S. Elicriso

INCI Name: Aqua, Helichrysum italicum Extract

Colour: deep yellow

Odour: characteristic



#### Arda Thermal Infusion S. Iperico

INCI Name: Aqua, Hypericum perforatum Flower/Leaf/Stem Extract

Colour: reddish-brown

Odour: characteristic



Arda Thermal Infusion S. Salvia INCI Name: Aqua, Salvia officinalis Leaf Extract

Colour: dark brown

Odour: characteristic



Arda Thermal Infusion S. Passiflora INCI Name: Aqua, Passiflora incarnata Flower Extract Colour: dark amber

Odour: characteristic



### **Arda Thermal Infusion S. Elicriso**



Helichrysum (Helichrysum italicum)

Immortal

Parts used: flowering tops.

Small, unbranched green shrub with thin, linear, spindly leaves and bright golden flower heads. It grows on sunny, arid, rocky soils and sandy dunes near the Mediterranean Sea, loving its saltiness and wind and not afraid of winter frosts.

Modern studies on the efficacy of *Helichrysum Italicum* are due to the medical/pharmacological research of Dr. Leonardo Santini (Molazzana, 1 January 1904 - Castelnuovo di Garfagnana, 3 July 1983). [1] The main activities of the extracts reported in the scientific literature are related to the **antioxidant action** exerted by the inhibition of enzymatic and non-enzymatic lipid peroxidation. This mechanism appears to underlie the **anti-inflammatory** efficacy noted in several in vivo and in vitro studies. [2]



### **Arda Thermal Infusion S. Iperico**



#### Perforate St John's Wort (Hypericum perforatum)

St John's Wort

Parts used: flowering tops.

Semi-evergreen perennial medicinal plant, belonging to the *Clusiaceae (Guttiferae)* family and to the *Hypericum* genus. Native to the British archipelago, it is now widespread in all the regions of Italy and in the rest of the world. It prefers sunny or semi-shaded and dry locations, such as abandoned fields and ruderal environments.

From the literature, evidence of **anti-inflammatory and antimicrobial effect** has been reported for the plant species extract (one study in particular focuses on the pathogens of the oral cavity [3] for the aqueous extract).



### **Arda Thermal Infusion S. Passiflora**



#### Passion flower (Passiflora Incarnata)

Passion flower

Parts used: aerial parts.

Highly branched, hardy subtropical perennial plant. Native to the southern United States of America and Mexico, it has acclimatized very well also in Italy, where it has been cultivated since 1975. Marche, followed in the 90s by Umbria and Piedmont, and recently by Veneto and Emilia-Romagna are historical areas of production. [4] Its solitary flowers of about 5 cm vary from white to lavender, going through all the intermediate shades depending on the ecotype.

The activity of the flower extract is related to its composition, rich in different species of flavonoids, for which there is evidence of a relevant **anti-radical** efficacy. [5]



# **Arda Thermal Infusion S. Salvia**



#### Sage (Salvia Officinalis)

Health herb or Sacred herb

Parts used: leaves and flowering tops.

Perennial plant belonging to the family of *Lamiaceae (Labiatae)*, native to Mediterranean countries, where it often grows spontaneously even in the poorest and most difficult soils. Considered the herb of health by Greeks and Romans, it is one of the most known medicinal species of ancient times, which was widely used in many medicinal preparations. <sup>161</sup>

Its extract is rich in saponins and tannins and ideal in **astringent** formulations. Several studies present evidence of **anti-inflammatory** efficacy attributed to the presence of ursolic acid, and selective **antimicrobial** against *Staphylococcus aureus* [7], in addition to benefits on oral cavity and dental treatments. [8]



### **Customisation**

Does thermal water infusion fascinate you and would you like to apply it to a specific botanical species? Contact us and give us an idea of your requirements. We will tailor **the Arda Thermal Infusion according to your needs.** 





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