

## Technical specifications

### • *Vitasource 72400*

PROPERTIES	Delays skin fibroblasts aging process and postpones senescence. Increases skin firmness, elasticity and activity. Rejuvenates skin appearance.
ACTIVE MOLECULES	Baicalin
APPEARANCE	Transparent liquid Yellowish green – light grey-brown color
SOLUBILITY	Soluble in aqueous solutions
RECOMMENDED DOSE	1 - 5%

## Formulation

### • *Eye recovery treatment*

	INCI / CTFA	%
A	Dimethicone/PEG-10/15 Crosspolymer	7.80
	Cyclopentasiloxane/Dimethicone/Vinyl Dimethicone Crosspolymer	18.20
	Dimethylpolysiloxane	11.90
B	Citric Acid	0.22
	Aqua (Water)	26.40
C	Butylene Glycol	14.00
	Glycerin	9.00
	Tetrasodium Glutamate Diacetate, Sodium Hydroxide, Aqua (Water)	0.20
	Phenoxyethanol, Ethylhexylglycerin	0.80
D	Aqua (Water)	1.00
	Sodium Chloride	0.40
E	<b>VITASOURCE™</b>	5.00
F	Parfum (Fragrance)	0.88
G	Cyclopentasiloxane/Dimethicone/Vinyl Dimethicone Crosspolymer	4.20

## *Vitasource*

Innovative active ingredient which delays senescence



*Anti-aging*

Vitasource

## Revitalize your skin 10 years ... is a fact!

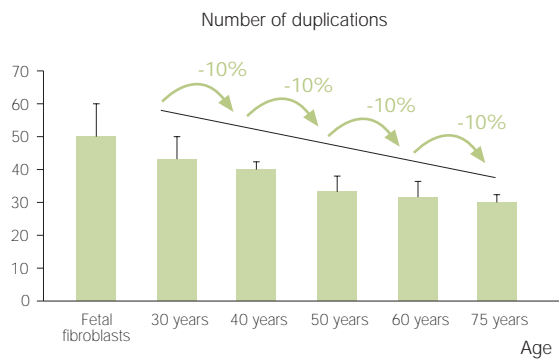
The term **senescence**, synonym for aging, implies the end of cellular replication. It is a state of proliferation arrest in which human somatic cells with signs of morphological and biochemical changes enter, as a result of having exceeded its division capacity limit.

Applied to skin, cellular senescence is the main process of erosion and loss of fibroblasts.

VITASOURCE™ is a purified fraction obtained from roots of *Scutellaria baicalensis Georgi* standardized in baicalin which delays cellular senescence and recovers characteristics that skin cells had 10 years earlier.



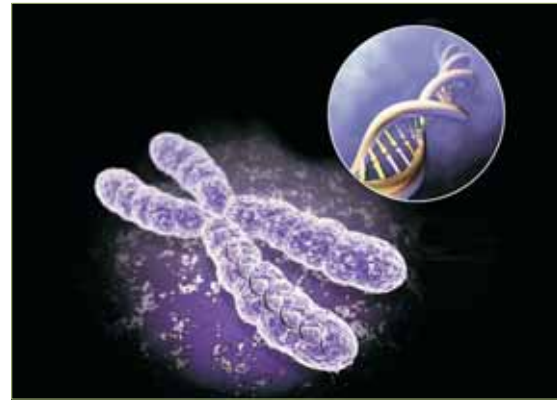
As we age, senescent fibroblasts tend to prevail over young fibroblasts, and as a result skin loses some of the functional characteristics of young skin.



The number of cell duplications of fibroblasts depends on age. Fetal fibroblasts can duplicate 50 times on average before entering senescence, while from 30 years of age onwards, the number of duplications is **reduced by 10% every decade**.

One of the main causes of the transition from the proliferative cellular state to senescence is the shortening of a region of non-coding DNA that is located at the ends of chromosomes, the **telomeres**. Adult cells shorten their telomeres at each cell division and exhibit the senescent phenotype when one or more of their telomeres reaches a critical length.

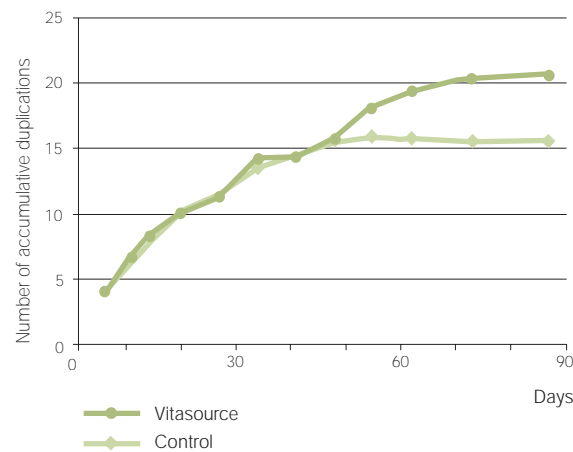
There is a ribonucleoprotein complex called **telomerase** (enzyme) which avoids the telomere shortening by creating the missing piece again. This enzyme is not expressed in adult cells and, therefore, skin fibroblasts do not express it either.



### In Vitro

Provitall has developed an innovative technology to identify the responsible fraction for the telomerase gene activation in human fibroblasts, from a wide screening.

The result is an active ingredient which **increases 10%** the number of duplications that take place in fibroblasts before entering senescence which causes negative effects on the skin.

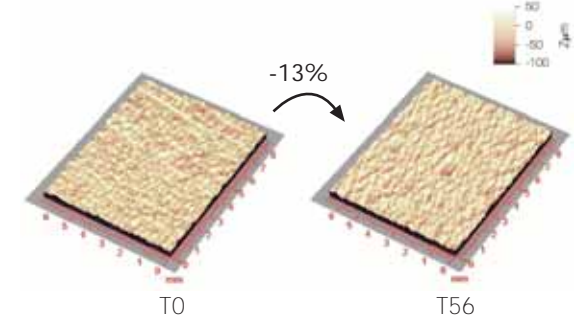


### In Vivo

- One group of female volunteers, between 35-45 years old
- Placebo on one forearm and Vitasource™ (1.5%) on the other, twice a day
- Different parameters were analysed: skin microrelief using fringe projection, and firmness (Uf, Uv) and elasticity (Ur, Ue) with the Cutometer
- Measures were taken at T0 and T56 looking for the difference between these two times for the placebo and active ingredient individually
- Comparison between the result obtained for the placebo and the one obtained for the active ingredient

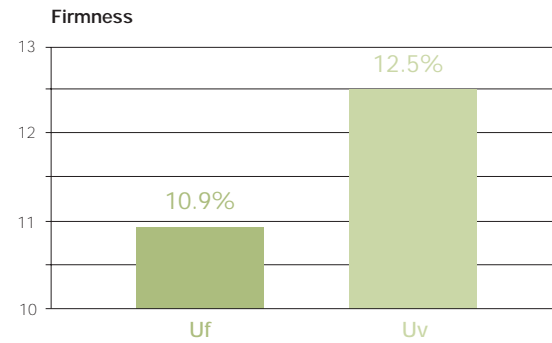
#### • Skin microrelief

When Vitasource™ is applied, anisotropy decreases, which implies skin restructuring



#### • Firmness parameters

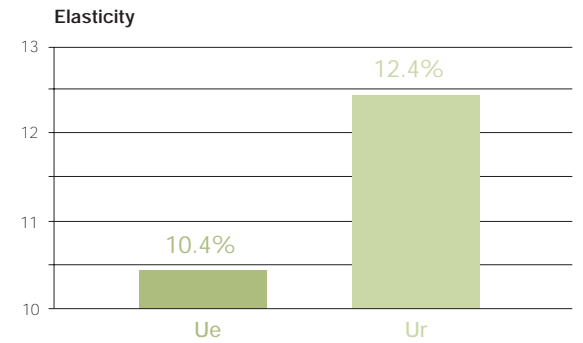
Variation between placebo and Vitasource™



**Uf:** total maximum skin extensibility  
**Uv:** viscoelastic extensibility and delayed extensibility

#### • Elasticity parameters

Variation between placebo and Vitasource™



**Ue:** immediate extensibility  
**Ur:** recovery of immediate elasticity

### Results:

- **10%** increase of fibroblasts duplications number
- **13%** increase of skin restructure
- **10.9%** and **12.5%** increase of firmness
- **10.4%** and **12.4%** increase of elasticity

### Cosmetic applications

- Cosmetic products for skin rejuvenation
- Cellular reactivator for skin
- Anti-aging preventive cosmetics
- Cellular regenerator
- Intensive facial treatments

### Toxicological information

VITASOURCE™ has been evaluated according to the available toxicological information, based on safety assays and bibliographical data. These data allow the conclusion that using this ingredient, under the normal conditions for the use of cosmetics and at the recommended concentrations, is free of risks.