



REDIVINE

Anti-urban pollution (indoor and outdoor)

volatile pollutants + domestic dust + artificial radiations
(blue lights: domestic and multimedia origins)

Anti-oxidative stress
Anti-aging



EXSYMOL
MONACO

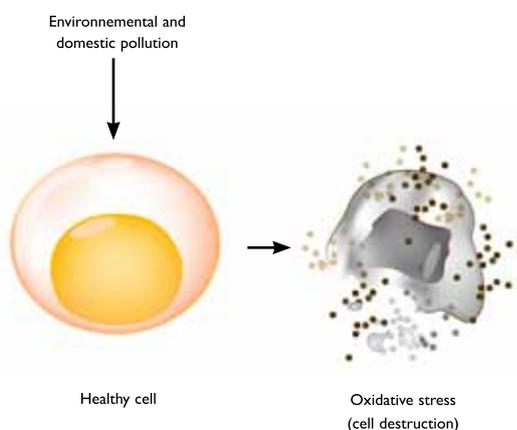
URBAN POLLUTION AND PREMATURE AGING

Accumulation of domestic pollutants

Progress allowed for a better house isolation and for energy control.

House isolation which is supposed to protect us from the outside pollution is in fact a trap for it, leading to an increased concentration on the inside.

Because of low air renewal, it is pretty frequent to find more concentrated pollutants on the inside than outside.



Metabolization of urban pollutants

Pollutants, such as BaP (Benzo[a]pyrene), activate the cell xenobiotic response elements (XRE) which supports the metabolization of pollutants.

This detoxification process however generates ROS.

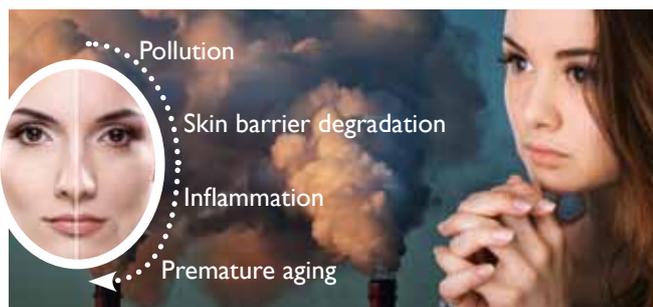
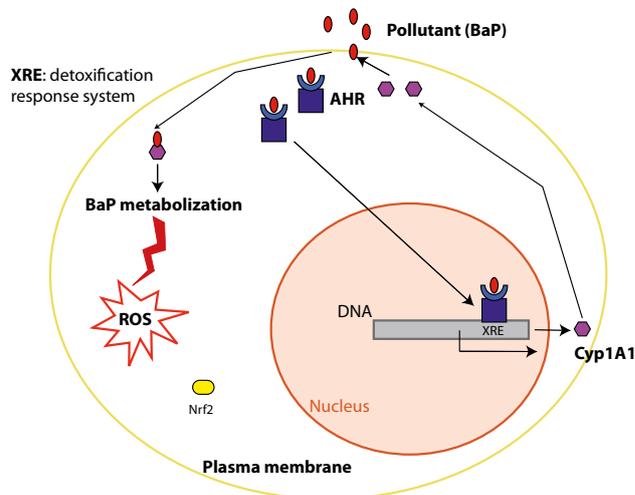
ROS accumulation is still an important risk for skin and cell's integrity.

Cell's sentinel Nrf2 controls ROS content and triggers anti-oxidant systems.

Environnemental pollution is therefore closely linked with cells pollution!

Urban pollution, a threat for cells

Microparticles from urban pollution (20 times smaller than skin pores), domestic carbon monoxide (heating, cigarette smoke), domestic pollutants (furniture glue, paint solvents...) together with the blue lights emitted by multimedia and artificial light, penetrate the skin and reach up to skin cells.



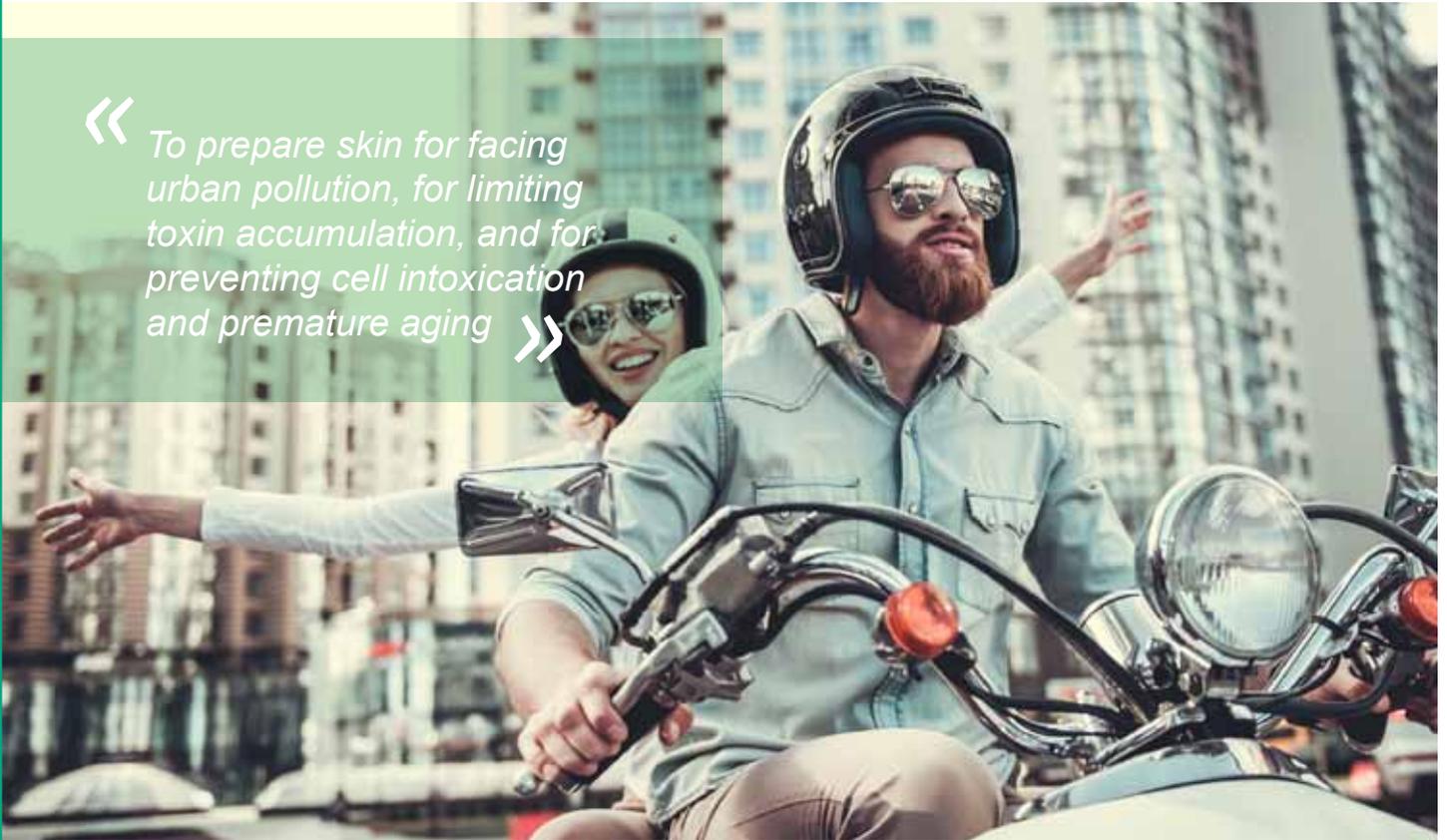
Consequences of urban pollution

- **Skin sensitivity:** redness, dryness, irritations
- **Skin dryness**
- **Dull skin tone**
- **Age spots**
- **Skin collapse**
- **Premature aging**

REDIVINE

Cosmetic characteristics

« To prepare skin for facing urban pollution, for limiting toxin accumulation, and for preventing cell intoxication and premature aging »



Cosmetic applications

- Anti-pollution
- Skin detoxification
- Anti-oxidative stress
- Sensitive skin (dermo-cosmetic)
- Anti-aging

Beauty promises

- Hydration
- Anti-tiredness
- Radiant skin tone
- Anti-age spots
- Anti-wrinkles

Cosmetic Concepts

- Protection against atmospheric pollution: volatile particles
- Protection against domestic pollution:
 - artificial and multimedia lights, volatile compounds and dust
 - prevention of cell intoxication
- Fighting against invisible oxidative stress (pollution)
- Preventive stimulation of the cell's sentinel: Nrf2
- Activation of the ARE: « anti-oxidant response elements »
- Boosts natural anti-oxidant defenses: Glutathione and NQO1

Metabolic targets

- ARE stimulation (anti-oxidant response element)
- Maintains high levels of glutathione and NQO-1
- Protection against cell intoxication by particles and domestic dust
- Protection against domestic radiations – blue lights: lighting and multimedia
- Protection of skin elastic fibres: anti-collagenase and elastase
- Protection against ROS

REDIVINE

Anti-aging benefits of a protection against urban pollution

Protection against air pollutants

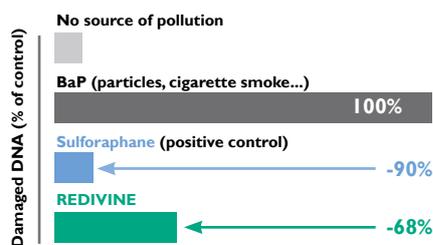


Air pollution is an atmosphere filled with polluting molecules. The XRE system prevents cell intoxication by degrading volatile molecules. This detoxification process however generates ROS. Pollution indirectly amplifies the oxidative stress.

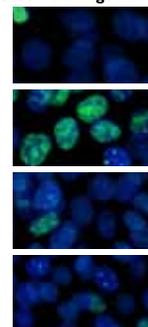


VOLATILE PARTICLES → CELL INTOXICATION

DNA PROTECTION



Blue: Nuclei
Green: Damaged DNA



0.1% REDIVINE prevents keratinocytes' DNA damages by 68%, thus preventing skin premature aging
(Evaluation model: Keratinocytes)

REDIVINE efficiently protects DNA, limits cell oxidation, and prevents premature aging

Protection against domestic pollutants



DOMESTIC PARTICLES
DUST AND HEAVY METALS



DOMESTIC RADIATIONS
BLUE LIGHT: LIGHTING AND MULTIMEDIA

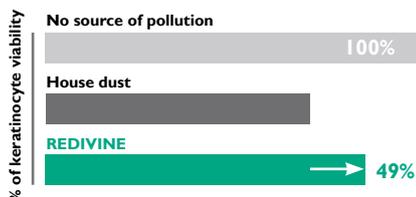


CELL OXIDATION +
STRUCTURAL COLLAPSE

Domestic pollution includes:

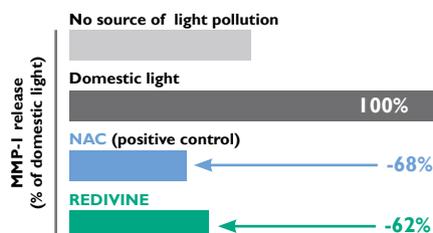
- Dust (often more toxic than outside pollutants since they are often more concentrated in lead)
- Volatile pollutants
- Artificial radiations – lighting and multimedia (blue light)

ANTI-CELL INTOXICATION

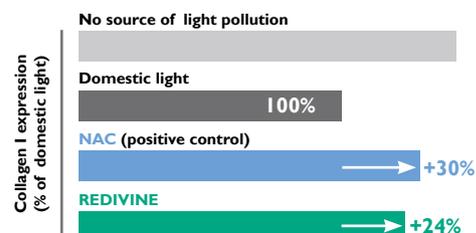


0.05% REDIVINE prevents cell intoxication by 49%, therefore preventing skin premature aging
(Evaluation model: Keratinocytes)

COLLAGEN PROTECTION



0.5% REDIVINE limits MMP-1 expression by -62%, thus preventing collagen degradation
(Evaluation model: Fibroblasts)



0.1% REDIVINE stimulates collagen I production by 24%, thus improving skin density
(Evaluation model: Fibroblasts)

REDIVINE protects skin from cell intoxication and from premature aging

REDIVINE

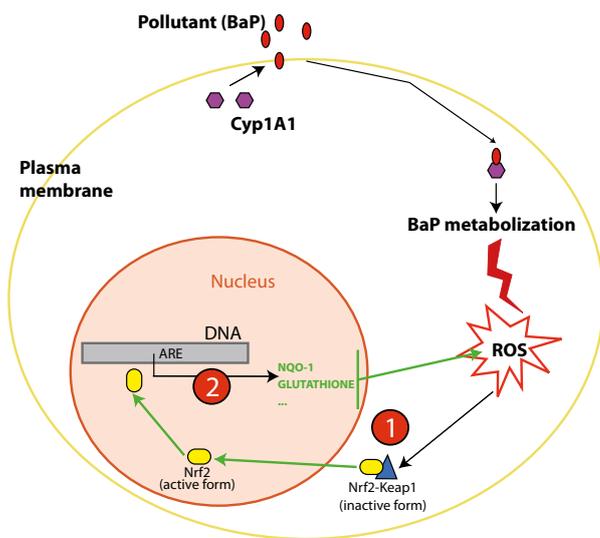
Mechanism of action

The « xenobiotic response element » (XRE) is responsible for degrading pollutants. However, pollutants metabolism generates ROS (cf. page 2).

The presence of ROS triggers the « anti-oxidant response element » (ARE) which expresses detoxifying enzymes. This process is mediated by Nrf2.

REDIVINE stimulates this detox response in order to prevent the noxious effects of an evergrowing exposure to urban pollution.

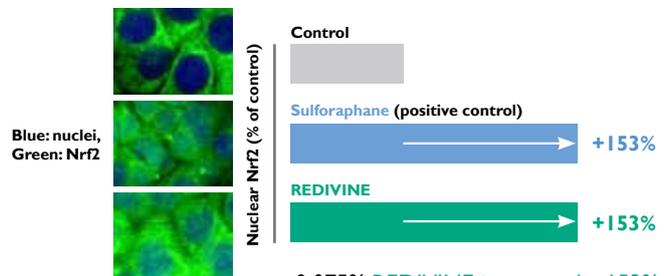
1 Activation of the skin natural defenses against urban pollution



ACTIVATION OF THE SENTINEL Nrf2

Nrf2 is a « sentinel » protein stored in the cell's cytoplasm.

In the presence of toxins, Nrf2 relocates to the nucleus in order to trigger the « anti-oxidant response element » (ARE) and to stimulate the synthesis of cytoprotective anti-oxidant systems.



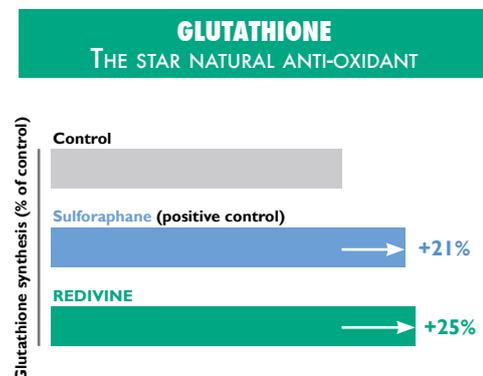
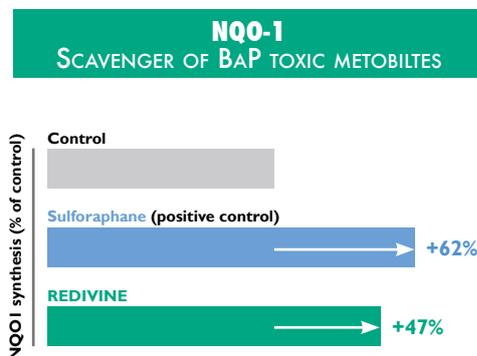
0.075% REDIVINE increases by 153% the translocation of Nrf2 into the nucleus, thus inducing the activation of ARE

(Evaluation model: Keratinocytes)

REDIVINE improves the activation of the transcription factor Nrf2 that will relocate into the nucleus for stimulating the ARE.

2 Anti-oxidant / cytoprotector synthesis

The expression of ARE induces the synthesis of detoxifying cytoprotective enzymes such as:



0.075% REDIVINE increases the synthesis of NQO-1 by 47% and the synthesis of glutathione by 25% thus optimizing cytoprotection

(Evaluation model: Keratinocytes)

REDIVINE stimulates the skin cell defenses, and:

- Fights effectively urban pollution toxic forms
- Prevents free radicals accumulation
- Prevents the resulting premature aging

REDIVINE

A technology born of red vine leaves



REDIVINE uses the benefits of red vine leaves such as:

- The toning and protective effect of microcirculation
- Strong anti-oxidant (high content in polyphenols and tanins)
- Prevents elastic fibres reticulation
- Strong astringent activity in order to close skin pores.

Anti-fatigue



STIMULATION OF THE MICROCIRCULATION

Skin fatigue leads to a slowdown of all skin metabolisms which eventually have visible repercussions.

An impaired microcirculation was described as directly impacting metabolisms. Skin is deprived of nutrients essential for an optimal rejuvenation.

The ability of the red vine leaves to strengthen blood vessels provides a sustainable response to skin fatigue and prevents its visible effects.

Protection and firmness



ANTI-OXIDANT ACTIVITY BETTER RESULTS THAN VITAMIN C

	DPPH	ABTS
REDIVINE	IC ₅₀ = 0.071‰	IC ₅₀ = 0.052‰
Vit. C (1%)	IC ₅₀ = 0.42‰	IC ₅₀ = 0.43‰

Red vine leaves are rich in polyphenols which provide REDIVINE with strong anti-oxidant properties preventing elastic structures reticulation, therefore maintaining an optimal skin firmness.

ANTI-ELASTASE ACTIVITY ELASTIN PROTECTION



0.23% eq REDIVINE inhibits elastase activity by 88%, thus preventing elastin degradation.

Skin tone



ASTRINGENT ACTIVITY

The astringent properties of the red vine leaves leads to tighten pores and tissues.

Skin texture and tone will be smoother and more homogeneous. Combined with many other benefits, red vine leaves provides skin with a radiant tone.

Furthermore, this astringent activity is also an asset for limiting the penetration of microparticles in the skin through pores.

Naturally suited for a global anti-aging activity, REDIVINE strongly enhances the anti-aging benefits of the red vine leaves in order to effectively fight urban pollution.

INCI NAME

VITIS VINIFERA (GRAPE) LEAF EXTRACT

ANALYTICAL COMPOSITION

Vitis vinifera (grape) leaf extract 2%
Propanediol 49%
Water (sq) 100%

PHYSICO-CHEMICAL CHARACTERISTICS

Limpid to slightly opalescent liquid, orange to burgundy red
Density at 20°C ≈ 1.045
pH: 5
Miscible with water, alcohol and glycols.

PRESERVATIVES

No preservative system.

TOLERANCE AND TOXICITY STUDIES

REDIVINE does not show any toxicity, and tolerance studies show that it is perfectly tolerated.

FORMULATION

Advised doses: 1% - 5%.
No particular formulation restriction.

AVAILABILITIES

REDIVINE is available in 5kg and 30kg drums.



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