

ALL-Q[®] plus

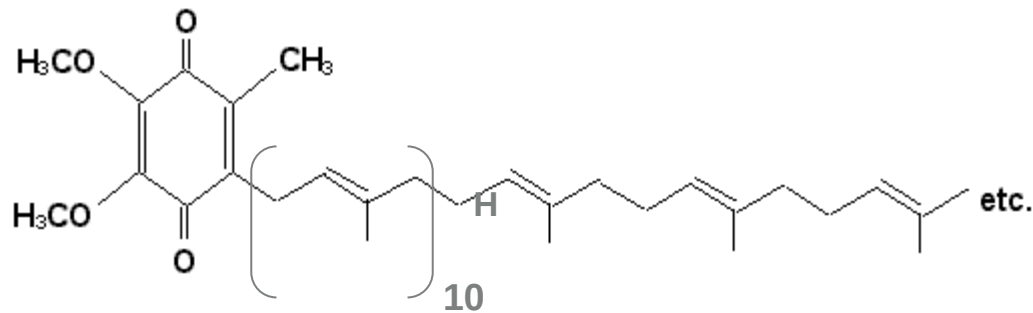
to unveil the secret of beauty

Master Presentation
07.2020



What is Coenzyme Q₁₀?

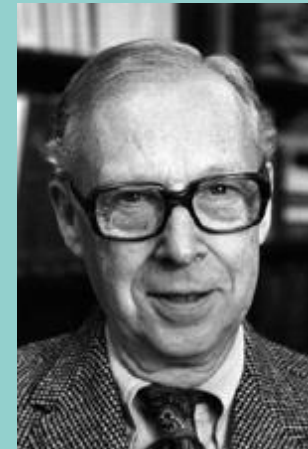
- Natural, fat-soluble compound found in most plant and animal cells
- The only oil-soluble antioxidant synthesized by human body (from amino acid tyrosine)
- Also known as ubiquinone or Coenzyme Q10 (short: CoQ10)
- “Ubi” = latin for “everywhere”
- “Coenzyme” = activity of enzymes depend on the presence of Q10



History of CoQ10



- 1957 Coenzyme Q10 first isolated from beef heart mitochondria by Dr. Frederick Crane of Wisconsin
Named ubiquinone (=ubiquitous quinone)
- 1958 Prof Karl Folkers of Merck determined chemical structure
- 1975 CoQ10 synthesis developed by Japanese
- 1978 Peter Mitchell received Nobel Prize for biological energy transfer theory, including role of CoQ10
- Early 90 First larger promoted use in a cosmetic product: Beiersdorf



Karl Folkers

CoQ10 - The Ultimate Benefits

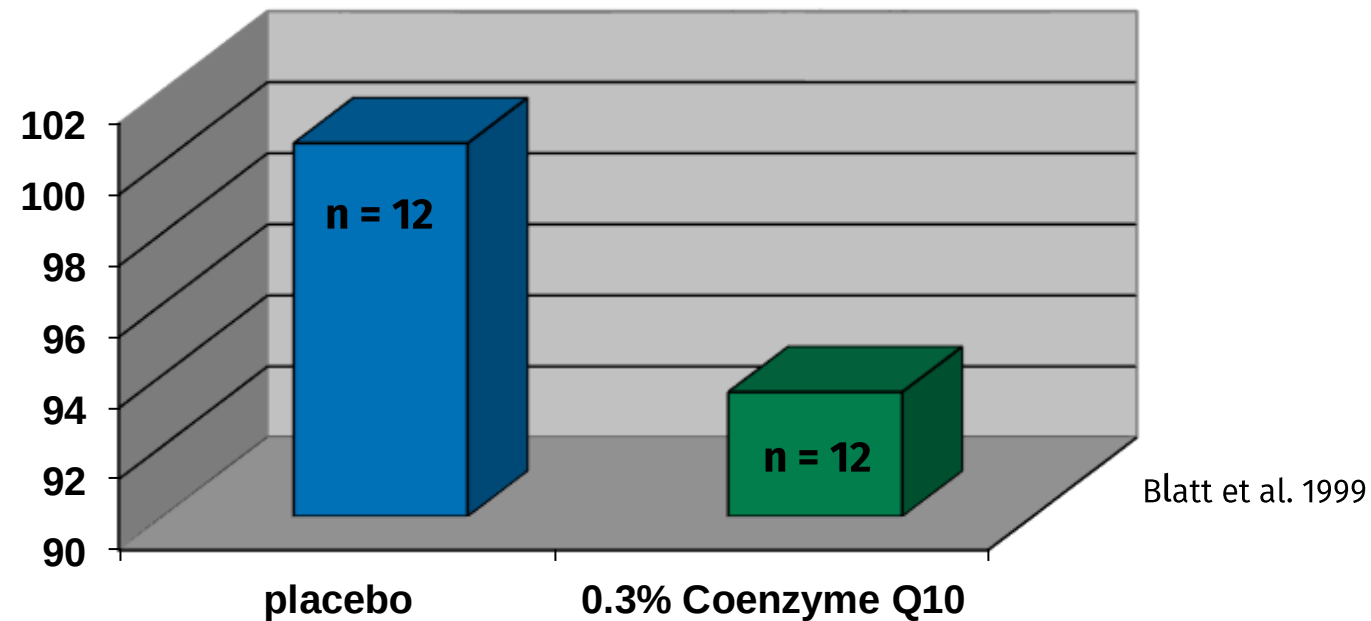


- CoQ10 or just Q10 is synthesized by the body and also consumed in the diet.
- CoQ10 is a fat-soluble super antioxidant that can neutralise free radicals.
- CoQ10 works to sustain energy production to fulfil the skin's vital functions.
- CoQ10 protects the deeper layers of your skin from damage caused by UVA*.
- CoQ10 fights against wrinkles*.

CoQ10 protects the skin from UVA damage



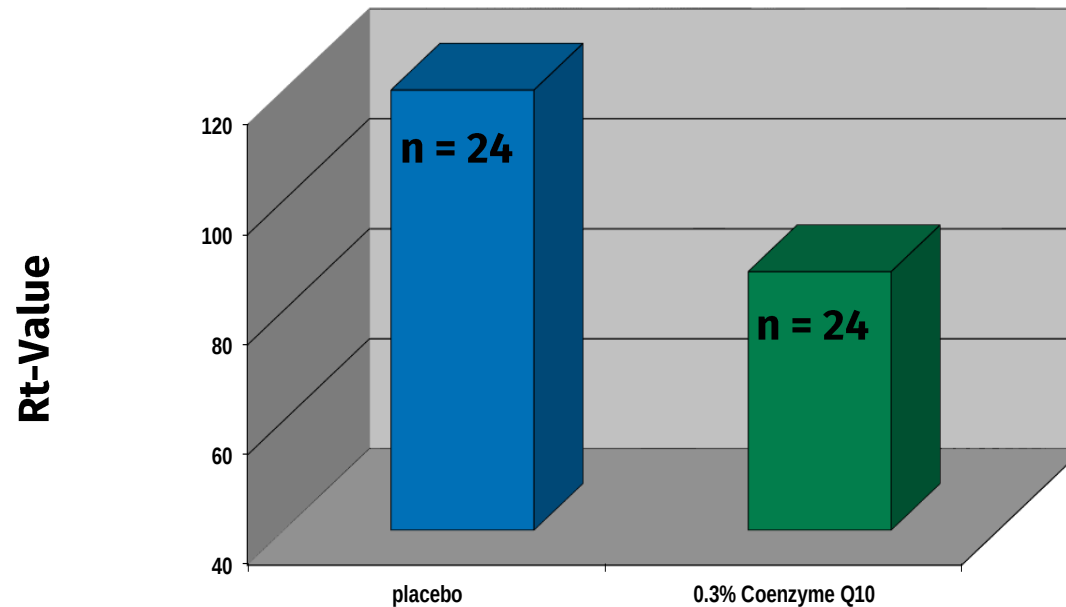
UVA-induced ultra weak photon emission after application of CoQ10



CoQ10 reduces wrinkles



Reduction of wrinkles around the eyes after application of CoQ10 for 6 months



Blatt et al. 1999

Q10 a still unbroken trend



Anti-Wrinkle



Skin Energy



Anti-Age Care
Hand Cream



Coenzyme Q10



Q10 Sunscreen



Protection
Cream



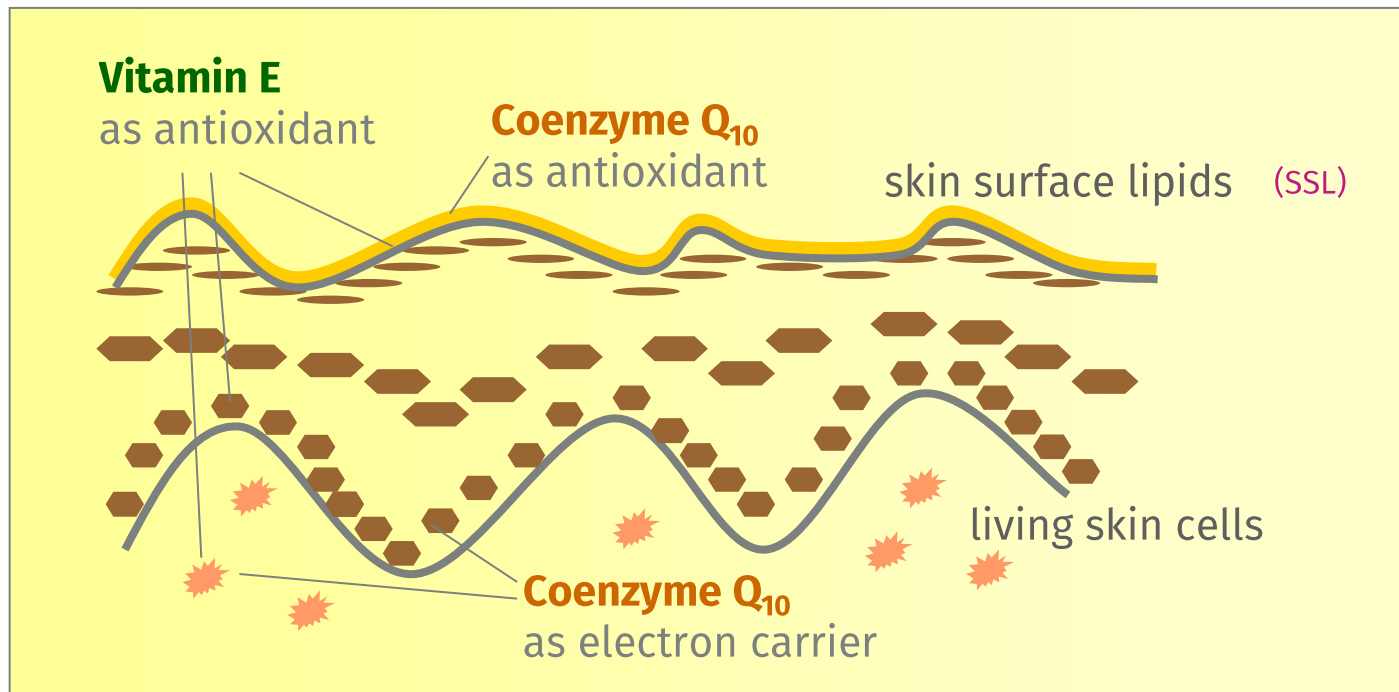
ALL-Q® plus at a glance



- Well balanced combination of the two major anti-oxidants CoQ10 and Vitamin E in a liquid form
- Composition ALL-Q® plus (INCI):
 - 7.5% Ubiquinone
 - 20% Tocopheryl Acetate
 - 72.5% C12-15 Alkyl Benzoate
- the ideal anti-ageing active ingredient



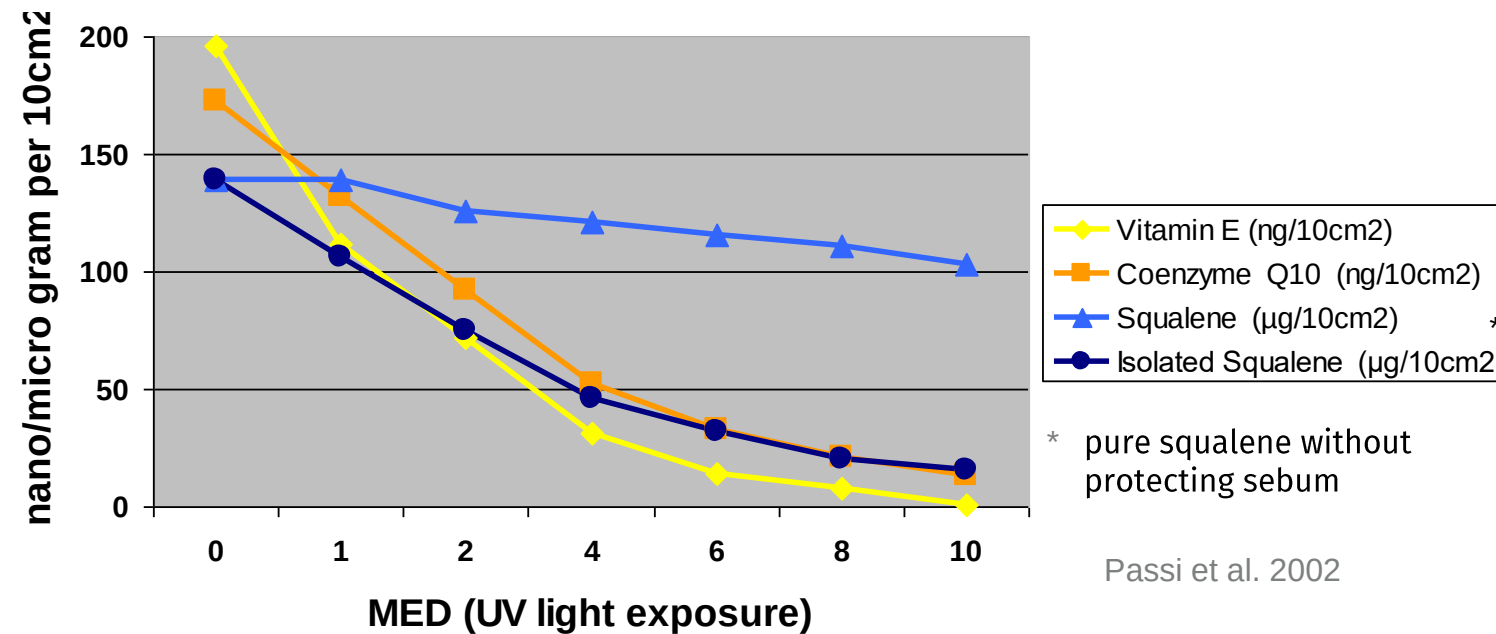
ALL-Q[®] plus mirrors the natural presence of Coenzyme Q10 and Vitamin E in the skin



CoQ10 protects together with Vitamin E the skin surface lipids from peroxidation

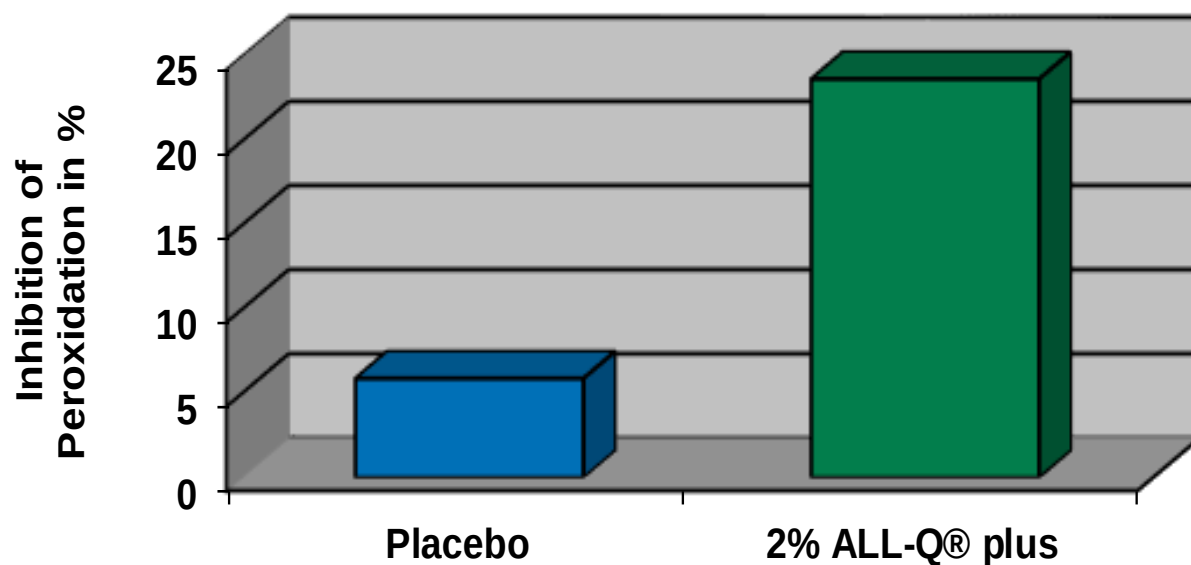


Influence of UV light on levels of skin lipids and antioxidants



Passi et al. 2002

ALL-Q[®] plus protects the skin



- 20 volunteers
- 7 days, once daily application on inner forearm
- UVA-irradiation (10J/cm²)
- Determination (HPLC) of squaleneperoxide formed

ALL-Q[®] plus protects the skin lipids from UV-induced peroxidation

Convenient handling of ALL-Q[®] plus



- ALL-Q[®] plus is a very easy to use liquid
- It is oil-miscible
- Can be directly added to the emulsion



Superior emulsion aspect with ALL-Q[®] plus



- **4% ALL-Q plus or 0.3% crystalline Coenzyme Q₁₀** were added under intensive mixing and homogenization for several hours → photos taken

ALL-Q® plus is stable in formulations with reference to lead component CoQ10

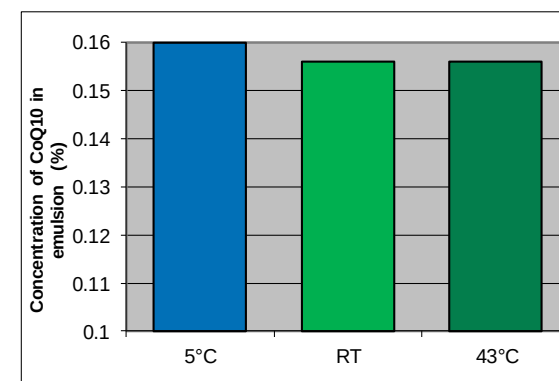


Moisturizing Body Lotion with ALL-Q® plus (100162-012/001)

Ingredients	INCI Nomenclature	%
Arlatone 2121	Sorbitan Stearate & Sucrose Cocoate	2.5
Lipocire Na 10 Pastilles	Hydrogenated Coco-Glycerides	2.5
Tegin M	Glyceryl Stearate	0.8
Myritol 318	Caprylic/Capric Triglyceride	12.5
Phenonip	Phenoxyethanol & Methylparaben & Ethylparaben & Butylparaben & Propylparaben & Isobutylparaben	1
D-Panthenol 75 L	Panthenol	0.5
Keltrol CG T	Xanthan Gum	0.7
Carbopol Ultrez 21	Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.15
Glycerin	Glycerin	4
Water dem.	Aqua	72.55
Disodium EDTA	Disodium EDTA	0.1
ALL-Q® plus	Ubiquinone & Tocopheryl Acetate & C12 15 Alkyl Benzoate	2
KOH 10% solution	Potassium Hydroxide	0.7

Stability checked at 5°C, RT and 43°C after 3 months

- stable formulation: viscosity, pH
- smell, color: i.O
- ALL-Q plus: component CoQ₁₀ (0.15% nominal in emulsion)



Evaluating the color impact of ALL-Q® plus



Body Lotion

with ALL-Q® plus and D-Panthenol 75L

The ultimate antioxidant combination of Coenzyme Q₁₀ and Vitamin E in a gentle, moisturizing lotion to help improve the appearance of aging skin

Phase	Ingredients	INCI Name	% w / w	Supplier
A	Arlatone 2121	Sorbitan Stearate & Sucrose Cocoate	2.50	100347
	Lipocire Na 10 Pastilles	Hydrogenated Coco-Glycerides	2.50	100413
	Tegin M	Glyceryl Stearate	0.80	100415
	Myritol 318	Caprylic/Capric Triglyceride	12.50	100396
	Phenonip	Phenoxyethanol & Methylparaben & Ethylparaben & Butylparaben & Propylparaben & Isobutylparaben	1.00	100394
B	D-Panthenol 75 L	Panthenol	0.50	100288
	Keltrol CG-T	Xanthan Gum	0.70	100400
	Carbopol Ultrez 21	Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.15	100435
	Glycerin	Glycerin	4.00	100396
	Water dem.	Aqua	72.55	
	Edeta BD	Disodium EDTA	0.10	100037
C	ALL-Q® plus	Ubiquinone & Tocopheryl Acetate & C12-15 Alkyl Benzoate	0.5 – 5.0%	100288
	Potassium Hydroxide 10% Sol.	Potassium Hydroxide	0.70	

Procedure

- 1 Heat part A and part B to 85°C.
- 2 When both have reached the same temperature, add part B to part A while homogenizing intensively. Cool down the product to 35°C while stirring.
- 3 Now add part C and homogenize intensively again.
It is generally recommended to use vacuum while producing the emulsion.



Visual aspect indicates ALL-Q[®] plus concentration



0.5%

1.0%

2.0%

3.0%

4.0%

5.0%

APPLICATION CONCEPTS



ALL-Q® plus is the ideal active ingredient for

- skin protection formulations (sun care, environmental stress, etc.).
- regenerating products such as night creams to reduce wrinkles
- intensive treatment products: eye or hand care
- energising applications (wake-up formulations)

Recommended use concentration

- 0.5 to 2.0%
- Intensive treatment: up to 4.0%

CONCLUSION



- **ALL-Q[®] plus** is a well balanced combination of the two skin antioxidants Coenzyme Q₁₀ and Vitamin E.
- **ALL-Q[®] plus** is an easy to use product form of Coenzyme Q₁₀ for personal care applications.
- **ALL-Q[®] plus** has proven skin protecting activities



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