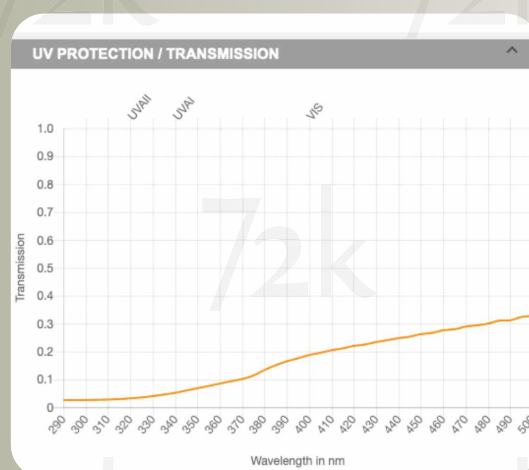
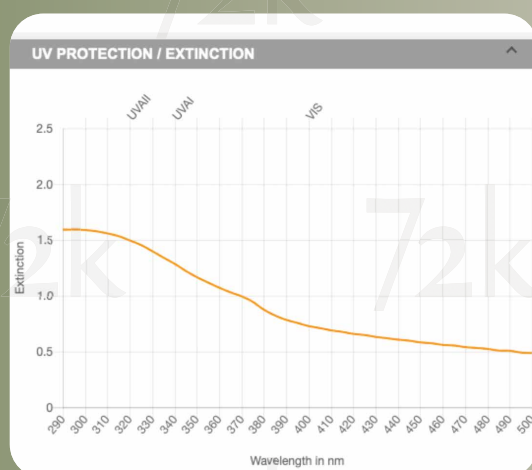




72k SKIN PROTECTION SKIN TEST RESULTS



RESULTS OF IN-VITRO AND IN-VIVO MEASUREMENTS of the Product: 72k sun SPF 30 tinted



UV Extinction and Transmission Curve of 72k sun SPF 30 tinted

SPF (ISO24444:2019) in-vivo determination of the sun protection factor (SPF):

Measured SPF (ISO 24444:2019) in-vivo:

33.7 +/- 2.7 (c)

Rating: **SPF: 30**

According to the European Commission 2006/647/CE recommendation of 22 September 2006 on the efficacy of sunscreen products and the claims made relating thereto, the sunprotection factor provided by the product belong to the category:

'HIGH PROTECTION'

UVA-Metrics (ISO 24443:2021)

UVA-PF: **11.7** with SD:0.2

UVA-PF/SPF: 0.35

Critical wavelength (nm): **378.5 nm**

Broad Spectrum Rating: **PASS**

Rating: **UVA**

In accordance with the data experimentally determined, 72k sun 30 tinted is **COMPLIANT** to UVA protection criteria defined in the Rec. September 22nd 2006, n. 2006/647/CE.



72k SKIN PROTECTION SKIN TEST RESULTS



Assessment of the UVA/UVB ratios of a sunscreen product according to Boots standard (Star Rating System) (IDEA, SGS, France)

GB (UVA Protection according to Boot Star Rating):

UVA/UVB ratio without irradiation: 0.74

UVA/UVB ratio with irradiation: 0.74

Rating: **UVA** +++

UFA-PF (ISO 24442): 10.9 (11.7)

Rating: **PA +++** (Very effective against UVA protection)

In silico-method (BASF) – sunscreen simulation

Blue Light Reduction: **77.5%**

Blue light protection given in % of transmittance reduction between 400-450nm.

Free radical Protection. Radical reduction: **91.1%**

Radical protection given in % of radical formation reduction for an irradiation between 290 and 450nm.



72k SKIN PROTECTION SKIN TEST RESULTS



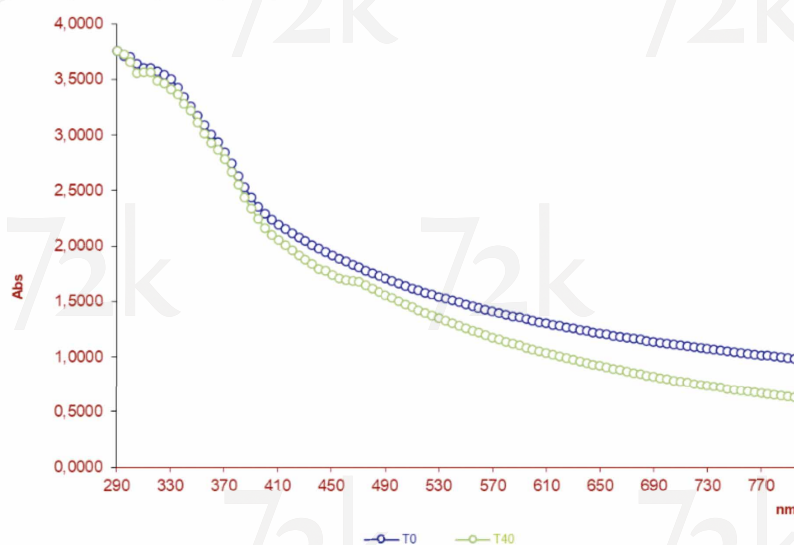
WATER RESISTANCE MEASUREMENT (ISO 16217:2020 + ISO 18861:2020)

72k sun 30 tinted

is resistant to current water until 40 minutes immersion,
therefore can be considered as

WATER-PROOF

Comparison of the average absorption spectra at T0 and T40.



Comparison of the average absorption spectra at T0 and T40

Comment to results

Data reported on the tables 1 and 2 refer to tested product absorption value spectrophotometrically measured in the 290- 800 nm range, at intervals of 5, for each carried out trial.

For each considered experimental time the mean absorption spectrum was calculated and reported on Graph 1.

Data reported on table 4 refer to % absorption variations at T40 vs absorption spectrum at T0, calculated in the 290 - 800 nm range. In the tables 4 the average % variation was also reported. This variation is of -16,15 % after 40 minutes of water immersion. **The product is water resistant.**

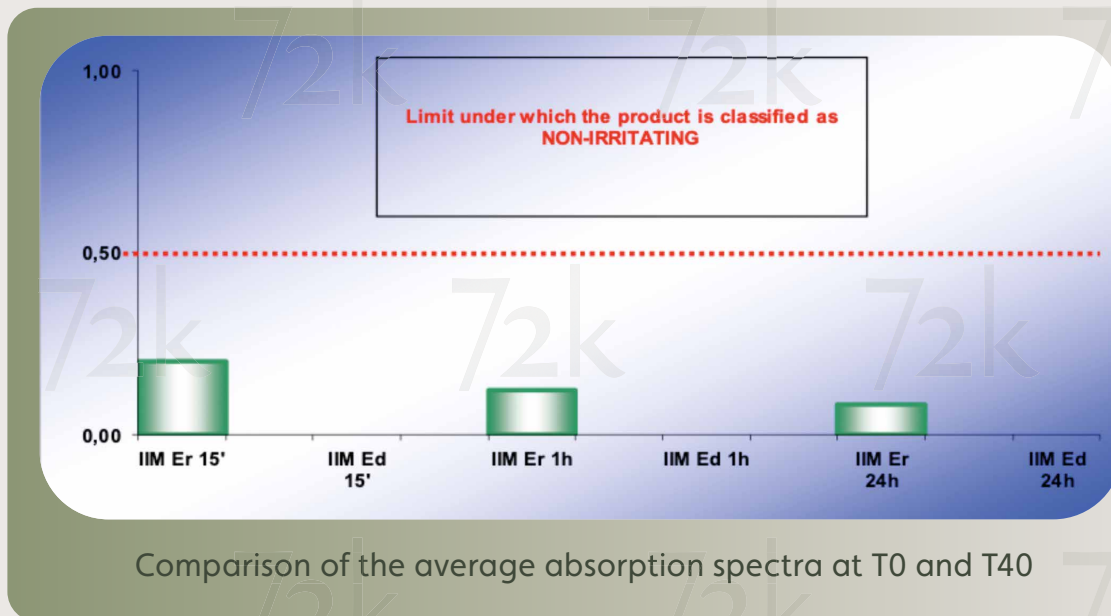


72k SKIN PROTECTION SKIN TEST RESULTS



DERMATOLOGICAL TESTING

48h closed patch test under occlusion on 25 subjects (mixed panel)



CONCLUSIONS

Potential skin irritation of the product has been assessed according to the amended Draize classification. On the basis of the data obtained we deem the product:

72k sun SPF 30 tinted

NON IRRITATING "DERMATOLOGICALLY TESTED"

Sweat Resistance:

IN VITRO EVALUATION OF THE SWEAT RESISTANCE OF A COSMETIC PRODUCT BY USING DIFFEY-ROBSON TEST

This test is aimed to evaluate sweat resistance of a cosmetic product containing UV filters by means of the analysis of the absorption/transmittance spectrum in the region between 290 and 400nm before and after repeated immersion in a solution of artificial sweat. The test is run out according the Diffey-Robson method and allows for the instrumental evaluation of:

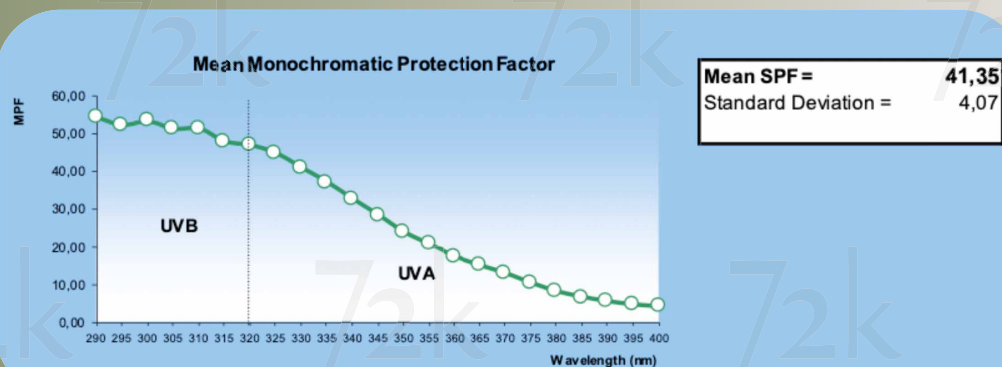
sun protection factor: the instrumental determination of the sun protection factor simulate the application conditions used for in vivo testing, both the applied quantity and substrate interaction. This would produce a reliable in vitro SPF that would positively predict the result of a subsequent in vivo test allowing for time saving in a subsequent in vivo determination of the SPF value.

Conclusion

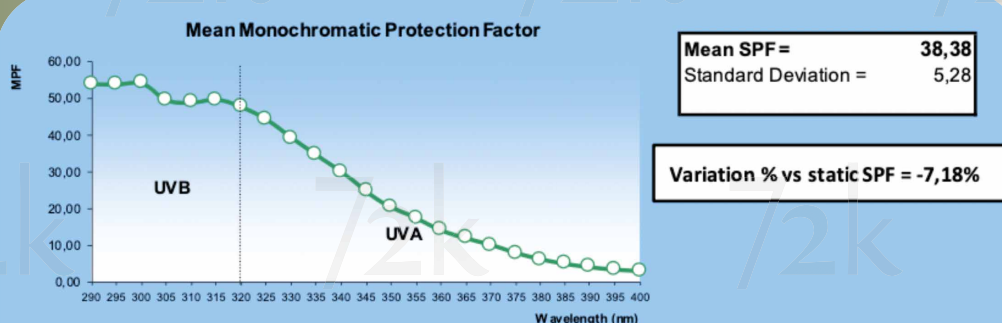
After 40 minutes of immersion, the sun protection factor is still 92.8% of the starting value of 100%. In other words, a decrease of 7.2% was measured.



72k SKIN PROTECTION SKIN TEST RESULTS



Static SPF (before immersion)



SPF after 40 minutes in immersion



72k SKIN PROTECTION SKIN TEST RESULTS



DECLARATION OF COMPLIANCE TO COSMETIC REGULATION (EC) No 1223/2009

We herein declare and certify, that the three described sun protection products, namely:

72k sun SPF 30 tinted (V. 1.3 P3)
72k sun SPF 50+ (V.3.4)
72k sun SPF 50+ tinted (V.3.4 P2)

- are in compliance with the current EU regulation (EC) No 1223/2009
- are manufactured according to ISO22716 and are in conformity with quality standards ISO22716 and specifications established by the manufacturer
- corresponds in its entirety to the samples sent to the testing institut
- are tested according to the corresponding ISO test method at the institute

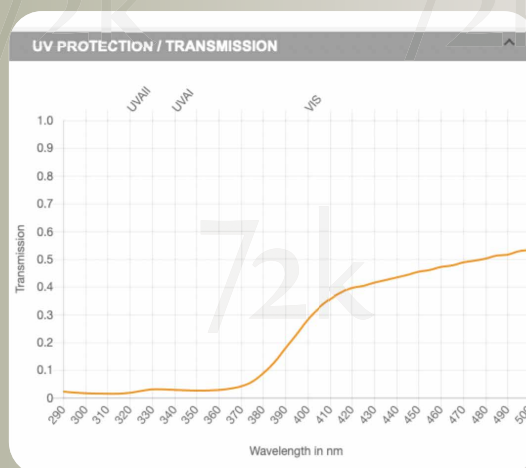
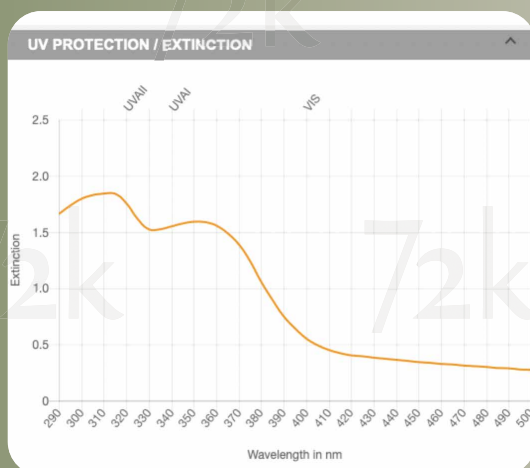


72k SKIN PROTECTION SKIN TEST RESULTS



RESULTS OF IN-VITRO AND IN-VIVO

72k sun SPF 50+ and 72k sun 50+ tinted



UV Extinction and Transmission Curve

SPF (ISO24444:2019) in-vivo determination of the sun protection factor (SPF)

Measured SPF (ISO 24444) in-vivo:

70.4 +/- 6.1 (c)

Rating: **SPF: 50+**

According to the European Commission 2006/647/CE recommendation of 22 September 2006 on the efficacy of sunscreen products and the claims made relating thereto, the sun protection factor provided by the product belong to the category: **«VERY HIGH PROTECTION»**

UVA-Metrics (ISO 24443:2021)

UVA-PF: **35.4** with SD: **1.4**

UVA-PF/SPF: **0.50**

Critical wavelength (nm): **381.0 nm**

Broad Spectrum Rating: **PASS**

Rating: **UVA**

In accordance with the data experimentally determined, the 72k sun 50+ and 72k sun 50+ tinted are **COMPLIANT** to UVA protection criteria defined in the Rec. September 22nd 2006, n. 2006/647/CE.



72k SKIN PROTECTION SKIN TEST RESULTS



Assessment of the UVA/UVB ratios of a sunscreen product according to Boots standard (Star Rating System) (IDEA, SGS, France)

GB (UVA Protection according to Boot Star Rating):

UVA/UVB ratio without irradiation: 0.74

UVA/UVB ratio with irradiation: 0.74

Rating: **UVA** +++

UFA-PF (ISO 24442): 23.7 (35.4)

Rating: **PA +++++** (Extremely effective against UVA protection)

In silico-method (BASF) – sunscreen simulation

Blue Light Reduction: **61.0%**

Blue light protection given in % of transmittance reduction between 400-450nm.

Free radical Protection. Radical reduction: **93.8%**

Radical protection given in % of radical formation reduction for an irradiation between 290 and 450nm.



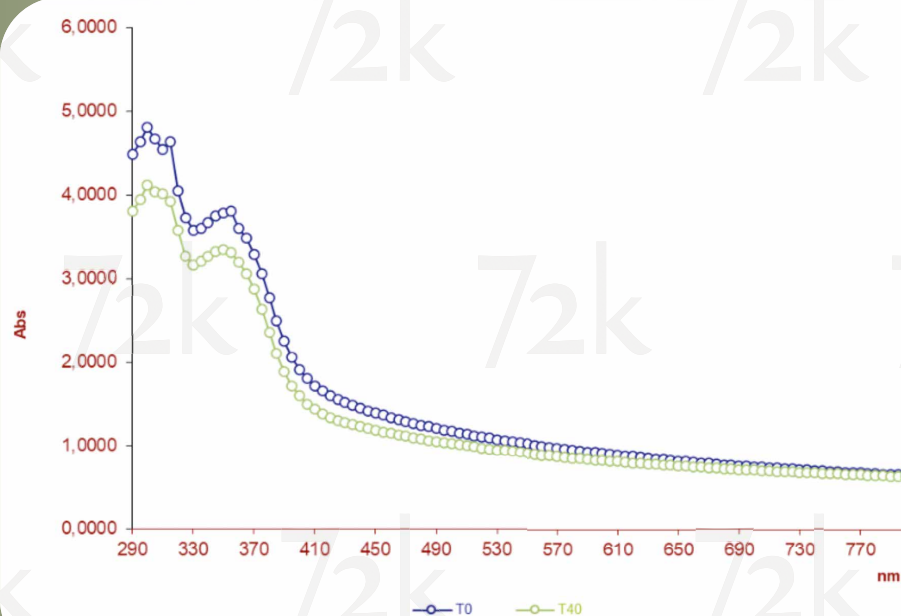
72k SKIN PROTECTION SKIN TEST RESULTS



WATER RESISTANCE MEASUREMENT (ISO 16217:2020 + ISO 18861:2020)

72k sun 50+ and 72k sun 50+ tinted

are resistant to current water until 40 minutes immersion,
therefore can be considered as
WATER-PROOF



Comparison of the average absorption spectra at T0 and T40

Comment to results

Data reported on the tab/es 1 and 2 refer to tested product absorption value spectrophotometrical/y measured in the 290 - 800 nm range, at intervals of 5, for each carried out trial.

For each considered experimental time the mean absorption spectrum was calculated and reported on Graph 1. Data reported on tab/e 4 refer to % absorption variations at T40 vs absorption spectrum at T0, calculated in the 290 - 800 nm range. In the tab/es 4 the average % variation was also reported. This variation is of -10,11 % after 40 minutes of water immersion. **The product is water resistant.**

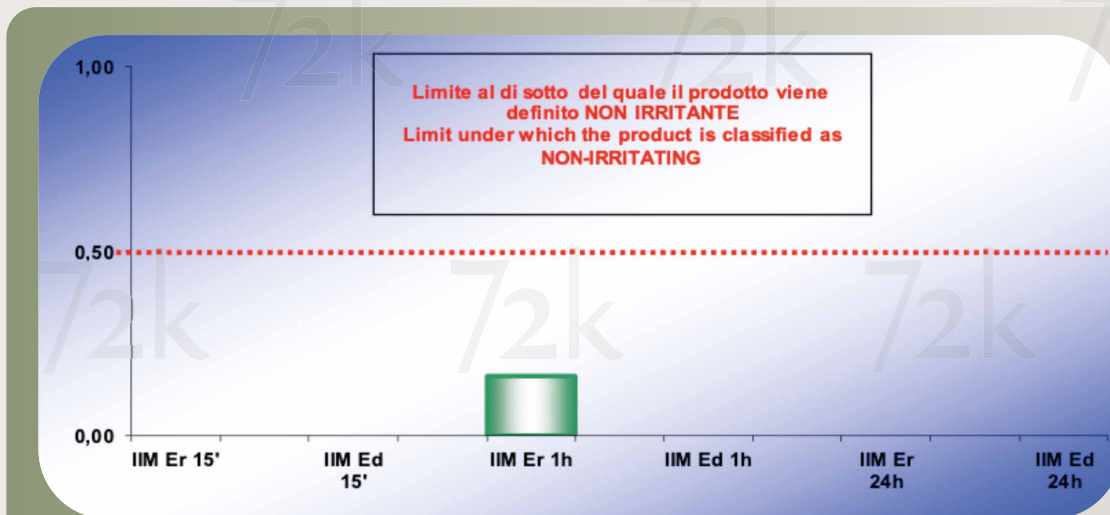


72k SKIN PROTECTION SKIN TEST RESULTS



DERMATOLOGICAL TESTING

48h closed patch test under occlusion on 25 subjects (mixed panel)



Comparison of the average absorption spectra at T0 and T40

CONCLUSIONS

Potential skin irritation of the product has been assessed according to the amended Draize classification. On the basis of the data obtained we deem the products: **72k sun 50+ and 72k sun 50+ tinted**

NON IRRITATING "DERMATOLOGICALLY TESTED"

Sweat Resistance:

IN VITRO EVALUATION OF THE SWEAT RESISTANCE OF A COSMETIC PRODUCT BY USING DIFFEY-ROBSON TEST

This test is aimed to evaluate sweat resistance of a cosmetic product containing UV filters by means of the analysis of the absorption/transmittance spectrum in the region between 290 and 400nm before and after repeated immersion in a solution of artificial sweat. The test is run out according the Diffey-Robson method and allows for the instrumental evaluation of:

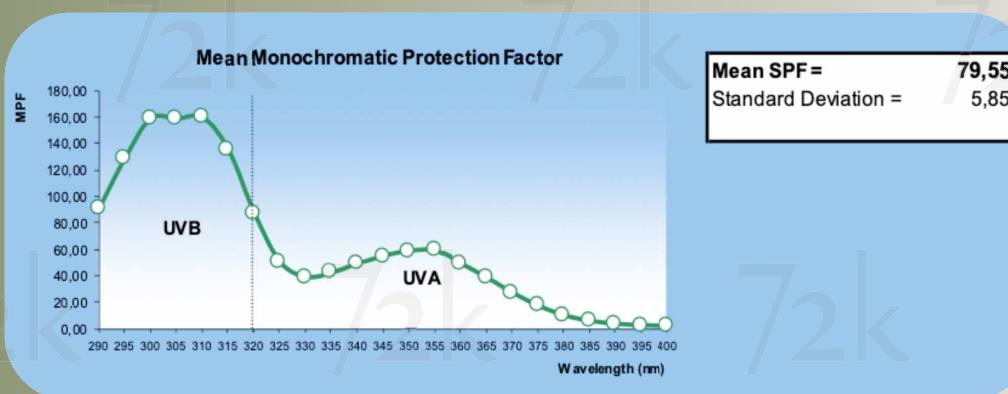
sun protection factor: the instrumental determination of the sun protection factor simulate the application conditions used for in vivo testing, both the applied quantity and substrate interaction. This would produce a reliable in vitro SPF that would positively predict the result of a subsequent in vivo test allowing for time saving in a subsequent in vivo determination of the SPF value

Conclusion:

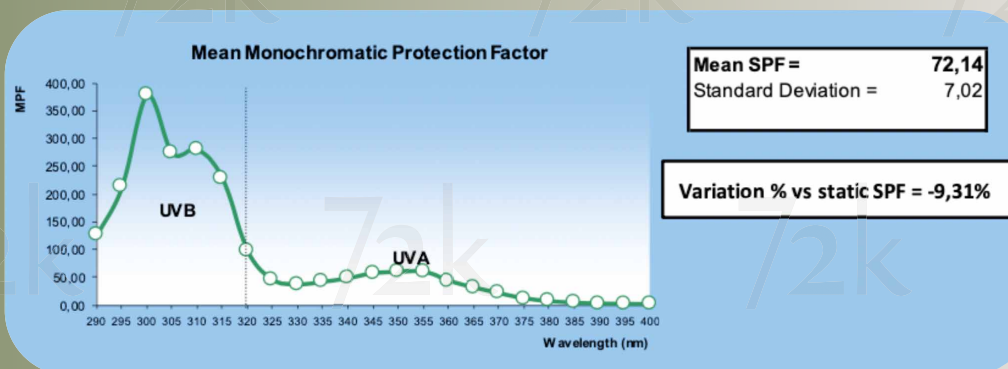
After 40 minutes of immersion, the sun protection factor is still **90.69%** of the starting value of 100%. In other words, a decrease of 9.31% was measured.



72k SKIN PROTECTION SKIN TEST RESULTS



Static SPF (before immersion)



SPF after 40 minutes in immersion



72k SKIN PROTECTION SKIN TEST RESULTS



DECLARATION OF COMPLIANCE TO COSMETIC REGULATION (EC) No 1223/2009

We herein declare and certify, that the three described sun protection products, namely:

72k sun SPF 30 tinted (V. 1.3 P3)
72k sun SPF 50+ (V.3.4)
72k sun SPF 50+ tinted (V.3.4 P2)

- are in compliance with the current EU regulation (EC) No 1223/2009
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