



FIFLOW®

IMPACT OF FIFLOW® BB 61 ON REDNESS AND WHITENING

FIFLOW® products are fully fluorinated perfluorocarbons, which have a high capacity to carry gases, notably Oxygen, Nitrogen and Carbon Dioxide.

Fiflows are completely inert, stable and heavy liquids (density above 1,8). Even the most volatile Fiflow® are safe to use, and they have no flash point.

Fiflows have specific surface characteristics. They are not oil soluble or water soluble, but omniphobic repelling other ingredients in the formulation, acting as a co-emulsifier. Fiflows create instantly a third phase and stabilizes the emulsion increasing considerably the hexagonal structure of the micelle.

The surface charge of Fiflows is very negative and hence Fiflows are very easy materials to formulate with.

No incompatibility with any cosmetic ingredients is known, as very inert materials, Fiflows are not sensitive to any chemical reactions.

Fiflows provide an instant refreshing and brightening effect to the skin, ideal in Asia, due to its very emollient character, creating a thin film application. They improve texture in formulations offering a very smooth and soft feel.

FIFLOW® BB products provide instant bubbling effects for skin care applications. They are ideal for bath and cleansing products or mask and serum applications, where visual foaming is desired.

Tests used

Videoscope

Skin Colour

Purpose of the study

Fiflow® products are fully fluorinated perfluorocarbons, which have a capacity to carry gases, notably Oxygen, Carbon Dioxide and Nitrogen.

The goal of this study is to show the efficiency of **FIFLOW® BB 61** on redness and whitening:

FIFLOW® BB 61 (INCI : Perfluorohexane (and) Perfluorodecalin (and) Pentafluoropropane) which provides instant bubbling effects for skin care applications. It is an ideal ingredient for anti-wrinkle products as it has an instantaneous dermal filling and muscular relaxation effect. It also has long-term effects due to its capacity to supply oxygen to the skin.

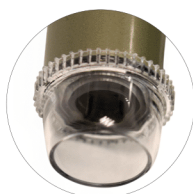
One formula containing **FIFLOW® BB 61** has been studied :

Pink Extra Foaming Bubbling Mask (PFI1305CS) containing 10% of **FIFLOW® BB 61**.

Equipment

- Videoscope

This probe is an electronic video microscope with 20-50X magnification. It provides high quality close-up images of the surface of the skin using a polarized or non polarized white light as light source.



- Skin Colour

This probe measures different color systems including CIE L*a*b* and erythema/melanin index to provide information about the pigmentation level.



Protocols

A location on the forearm of the subject is observed with the Videoscope before application of the product. Measures of the redness are done with the skin color probe.

Some Pink Extra Foaming Bubbling Mask is spread on the same location than before (inside a 3cm-diameter circle).

Pictures and measures are done right after the application of the product and after 10 minutes.

Results

Whitening effect : Pink Extra Foaming Bubbling Mask with 10% of **FIFLOW® BB 61**.



Before application.

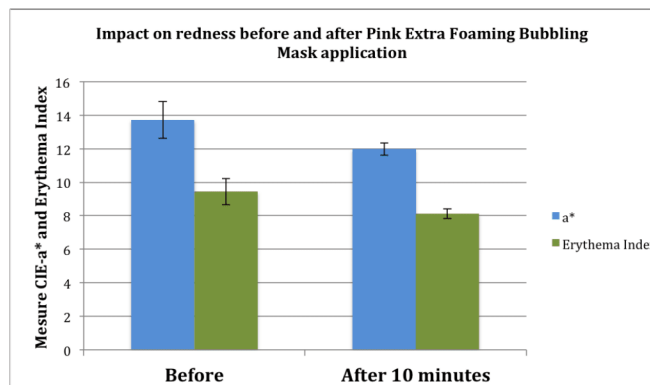


After application, T =2 minutes.



After application, T =10 minutes.

Redness : Pink Extra Foaming Bubbling Mask with 10% of **FIFLOW® BB 61**.



Pink Extra Foaming Bubbling Mask containing 10% of **Fiflow® BB 61** reduces significantly skin redness (t-test, P < 0,05).

Conclusion

Skin's uptake of Oxygen starts to decline at age 20 and is reduced by 50% by age of 50.

Oxygen depletion and Carbon Dioxide accumulation lead to poor cell respiration which causes dehydration, uneven skin tone and dull skin. It is probably the largest contributor to the premature aging of the skin, as Carbon Dioxide hinders or stops bio-pathways for cell metabolism.

FIFLOW® BB 61 can solubilise Oxygen and Carbon Dioxide, mimicking the function of hemoglobin. **FIFLOW® BB 61** carries Oxygen into the dermis, where it will diffuse from a region of higher partial O2 pressure. As Carbon Dioxide is more soluble in **FIFLOW® BB 61** than Oxygen, it will immediately replace Oxygen in **FIFLOW® BB 61** and will be carried out by it. This will allow cells to breathe normally and refresh their biological functions, leading to much better skin appearance.