



FIFLOW® AQI

EFFICACY OF FIFLOW® AQI AS A RESCUE FOR POLLUTED SKIN

FIFLOW® AQI (Perfluorohexane (and) Perfluoroperhydrophenanthrene (and) Perfluoro Dimethylethylpentane) is a completely inert liquid, which has the capacity to clean the skin from gas pollutants. It functions as our blood, by partial air pressure, releasing Oxygen and capturing gaseous pollutants from the skin with a simple physical phenomena. It is the only gas capturing ingredient in cosmetic use, which brings back a healthy level of oxygen to skin cells.

Fine particulate matter (PM2.5) is an air pollutant that is a concern for people's health when the levels are high. PM2.5 are tiny particles or droplets in the air and it is a well-used term in anti-pollution skin care.

Ground-level ozone, sulfur dioxide, carbon dioxide, carbon monoxide and nitrogen dioxide are important contaminants too and are monitored to calculate **air quality index (AQI)**.

This study shows the efficacy of our **FIFLOW® AQI** to capture gaseous pollutants.

Tests used

pH measurement

PRODUCTS

The table below introduces the studied product:

Product Name	Sample/Batch n°	INCI Name
Fiflow® AQI	L16H1801	Perfluorohexane (and) Perfluoroperhydrophenanthrene (and) Perfluoro Dimethylethylpentane

To have comparable assessment, all measurements have been performed on the following conditions:

Date	Products Studied	Time of Measurement	Atmospheric Pressure	Outside Temperature	Weather	Outside Relative Humidity	Room Temperature of the evaluation room	Relative Humidity of the evaluation room
From 09/06/16	Fiflow® AQI	10:00 - 12:00 am (before)	1019 hPa	Around 22°C	Sunny day	Around 57%	21 °C	59 %

PH MEASUREMENT

Assessment protocols

- A sample of **Fiflow® AQI** is loaded with CO₂ (pollutant)
- O₂ content of **Fiflow® AQI** loaded with CO₂ is checked with an oxygen measurement
- **FIFLOW® AQI** and **Fiflow® AQI** loaded with CO₂ are respectively added in neutral water (pH 7,00- approximately) with a 50:50 ratio
- pH of each mixture of **Fiflow® AQI** with water is measured.

Results

- O₂ content in **Fiflow® AQI** loaded with CO₂: <2%

We can conclude that **FIFLOW® AQI** has been correctly loaded with CO₂ to replace O₂.

The table below summarizes the pH results:

FIFLOW® AQI loaded with CO₂ reduces pH of water.

	Water	Fiflow® AQI + Water (50:50)	Fiflow® AQI loaded with CO ₂ + Water (50:50)
pH	7,11	7,10	4,65

CONCLUSION

The water used for this study had an initial pH of 7,11. After adding **Fiflow®** loaded with CO₂, pH is 4,65.

This phenomenon is due to the presence of CO₂, which acidifies water. A molecule of CO₂ reacts with a water molecule to form carbonic acid (CO₂ + H₂O → H₂CO₃). This weak acid (pKa1= 6,37) dissociates itself spontaneously to H⁺ (and HCO₃⁻), which will cause a pH reduction.

Moreover, no change was observed in terms of pH after adding normal **FIFLOW® AQI** (7,11 to 7,10).

This confirms that **FIFLOW® AQI** captured the CO₂, which decreases water pH.

This is why **FIFLOW® AQI** is a unique rescue for polluted skin.