



Wildon, 02.01.2022

Prot. 01.VFF-EC003896-2021

Report for Photoprotective Technologies on “Melanin eyewear for volcanological applications”

Our collaborator Dr. Brosch has just concluded a fieldwork campaign on Mt Ruapehu Volcano, North Island, New Zealand. He received from your company, as part of the VFF Mare Nostrum eV World of Volcanoes programme, several samples of lenses and eyewear to be tested for usability in volcanic environments. For this fieldwork occasion, he took the provided fit-over and safety eyewear on to Mt Ruapehu Volcano. The aim was to perform preliminary test directly in harsh volcanic environments to test out the reliability, durability and quality of the supplied samples.



Melanin eyewear products from Photoprotective Technologies posing on Mt Ruapehu Volcano, New Zealand, with Mt Tongariro Volcano in the background, featuring the famous Ngauruhoe cone, which served as Mt. Doom in the Lord of the Rings trilogy. These eyewear products were used to conduct volcanological rock sampling.

Dr. Ermanno Brosch from Massey University headed the expedition and carried out several sampling tasks on volcanic rocks exposed on the flanks of Mt. Ruapehu.

“The weather conditions were excellent but on volcanoes shadow is rare. Hence, good protective eyewear is very important for protection against sunlight, especially here in New Zealand with higher than usual UV radiation”.

Dr. Brosch opted to use the safety goggles with high contrast melanin glacier sun lenses with silver coating and polarized lenses.



Dr. Brosch sampling volcanic rocks on Mt Ruapehu, New Zealand using the high contrast melanin glacier sun safety goggles.

“I was very impressed by the quality of these safety goggles. Not only did they fit over my eyes perfectly, therefore sealing off any fissures which might lead to volcanic ash entrance due to wind or rock splinters while collecting samples, but the reception of the colours was astonishing”, says Dr. Brosch.

He explained that the safety goggles filtered out the blue light wavelengths which are disturbing while carrying out field work in an environment where light strongly reflects on bright volcanic rocks and snow surfaces.



Dr. Brosch inspecting a volcanic rock sample with snow covers and dramatic volcanic landscape on Mt Ruapehu volcano in the background.

“I will certainly continue to use these products in future fieldwork missions in volcanic environments here in New Zealand and elsewhere. For me, the two main strengths of this product are the high-quality protective melanin lenses and the 2-in-1 combination of safety goggles and sunglasses.”

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