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Chlorophyll in Your Lip Balm?

Olive oil, extracted from the olive fruit, may lose chlorophyll content through processing. Chlorophyll has been shown to have health benefits in preventing cancer, tissue repair, and detoxification (Seibold 1990). Research was conducted to analyze lip balms made from various grades of olive oil for ultraviolet radiation protection capabilities. The researcher believed extra virgin olive oil would have the highest chlorophyll content and the greatest ultraviolet protection. A spectrometer was used to analyze absorbance peaks for relative chlorophyll amounts found in Bertolli extra virgin, classic, and extra light, and in Crisco extra virgin, pure and light grades. Oils were placed in separate Petri dishes. Ultraviolet detecting beads were placed below each sample, an ultraviolet light held directly above the sample, and the time recorded for the beads to turn a light color. An empty control dish was analyzed. The oil was then mixed with 3mL of beeswax to make lip balm and analyzed. Extra virgin grade demonstrated highest absorbance of chlorophyll, peaking at 1.5 in the 400-450 nm range, and at 0.5 in the 650-700 nm range. Supporting the hypothesis: extra virgin olive oil had a longer average time to change bead color (Bertolli - 17.22s., Crisco- 16.59s.). Times decreased for Pure, Extra Light, Classic, Light, and Extra Light grades (15.58, 14.85, 13.78, and 12.06 seconds respectively); control comparison of 6.93 seconds. Mixed with beeswax, the ultraviolet protection increased: both extra virgins and extra light showing no change until 20 seconds, Pure – 25, Classico and Light at 30 seconds.