Anthocyanin of Beta Vulgaris.

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If a freshly made solution of chlorophyll is placed in a transparent vessel in the direct sunlight it is well known that in a few hours the chlorophyll will be broken down and will become more or less brown in color. If, however, part of the freshly made solution of chlorophyll is placed in the dark it will remain apparently unchanged in color even after twenty-four hours or longer. The above mentioned behavior of chlorophyll acts quite differently from the anthocyanin of Beta vulgaris. The anthocyanin of this plant forms one of those examples where the pigment forms in the subterranean parts. The behavior of this pigment with reference to the light is quite different as regards preservation in the light. If a strong solution of the anthocyanin of Beta vulgaris is placed in a test-tube in darkness it will continue to preserve its normal color for more than a week. Quite different from chlorophyll if a strong solution of this anthocyanin is exposed in a test-tube in direct sunlight it will retain its normal bright color for a week, or sometimes more, or until broken down and disorganized by bacterial action. This latter effect finally happens to the solution of anthocyanin of Beta vulgaris in the dark. So that whether in the light or dark the color remains almost the same length of time. While it is clear that the presence of anthocyanin in various plants is not important like chlorophyll, still a comparative, exhaustive study of the two pigments under different physiological conditions is much to be desired and would make a valuable contribution.