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Physicochemical Characteristics Polyphenols as Antioxidants SHINYOUNG PARK, RICHARD KYUNG, CRG-NJ — The aim of this study was to assess the physicochemical characteristics and antioxidant activity phenolic compounds. Phytoncide extracts such as terpene, essential oils and flavonoid from trees have shown antioxidant effects. Polyphenols are a large family of naturally occurring organic compounds characterized by multiples of phenol units. Many of them have been found in plant-based foods and some are structurally and functionally related to flavonoids phenolic compounds. In this project, thermodynamic and stereochemical properties of several types of biochemical molecules that can be used as a biological antioxidant were studied. Computational and biomedical simulations were used, and have been proven useful in assessing the physicochemical stability of molecules. Molecular editing programs were used to model, optimize, and compare the resulting molecular optimization energies of the phenolic compounds.

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