

**COMPARISON OF CAFFEINE CONTENTS IN DARK
CHOCOLATE AND WHITE CHOCOLATE USING HIGH
PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)**

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ABSTRACT

COMPARISON OF CAFFEINE CONTENTS IN DARK CHOCOLATE AND WHITE CHOCOLATE USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)

This study was conducted to compare the amount of caffeine in two types of chocolate from two different brands. Caffeine was extracted from dark chocolate and white chocolate samples by using liquid-liquid extraction (LLE) method and chloroform as extracting agent. Then, the concentration level of caffeine was determined by using high performance liquid chromatography (HPLC). The calibration curve of standard solutions showed linearity of $y = 420.41x + 14.565$ and $R^2 = 0.99978$. The data shows that dark chocolates from Brand A and Brand B contain 0.034 mg/g and 0.035 mg/g of caffeine contents respectively, while white chocolate from both brands contain 0.002 mg/g of caffeine contents. Since all chocolate samples contain caffeine lower than a maximum value recommended by regulations which is 1.25 mg/g so, chocolate samples used in this analysis can safely be consumed by all generations.