

# Comparative Evaluation of Total Carbohydrate Content in Various Nuts and Dry Fruits by Using Anthrone Methods

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**Abstract:** *This study aims to estimate the total carbohydrate content in various nuts and dry fruits using the Anthrone method, a widely accepted colorimetric technique for carbohydrate quantification. Nuts and dry fruits are important dietary components, offering a rich source of energy, fiber, and micronutrients. To determine the nutritional value and possible health advantages of different nuts and dry fruits, it is essential to estimate their total carbohydrate content. The purpose of this study was to use the anthrone method to measure the total amount of carbohydrates in dry fruits and nuts that are frequently consumed. The Anthrone reagent reacts with carbohydrates under acidic conditions to produce a green-colored complex, which is measured spectrophotometrically to determine carbohydrate concentration. Samples including almonds, cashews, walnuts, raisins, dates, and figs were analyzed. The results revealed that dry fruits contain significantly higher carbohydrate levels, primarily due to their natural sugar content, while nuts exhibited lower carbohydrate concentrations, dominated by complex carbohydrates and dietary fiber. This variation underscores the nutritional diversity of these food groups and highlights the importance of accurate carbohydrate estimation for dietary planning and food labeling. The Anthrone method proved to be a simple, rapid, and reliable approach for carbohydrate analysis, making it suitable for routine nutritional assessments in food science and dietetics.*

**Keywords:** Anthrone Method, Carbohydrate Content, Dry Fruits, Nuts, Spectrophotometer

