

THE AGILENT CARY 60 UV-VIS SPECTROPHOTOMETER – A LABORATORY ESSENTIAL

APPLICATION OVERVIEW



Agilent Cary 60 UV-Vis spectrophotometer.

Introduction

Agilent Technologies offers a broad and powerful suite of analytical tools for the purification and characterization of PEGylated proteins. The Agilent Cary 60 UV-Vis spectrophotometer is an integral part of this multifaceted analytical protocol.

Key benefits of the Agilent Cary 60 UV-Vis spectrophotometer for protein analysis

Accurate and Reproducible Results: The unique Agilent Xenon flash lamp source and the optical configuration of the Cary 60 UV-Vis has been proven to eliminate photodegradation. This ensures that precision samples are not altered or modified by the measurement, allowing all biological molecules to be measured safely, accurately, and reproducibly.

Fast and cost-effective sample analysis: The Cary 60 UV-Vis spectrophotometer is extremely robust with few moving parts and a source lamp that typically lasts more than 10 years (minimizing revalidation costs), and never requires any warm-up. The Cary 60 UV-Vis spectrophotometer delivers a laboratory-essential instrument with rapid startup, ultrafast scanning, and unbeatable performance – ideal for multiuser laboratories.

Regulatory compliance: The Cary 60 UV-Vis is unmatched in regulated environments with software that supports 21 CFR Part 11 and EU Annex 11 compliance, providing controls for system access, user role management, audit trails and electronic signatures. A validation software module is provided as standard allowing for streamlining of operational qualification tests.



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Analysis Example

The enzymatic activity of lysozyme and its conjugate was determined by measuring turbidity changes in bacterial cell suspensions. The absorbance of the suspension was measured at 450 nm, and a decrease in absorbance of 0.001 was defined as one unit of lysozyme activity.

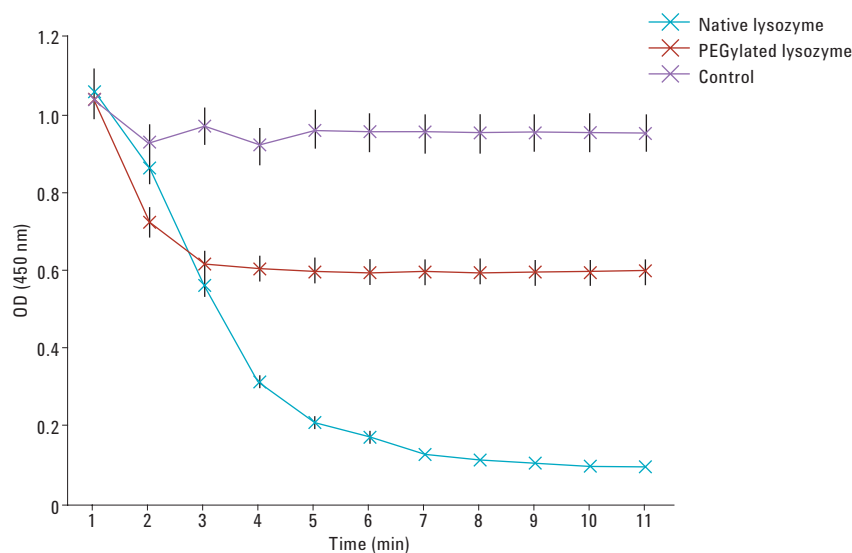


Figure 1. Lysozyme activity measured as turbidity changes in bacterial cell suspensions.

The results of this study show:

- The Agilent Cary 60 UV-Vis spectrophotometer is an essential tool where the purification and characterization of PEGylated proteins is concerned.
- Excellent analytical performance with the demonstrated ability to accurately and reproducibly quantify proteins and measure enzyme activity.
- Data collected provided invaluable information about the degree of PEGylation and its biological activity to a complex, multifaceted experimental study.
- Each spectrum took seconds to collect, and with no instrument warm-up time, could be conducted quickly and easily by any operator.

To download full application note, go to:

<http://www.agilent.com/cs/library/applications/5991-3069EN.pdf>

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