## FLORIDA STATE UNIVERSITY COLLEGE OF ARTS AND SCIENCES

## CHROMATOGRAPHIC METHODS AND CHARACTERIZATION TECHNIQUES FOR PETROLEUM PRODUCTS

By JONATHAN CALEB PUTMAN

A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy Jonathan Caleb Putman defended this dissertation on July 16, 2020.

The members of the supervisory committee were:

Alan G. Marshall

**Professor Directing Dissertation** 

Munir Humayun

University Representative

Christian Bleiholder

Committee Member

Michael Roper

Committee Member

Ryan P. Rodgers

Committee Member

The Graduate School has verified and approved the above-named committee members and certifies that the dissertation has been approved in accordance with university requirements.