SYNTHESIS OF TAURINE-GRAFTED TOFU WASTE-DERIVED SOLID ACID CATALYST FOR GLYCEROL TO SOLKETAL
KETALIZATION: CATALYTIC PERFORMANCE STUDY
Mikha Ferdinand Simanjuntak, Prof. Dr. Triyono, S.U.; Prof. Dra. Wega Trisunaryanti, M.S., Ph.D.,Eng
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

TABLE OF CONTENT

TITLE PAGE.....**ii**
RATIFICATION PAGE.....**iii**
PLAGIARISM-FREE STATEMENT.....**iv**
PREFACE.....**v**
LIST OF REFERENCE.....**vi**
LIST OF TABLES.....**viii**
LIST OF FIGURES.....**ix**
ABSTRACT.....**i**
INTISARI.....**ii**
CHAPTER I INTRODUCTION.....**3**
I.1 Background.....3
I.2 Research Objectives.....6
I.3 Research Benefits.....6
CHAPTER II LITERATURE REVIEW AND HYPOTHESISES FORMULATION.....**7**
II.1 Literature Review.....7
II.1.1 Glycerol valorization and solketal synthesis.....7
II.1.2 Solid Acid Catalysts for Glycerol Ketalization.....8
II.1.3 Tofu Waste-Derived Taurine-Grafted Catalyst and Characterization.....10
II.2 Hypotheses Formulation.....11
II.2.1 Formulation of hypothesis 1.....11
II.2.2 Formulation of Hypothesis 2.....11
II.2.4. Research Design.....12
CHAPTER III RESEARCH METHODOLOGY.....**15**
III.1 Research Materials.....15
III.2 Research Equipment.....15
III.3 Procedure.....16
III.3.1 Preparation of Activated Carbon (AC) from Tofu Waste.....16
III.3.2 Grafting of Taurine Amino Acid onto the Activated Carbon Matrix.....16
III.3.3 Synthesis of Solketal from Glycerol.....17
CHAPTER IV RESULT AND DISSCUSSION.....**18**
IV.1 Acid-catalyzed Solketal Synthesis.....18
IV.2 Result and Characterization.....23
CHAPTER V CONCLUSIONS AND SUGGESTION.....**38**
V.1 Conclusions.....38

SYNTHESIS OF TAURINE-GRAFTED TOFU WASTE-DERIVED SOLID ACID CATALYST FOR GLYCEROL TO SOLKETAL
KETALIZATION: CATALYTIC PERFORMANCE STUDY
Mikha Ferdinand Simanjuntak, Prof. Dr. Triyono, S.U.; Prof. Dra. Wega Trisunaryanti, M.S., Ph.D.,Eng
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

V2 Suggestion..... 39
LIST OF REFERENCE..... **41**
APPENDIX..... **46**