UNDERGRADUATE THESIS

NICKEL AND MOLYBDENUM RECOVERY FROM SPENT HYDROPROCESSING CATALYST USING AMMONIA AND AMMONIUM CARBONATE BASES LEACHING METHOD WITH H_2O_2 OXIDIZER

PEMULIHAN NIKEL DAN MOLIBDENUM DARI KATALIS HIDROPROSES BEKAS MENGGUNAKAN METODE PELINDIAN BASA AMONIA DAN AMONIUM KARBONAT DENGAN OKSIDATOR H_2O_2

ELYSA UMIATI
21/476555/PA/20580

INTERNATIONAL UNDERGRADUATE PROGRAM OF CHEMISTRY
DEPARTMENT OF CHEMISTRY
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
UNIVERSITAS GADJAH MADA
YOGYAKARTA

2025

UNDERGRADUATE THESIS

NICKEL AND MOLYBDENUM RECOVERY FROM SPENT HYDROPROCESSING CATALYST USING AMMONIA AND AMMONIUM CARBONATE BASES LEACHING METHOD WITH H_2O_2 OXIDIZER

PEMULIHAN NIKEL DAN MOLIBDENUM DARI KATALIS HIDROPROSES BEKAS MENGGUNAKAN METODE PELINDIAN BASA AMONIA DAN AMONIUM KARBONAT DENGAN OKSIDATOR H_2O_2

Submitted to fulfill one of the requirements for obtaining a Bachelor of Science in Chemistry

ELYSA UMIATI
21/476555/PA/20580

INTERNATIONAL UNDERGRADUATE PROGRAM OF CHEMISTRY
DEPARTMENT OF CHEMISTRY
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
UNIVERSITAS GADJAH MADA
YOGYAKARTA

2025

RATIFICATION PAGE

UNDERGRADUATE THESIS

NICKEL AND MOLYBDENUM RECOVERY FROM SPENT HYDROPROCESSING CATALYST USING AMMONIA AND AMMONIUM CARBONATE BASES LEACHING METHOD WITH H_2O_2 OXIDIZER

This work has been prepared and created by

ELYSA UMIATI

21/476555/PA/20580

This work has been examined by an examiner
on 9 July 2025

Examiner Team

Mengetahui,
a.n. Dekan FMIPA UGM
Wakil Dekan Bidang Pendidikan, Pengajaran dan Kemahasiswaan

Prof. Drs. Roto, M.Eng., Ph.D.
NIP. 196711171993031020

Prof. Dra. Wega Trisunaryanti, M.S., Ph.D., Eng.
Supervisor I

Prof. Indriana Kartini, S.Si., M.Si., Ph.D.
Examiner I

Dr. Ir. Wawan Rustyawan, S.T., M.T.
Supervisor II

Prof. Tri Joko Raharjo, S.Si., M.Si., Ph.D.
Examiner II