



**PYRO PURGE: ASSESSING THE EFFECTIVENESS OF HOMEMADE
FIRE EXTINGUISHER IN FIRE MITIGATION**

**Lopez, Philip Emanuel U.
Diaz, John Francis A.
Keith, Kerville Godrielle
Villena, John Vincent**
Balayan Senior High School

ABSTRACT

Fire incidents pose significant risks to human safety and infrastructure, especially in low- and middle-income countries where resources for fire prevention and safety are often limited. This study explores the feasibility of using household items as alternative fire extinguishers, aiming to address the shortage of conventional firefighting equipment. The research focuses on creating and evaluating a homemade fire extinguishing solution, termed Pyro Purge, utilizing materials such as baking soda, vinegar, chalk dust, crushed eggshells, lemon juice, dishwashing liquid, and water. Through experimental testing, the effectiveness of Pyro Purge in extinguishing Type A (solid material) and Type B (flammable liquid) fires is assessed. Results indicate that Pyro Purge shows promise in combating both types of fires, offering a cost-effective and accessible solution for fire safety in residential and community settings. The study underscores the importance of empowering individuals with practical tools and knowledge to respond effectively to fire emergencies, contributing to community resilience and safety. Recommendations include further research into the chemical processes underlying homemade fire extinguishers and their

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Keive O. Casimiro, Ma. Rhoda E. Panganiban
Rjay C. Calaguas, Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto

INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume V, Issue IV

May 2024

Available online at <https://www.instabrightgazette.com>



integration into comprehensive fire safety protocols to enhance community preparedness and response capabilities.



Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Keive O. Casimiro, Ma. Rhoda E. Panganiban
Rjay C. Calaguas, Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto
