General

Green Degreaser, eco-friendly cleaning innovation from collaboration between school pupils and UMPSA

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PEKAN, 30 June 2025 – The eco-friendly cleaning innovation, Green Degreaser, developed through the collaboration of Year 6 pupils from Sekolah Rendah Islam Al-Amin Paya Besar (SRIAAPB), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), and MNR Multitech Sdn. Bhd. has successfully made a significant impact in addressing chemical pollution and supporting environmental sustainability.

The product was initially developed from discussions in January 2025 and was fully completed in May 2025.

This project is part of the Triple Helix Collaboration initiative involving educational institutions, universities, and industry players in research, development, and product commercialisation.

According to the young research team, Maryam Mohd Najib, Safiyyah An-Nur Saipolbarin, and Nurul Iman Fakhrul Anuar, the idea to produce Green Degreaser stemmed from concerns about the environmental impact of chemical-based cleaning agents, which often pollute rivers and disturb aquatic life.

“We wanted to create a safer and more environmentally friendly alternative, especially for industrial sectors that frequently use grease and oil cleaners.

“Our Green Degreaser is biodegradable and non-toxic, making it suitable even for use in the food industry.

“Green Degreaser also works to remove grease and oil from various surfaces such as factory machines, motorcycle chains, and cooking utensils,” they explained.

The product is not only effective but also safe if it comes into contact with food, in line with the industry’s emphasis on safety and hygiene.

In efforts to commercialise the product, the school formed a strategic partnership with MNR Multitech Sdn. Bhd. as the manufacturer, while UMPSA provided research expertise.

The estimated market price of the product is RM3.55 per litre, making it a competitive and sustainable product.

This success was also celebrated at the university level when it won a silver medal under the Environmental and Biodiversity Cluster at the CITREX Research Exhibition and received the UMPSA Press Excellence Award.

Moreover, this recognition served as a catalyst for the project to expand to a higher level.

Two Letters of Intent to Collaborate (LoI) were signed; one between SRIAAPB and UMPSA for research purposes, and another between SRIAAPB and MNR Multitech Sdn. Bhd. for the official production and distribution of the product.

The school also expressed its intention to make the development of Green Degreaser a continuous project and a source of income for the school, in addition to providing opportunities for young students to engage in research and innovation from an early age.

Previously, the same student team also developed a ruminant animal feed product based on Napier grass called CubeNape, proving that creativity and innovation know no age and can bring great benefits to society and industry.

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