International

Halal and Biodegradable Food-Grade Grease from UMPSA makes its mark on the global stage

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OSAKA, JAPAN, 21 July 2025 – A groundbreaking product developed through research at Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) has been selected to represent Malaysia at the prestigious World Expo Osaka 2025 in Japan.

The product was created under the leadership of Ts. Mohd Najib Razali, a lecturer from the Faculty of Chemical Engineering Technology and Processes (FTKKP).

Held every five years, the World Expo is the largest international exhibition in the world.

This year’s edition runs from 21 to 27 July 2025, and UMPSA’s innovation will be showcased alongside other world-class technologies.

According to Ts. Mohd Najib, he and his team were deeply honoured when their product was chosen after a rigorous selection process conducted by the Ministry of Higher Education (KPT).

“The process involved evaluating 49 commercialised technology products from Malaysian public universities for international exposure.

“After the screening and evaluation process, 11 of the best products were selected to be exhibited at the KPT Pavilion, located within the Malaysia Pavilion at Expo Osaka 2025,” he said.

The product, a Halal and Biodegradable Food-Grade Grease, was developed with support from UMPSA’s Department of Research and Innovation.



It has since been commercialised by MNR Multitech Sdn. Bhd., a UMPSA start-up company, and has been available in the market since 2024.

“This lubricant is formulated using sustainable, plant-based oils and is completely free of toxic substances. It is safe for indirect contact with food, cosmetics, and pharmaceutical products,” he explained.

Designed for high-temperature industrial applications, the product stands out for its environmentally friendly profile.

It is both halal-certified and biodegradable, making it a sustainable solution for industries that prioritise clean and ethical manufacturing practices.

“This innovation also contributes to the global agenda of achieving net-zero carbon emissions,” Ts. Mohd Najib added.

The product has been certified under several international standards, including NSF H1, Halal, Good Manufacturing Practices (GMP), MyHijau, and ASTM.

These certifications ensure that the product meets global standards for quality, safety, and reliability, making it fully compliant for international use.

“What makes this product even more appealing is its competitive pricing. It offers an affordable, locally produced alternative to imported industrial grease products,” he said.

UMPSA’s Vice-Chancellor, Professor Dr. Yatimah Alias, welcomed the recognition, describing it as a testament to the university’s strength in research and innovation.

She said this global platform presents strategic opportunities to further internationalise UMPSA’s commercial products and enhance the university’s brand visibility worldwide.

A business matching session, organised by the Malaysia External Trade Development Corporation (MATRADE), was also held in conjunction with the Expo.

This session enabled UMPSA researchers to explore strategic partnerships with global industry players, pursue technology-matching opportunities, and further expand the commercial potential of the university’s innovative products.

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