

# Science of removing odours

STORY • MAZLAN SAMAD



The titanium dioxide compound is also sprayed into the aircon ducts.

It's a familiar love-hate relationship. Those who love durians or other pungent but heavenly food will swear that they are the taste of paradise. But those who hate them will detest the lingering odours they leave behind as being the smells of hell.

And if you happen to be carrying these powerful-smelling fruits or foods in your car, one thing is certain – you'll need some industrial-strength deodoriser to at least make your car habitable again.

A new product from Japan that utilizes scientific elements and chemistry to neutralize odour-causing positive ions while keeping the cabin air revitalized and clean is now available in the market.

Called the "IOGENIC Auto Treatment", the system combines science and nano technology in tackling the problem of foul odours and stale air in the vehicle cabin, regardless if it's a coach bus or small saloon car.

Designed by local company Nanoaq Pte Ltd, which adapted the system for use in vehicles, the application of this iogenic treatment is simple, swift and effective. In the preparation stage, the cabin, especially the seats, dashboard and door panels, is manually clean with light detergent to remove any traces of oil, dirt and grime, all of which would render the treatment less effective.

The "IOGENIC" equipment is then placed in the car and this is when the real scientific 'magic' takes place.



The machine sprays a fine mist of titanium dioxide in the cabin.



Combining titanium dioxide and distilled water as a medium, the machine sprays a fine mist of the compound in the cabin. Virtually every nook and cranny in the cabin, from the carpeting and seats to the windscreens and windows, is coated with a thin layer of the titanium dioxide compound.

After about seven minutes of spraying, the machine is turned off to allow the substance to settle. The cabin is then subjected to yet another spray of titanium dioxide for a second coating of the compound. The coatings are odourless and leaves no obvious traces.

With the help of the car aircon, it doesn't take long for the compound to dry, leaving behind a layer of titanium dioxide that is said to last at least three years unless the surface is intentionally and vigorously scrubbed. According to Mr Chua Hwee Woon, CEO of Nanoaq, the titanium dioxide coating has a hardness factor of 7H, which makes it harder than the 5H for most car paints. Furthermore, the

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The unique property of this titanium dioxide is that it is a photo-catalyst whose properties were discovered by two Japanese scientists back in 1964. It was, and still is, called the "Honda-Fujishima Effect". Being a photo-catalyst, the titanium dioxide transforms oxygen and moisture in the presence of light into 'active oxygen', which does a marvellous job in neutralizing the positive ions created by elements such as bacteria, strong odours, stale air and Volatile Organic Compounds (VOCs). These include your durians, salted fish, barbecued meats, cigarette smoke, etc.

Some of the oxidizing agent compounds, which do not require light to work, are sprayed into the deep recesses of

the aircon ducts. This will effectively inhibit the growth of odour-causing bacteria, thus eliminating the problem of foul smells coming out from the aircon.

Apart from its odour-neutralising properties, the compound also offers other benefits: It protects the dashboard and other surfaces from damage and discolouration from ultra-violet light and is stain resistant.

A point to note is that the IOGENIC treatment does not immediately eliminate odours within minutes. But it will certainly speed up the neutralizing process without having to rely on car perfumes and deodorizers. ●

For more information on the IOGENIC treatment, call Nanoaq at 64646223 or check out [www.nanoaq.com](http://www.nanoaq.com)