Dow Fuel Marking Solutions

Fuel Marker Demonstrates Success in United Kingdom & Ireland
Governments Report Progress in Fight Against Fuel Laundering

ACCUTRACE™ Fuel Marker

Innovative Response to Evolving Crime
Fuel fraud, which costs governments globally around $100 billion annually1 occurs when criminals launder tax exempt or rebated fuels and sell them for road use in vehicles. Criminals remove the dyes that differentiate these fuels in order to avoid taxes that generate necessary revenue for governments. Fuel launderers often use the illicitly gained profits to fund organized crime including drugs and human trafficking2. To overcome weaknesses in existing markers in order of fight back against these criminal operations, HM Revenue & Customs (HMRC) of the United Kingdom and the Exchequer of Ireland formed a joint committee to review available technologies. After an independent review, they selected and implemented the ACCUTRACE™ S10 fuel marker, developed by The Dow Chemical Company, in April 2015.

Marker Offers Numerous Advantages
Though invisible to the naked eye and extremely covert to those who don’t know what to look for in a lab, this novel chemistry can be detected quickly using portable gas chromatography systems. Highly robust and resistant to known chemical and physical laundering techniques, the molecular marker stubbornly maintains a unique fingerprint in the fuel, alerting authorities to its intended use. Naturally free from sulfur, fluorine, bromine, chlorine and other hazardous chemical elements, ACCUTRACE™ fuel markers come compatible with existing dyes and markers already in use, adding an extra layer of protection for revenue authorities looking to tackle crime. Based on the same chemical elements as the fuel itself, it does not add any known ozone-depleting additives. It does not present the dioxin-emitting or corrosive properties of halocarbons nor the health risks associated with some metals.

Early Review Indicates Success
A twenty four month review3 presented to the UK Parliament, demonstrates the full impact of the marker’s implementation, and reports that hazardous waste dumping associated with fuel laundering has been dramatically reduced in the United Kingdom. The ACCUTRACE™ fuel marker, hailed as a “game changer”4 in the war on laundered diesel, has supported the collapse of the fraudulent fuels market in Ireland, generating for the Irish Exchequer a revenue windfall estimated at €300 million credited to the marker’s implementation5. Former IRA gang members even hired chemists6 to attempt to remove the marker; thus far, however, they have produced “no evidence of successful removal through known laundering techniques, with criminal gangs even admitting to Irish media7 the futility of their efforts thus far.”

As the UK and Ireland continue to see positive results, other governments should consider implementing ACCUTRACE fuel marking technology to join in the fight against this costly and environmentally hazardous crime.

Did you know that in the first several months of implementation, the combination of the ACCUTRACE™ S10 fuel marker and the preexisting marker enabled 1,299 detections of laundered fuel? Without the presence of the ACCUTRACE marker, as many as 7% of these may have gone undiscovered due to removal techniques that had affected the existing marker without removing the new ACCUTRACE marker.8 In the first two years since the introduction of the new marker, HMRC and other law enforcement agencies found no evidence that fraudsters had laundered the marker. All the evidence indicated that the marker was being effective in helping drive down fuel laundering.8

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1 “How Chemistry is Helping Defeat Fuel Fraud,” Alex Scott, Chemical & Engineering News (Feb 1, 2016)
2 “New device helps put down a marker against fuel pirates,” Cate McCurry, Belfast Telegraph (Feb 19, 2016)
3 HM Revenue & Customs report from December 2017: Combatting Fuel Duty Fraud - Evaluation of the Accutrace Fuel Marker
4 “New fuel marker hailed as ‘game changer’ in war against laundered diesel,” Seamus Enright, The Anglo-Celt (Jan 7, 2016)
5 “Blitz on laundering a boost to Dail’s coffers,” Tom Brady, Belfast Telegraph (Dec 26, 2015)
6 “Scientists working for ex-IRA men in south Armagh unable to crack new diesel marker,” Jim Cusack, Belfast Telegraph (May 19, 2015)
7 “Fuel gangs hire foreign scientist to ‘wash’ diesel,” Debbie McCann, The Irish Mail on Sunday (July 26, 2015)
Laundering capacity decreased from 5,544 m³/week in 2013/14 to 352 m³/week in 2016/17, representing a 93.7% reduction across the whole of the United Kingdom. This information indicates that the presence of the fuel marker has had a significant effect in deterring fuel laundering operations allowing 88% volume reduction of associated hazardous waste from 2013/14 to 2016/17.

10 “Ford highlights new marker testing in fight against diesel laundering,” Department of Justice (Feb 18, 2016)

“The review suggests that the marker is having a very positive effect.”
- Theresa Villiers²
Secretary of State, Northern Ireland

“The new marker, which was introduced last year, has significantly improved HMRC’s capability of detecting this laundered fuel. This is a huge step forward against tackling this type of crime.”
- David Ford¹⁰
Justice Minister, Northern Ireland

“Since the launch of the new marker we have seen a significant reduction in the detection of laundering plants and dumping of waste material associated with laundering activities.”
- Pat Curtis¹⁰
National Oils Lead Investigator, HMRC

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