

# James Duncombe

<b>Qualifications</b>	MSci (Hons) Chemistry University College London, UK
<b>Affiliations</b>	Member of the Royal Society of Chemistry (AMRSC) Associate Member of the Energy Institute (AMEI)
<b>Year of Birth</b>	1993
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## Current Position at CWA

James joined CWA's Oil, Gas and Chemicals department as a Chemist in 2015 after completing a Master's degree in Chemistry from the University College London. His academic background focused on the synthesis of zeolites which are widely used in the petroleum refinery industry. James also has experience in commercial quality control laboratories in the beverage industry.

He is involved in the forensic investigation of contamination incidents and mitigation of claims made on petroleum products, petrochemicals, liquefied gases and vegetable oil cargoes. He also advises on tank cleaning and corrosion issues and bunker quality disputes.

## Specific Expertise and Experience at CWA

James has experience in contamination/degradation issues involving a wide range of cargoes, including; Crude Oil, Jet A-1; Automotive Gasoline; Gasoil; Naphtha; GTL paraffins, Marine fuel oils; Phenol; Styrene monomer; Vinyl Chloride Monomer (VCM); Acetone; Alcohols including Ethanol; Methanol; and Fatty Alcohols; Base oils; Vegetable oils including Sunflower seed, Coconut and Palm oil products; Crude Glycerine; 1,4-Butanediol; Mono and Di-ethylene Glycol (MEG, DEG); Methyl Ethyl Ketone (MEK); Hexene; Wet Process Phosphoric Acid (WPA); Elemental Sulphur; LPG; Ammonia; Butadiene; Liquid Detergent; Myrcene; Photoresists and Adhesives.

He has attended laboratories and refineries in the UK, Europe, Middle East and Asia and is experienced in the test methods and analysis associated with a wide range of cargoes, including extensive experience of ISO 8217 bunker fuel testing and Defence Standard 91-91 Jet A1 analysis. He has also advised on the analysis of petroleum-based contaminants in food products including peas and vegetable oils.

James has assisted in litigations involving petroleum products including marine fuel oil, fuel oil cargoes, Jet A1 fuel and has been involved as an expert witness in a Singapore High Court matter involving high hydrogen sulphide in fuel oil.

James has also attended on board vessels in North America, Europe, the Middle East and Asia to investigate alleged contamination incidents, oversee loading and discharge operations, arrange and oversee cargo sampling and carry out terminal inspections. He has carried out tank inspections and assisted crew with tank cleaning operations. James also has experience in carrying out on-board gas detection for fumigant levels after a casualty.

## Attendances

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|------------------------|--|
| <b>Belgium</b>         | <ul style="list-style-type: none"><li>• Attending joint analyses of bunker fuel samples.</li></ul>   |
| <b>Bermuda</b>         | <ul style="list-style-type: none"><li>• Investigating the cause of a leak of phosphine fumigant into vessel's accommodation, which led to a crew fatality.</li></ul>   |
| <b>China</b>           | <ul style="list-style-type: none"><li>• Joint analysis of cargoes including MEG, gasoline and gasoil.</li><li>• Sampling and analysis of MEG and crude glycerine cargoes.</li></ul>  |
| <b>Greece</b>          | <ul style="list-style-type: none"><li>• Joint analysis of cargo of gasoline.</li></ul>   |
| <b>India</b>           | <ul style="list-style-type: none"><li>• Attending sampling of LPG cargo.</li></ul>   |
| <b>Portugal</b>        | <ul style="list-style-type: none"><li>• Overseeing cleaning operations following carriage of vinyl chloride monomer.</li></ul>   |
| <b>Spain</b>           | <ul style="list-style-type: none"><li>• Inspection of cargo of fertiliser after decomposition and overseeing sampling and discharge operations.</li></ul>  |
| <b>Singapore</b>       | <ul style="list-style-type: none"><li>• Joint analysis of products including bunker fuel, methanol, MEG, naphtha, Jet A1, crude oil, fuel oil, gasoil, GTL paraffin, hexene, butadiene, styrene and oil isolated from yellow peas.</li><li>• Attending sampling operations for cargoes including petroleum products, butadiene and methanol.</li><li>• Inspection of containers after fire on board vessel and sampling adhesive cargo for subsequent analysis for hazardous compounds.</li><li>• Inspecting and sampling vessel engine components after alleged damage.</li></ul> |
| <b>South Korea</b>     | <ul style="list-style-type: none"><li>• Inspecting LNG cargo tank membranes during dry dock operations and taking samples of cuttings for microbial analysis.</li></ul>  |
| <b>Sri Lanka</b>       | <ul style="list-style-type: none"><li>• Attendance to investigate alleged contamination of Jet A1 cargo.</li></ul>   |
| <b>The Netherlands</b> | <ul style="list-style-type: none"><li>• Joint analysis of vegetable oil samples.</li><li>• Assisting crew with tank cleaning following cargo of shale gasoline.</li></ul>  |
| <b>Turkey</b>          | <ul style="list-style-type: none"><li>• Investigating the alleged contamination of coconut oil and palm oil products.</li><li>• Sampling and analysis of Vinyl Chloride Monomer (VCM).</li></ul>   |

**UAE**

- Attendance to investigate alleged off-specification RON in gasoline cargo and assisting with mitigation.
- Joint analysis of samples of MEG cargo.
- Investigating alleged haziness in a cargo of base oil and assisting crew with cargo operations.

**U.K.**

- Joint analysis of bunker fuels and cargoes including gasoil, gasoline, phenol, Jet A1, p-xylene, transformer oil.
- Joint sampling of Jet A1 and p-xylene.
- Inspection of tank coatings after dry docking.
- Investigating the quality of a crude sunflower oil cargo.
- Inspecting tanks for radioactive residues following carriage of LPG cargo.