FUELSTAT®

ConidiaBioscience

FUELSTAT® *ONE*: INNOVATIVE FUEL MICROBIOLOGICAL TESTING

A rapid, *in field* lateral flow test for MBG detection in fuels

Dr. Myrsini Chronopoulou

myrsini.chonopoulou@conidia.com

JIG-MTF, Rome; 9th June 2026

ConidiaBioscience

FUELSTAT®

ConidiaBioscience

- **Conidia Bioscience** research, design, develop, manufacture and globally distribute innovative solutions for fuel systems maintenance
- MBG testing into aviation, marine and land diesel sectors
- Fuel Microbiology contributions across the industry (IATA, EI, ASTM)

25 YEARS FUELSTAT®

ASTM INTERNATIONAL

STRATEGIC PARTNER IATA INTERNATIONAL AIR TRANSPORT ASSOCIATION

IASH - International Association for Stability, Handling and Use of Liquid Fuels, Inc.

energy institute

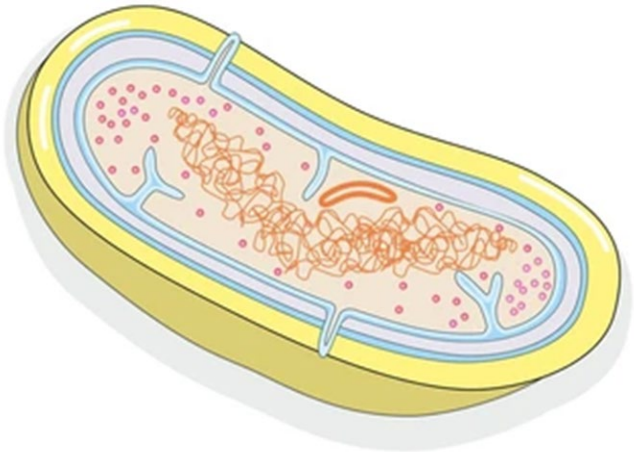
WHAT IS FUELSTAT® *ONE*

- A rapid (20-30 min) diagnostic test for the detection of microbial contamination in fuel systems
- An **in-field** test
- Technology: **lateral flow** test (a biochemical technique that identifies the presence of a specific marker)
- Using a **protein** (Mannose Binding Lectin- MBL) to specifically bind to microbial **carbohydrates**
- Targeting all three groups of known fuel system microbial contaminants (bacteria, filamentous fungi, yeasts) in a **single assay**
- **Fully quantitative** results; digital reading

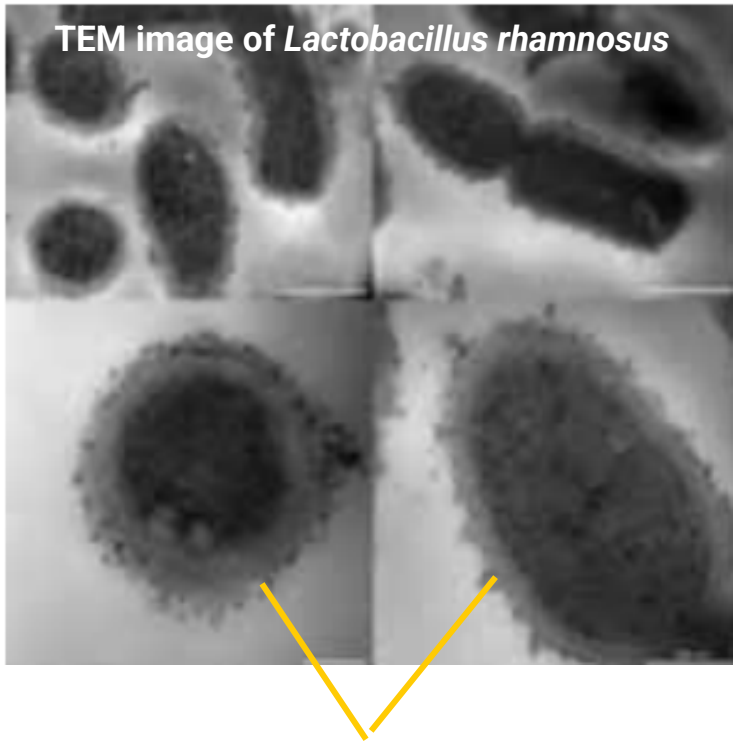
FUELSTAT®
ConidiaBioscience

WHY CARBOHYDRATES?

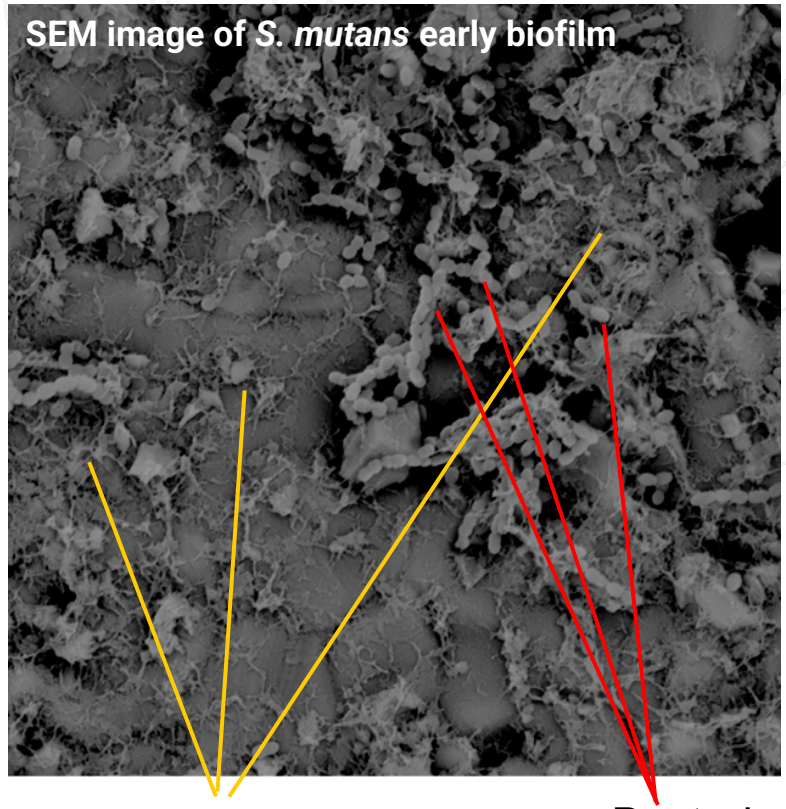
FUELSTAT®
ConidiaBioscience



Microbial cell walls



Extracellular polymeric substances (EPS)



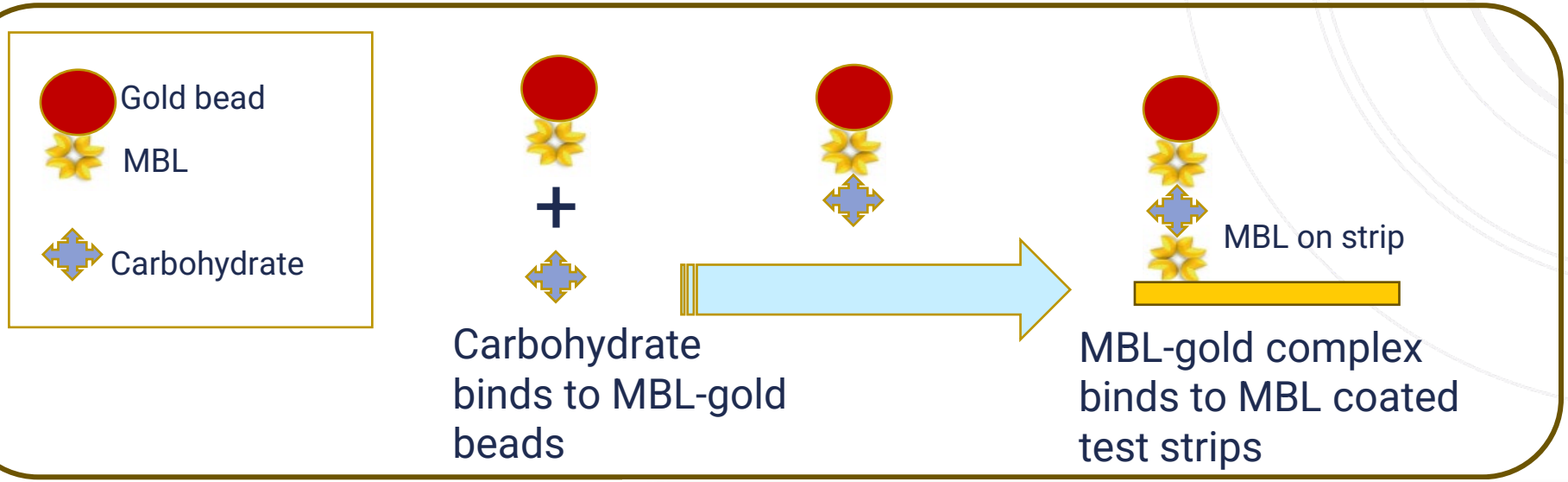
EPS -> 50-90% of biofilms

Bacteria

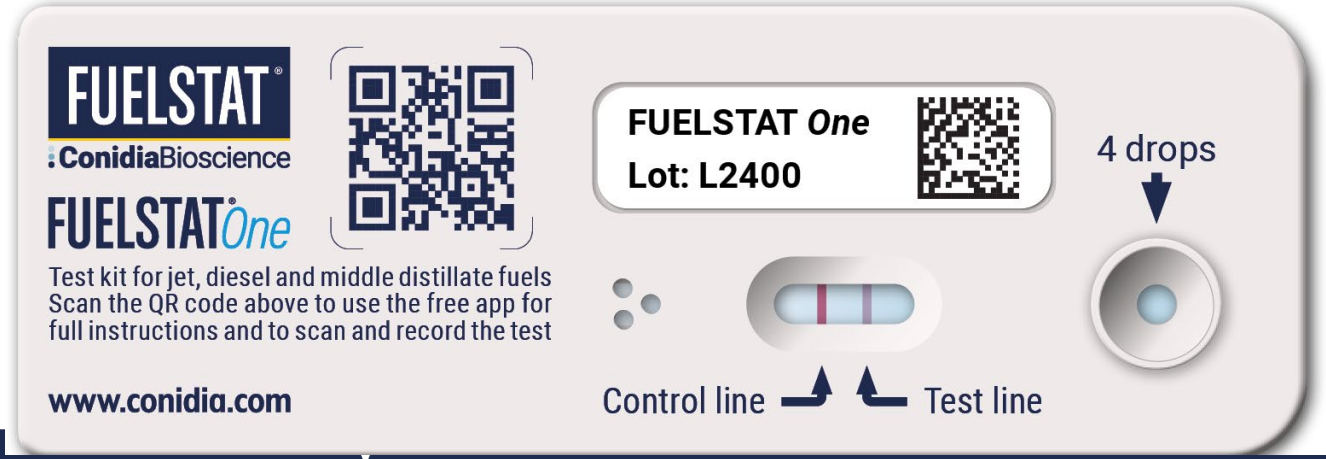
Carbohydrates as a marker for the detection of broad microbial presence.

THE TEST AT A GLANCE

FUELSTAT®
ConidiaBioscience



The more carbohydrates in the sample, the more intense the test line.

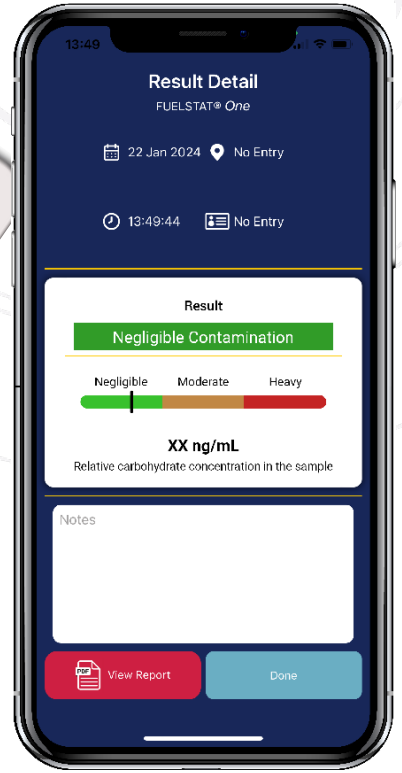


HOW TO USE FUELSTAT® *ONE*

- FUELSTAT® *One* works with both fuel and fuel-associated water phases
- 150 mL of fuel sample; 2 mL of water sample

Step 1: Mix sample with provided blue reagent -> carbohydrates extraction

Step 2: Apply onto the lateral flow device (LFD) and allow to flow through the strip (~15 min).



Step 3: Scan with the **FUELSTAT® Result App**. Result in ng/mL carbohydrate concentration in the sample based on incorporated calibration curve; with Negligible/ Moderate/ Heavy indication.

FUELSTAT® Report

- Fully **detailed report** can be instantly produced in PDF format
- Excel format. All microbial testing data on one spreadsheet
- **Traceability** of compliance centrally
- **Trend analysis** and identification of hotspots
- Planning of correct testing program

FUELSTAT One ANALYSIS REPORT ConidiaBioscience

This test for microbiological contamination was conducted on a fuel sample using the FUELSTAT® One test kit and the results reported below were read using the FUELSTAT® Result app.

REGISTERED USER

Registered User:	Joe Bloggs	Address:	Bakeham Lane Egham
Company name:	ABC Company Ltd	Post code:	N/A
Customer reference:	101	Country:	United Kingdom

TEST DATA

Fuel Type:	Diesel or other middle distillate fuel	FUELSTAT result #:	18,278
Sample Type:	Free water phase sample	FUELSTAT Test Lot #:	L2400
Tester name:	No entry by tester	Test date:	05-NOV-2020
Location/Site:	No entry by tester	Printout date:	05-NOV-2020
Asset Identity:	No entry by tester	Phone make:	OnePlus
Tank Reference:	No entry by tester	Phone model #:	ONEPLUS A6013
GPS location:	25°15'14.2"N 55°22'52.5"E	App version:	
		Portal version:	1.3.3

TEST RESULT CONTAMINATION ALERT LEVEL

OVERALL RESULT: NEGLIGIBLE CONTAMINATION

Relative carbohydrate concentration in the sample: XX ng/mL

NOTES

DISCLAIMER

FUELSTAT® Result app is designed for use with FUELSTAT® lateral flow tests. Readings obtained using the FUELSTAT® Result app are dependent on the make and model of phone / device used and their correct operation. The accuracy of this report may also be dependent on the accuracy of the sample provided.

CONTACT

Full terms of use available on the website: www.conidia.com

For any technical assistance telephone: +44 (0)1491 829102

ConidiaBioscience

Bakeham Lane, Egham, Surrey, TW20 9TY, UK

T: +44 (0)1491 829102
E: info@conidia.com
W: www.conidia.com

THANK YOU

+44 1491 829102 (HQ)
+1 844 438 3578 (US)
info@conidia.com
www.conidia.com

FUELSTAT®
ConidiaBioscience

ASTM INTERNATIONAL

STRATEGIC PARTNER
IATA
INTERNATIONAL AIR TRANSPORT ASSOCIATION

IASH - International Association for Stability, Handling and Use of Liquid Fuels, Inc.

energy institute

ENERGY INDUSTRIES COUNCIL EIC MEMBER