

Used Oil Testing Repeatability, Reproducibility: Why it is important at TestOil

TestOil explains the importance of test repeatability/reproducibility. These factors are critical for the validation of test methods and results.



CLEVELAND, OHIO, U.S., September 10, 2020 /EINPresswire.com/ -- [TestOil](#), an

industry leader in quality oil analysis testing, explains the importance of test repeatability/reproducibility. These factors are critical for the validation of test methods and results—providing customers with the assurance that their tests meet quality standards.

TestOil President Mary Messuti explained, “Our excellent reputation within the industry is due in large part to our focus on the quality of test results. We continually examine and fine tune each test and maintain a high level of standards in our lab; ensuring that we are doing everything within our means to deliver the most accurate results possible. Validation through repeatability and reproducibility are central to this.”

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Test repeatability and reproducibility are defined as follows:

- Test repeatability is the ability of a lab to test the same

material successively under identical conditions and obtain results whose difference is within a standard acceptable range.

- Test reproducibility is the ability of the lab to test the same material twice under disparate conditions and obtain results whose difference is within a standard acceptable range

TestOil Analyst Muge Bilgin explained, “Test repeatability shows how precise the test is. It is an indirect measure of precision. Because there will always be some variability, ASTM defines the variability range for some tests and there is a different range for each type of test.” ASTM specifies a range, rather than a single value because two consecutive samples taken under identical conditions will not necessarily have the identical result.

TestOil does have ISO/IEC 17025 accreditation for testing. ISO 17025 contains all requirements that testing and calibration laboratories must meet if they want to demonstrate that they operate a management system, are technically competent, and are able to generate technically valid results. This standard contains technical requirements which ISO 9000 does not and is the

preferred standard for laboratory quality systems.

TestOil's Quality Assurance Program conforms to and exceeds the requirements of ISO 17025 for the 36 tests listed on TestOil's scope of accreditation. For example, every instrument at TestOil is calibrated and then a quality sample is regularly run to verify the calibration.

Factors that can impact test repeatability and reproducibility include environmental conditions, test method selected, instrument detection limits, and technician competence/experience. The sample quality itself can also play a role in repeatability and reproducibility of test results. The quality of the sampling location, the consistency of the sampling technique, and even sample bottle cleanliness can all have an impact on test results.

TestOil's quality program ensures that every step possible is taken to ensure that factors that can impact repeatability and reproducibility are carefully controlled. These steps include a technician training program, instrument calibration program, daily verification of instrument calibrations with certified reference materials, participation in inter-laboratory proficiency testing programs, and ISO 17025 accreditation.

The range of acceptable repeatability/reproducibility varies from test to test. TestOil's lab has experience with these limits and takes them into account when reviewing reports.

"TestOil is doing everything within the definition of test repeatability, reproducibility and beyond that," Bilgin added. "We have also been participating in proficiency testing programs with ASTM for more than 10 years. Customers can have confidence in the accuracy and precision of our tests."

With more than 30 years of experience in the oil analysis industry, TestOil focuses exclusively on assisting industrial facilities with reducing maintenance costs and avoiding unexpected downtime through oil analysis program implementation. As industry experts in diagnosing oil-related issues in equipment such as turbines, hydraulics, gearboxes, pumps, compressors and diesel generators, TestOil provides customers with a guarantee of same-day turnaround on all routine testing. With in-house, certified training professionals, TestOil offers lubrication and oil analysis training, private onsite training, certification training and exams, and educational webinars. You can learn more about oil analysis testing by downloading the Get The Picture e-book. For more information on partnering with TestOil on oil analysis programs or training opportunities visit www.testoil.com. Contact: 216-251-2510; sales@testoil.com.

Jeanna Van Rensselar
Smart PR Communications
+1 630-363-8081
[email us here](#)

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