

STRONG BUSINESS IS BUILT ON DEFENSIBLE DATA

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In today's world, data is at the forefront of innovation. Technology evolves at an unprecedented pace. More and more digital information is collected almost seamlessly from smartphones to supercomputers. Has your business kept up with this trend? If not, your business will likely be in jeopardy. Data collection and defensible data are now more critical than ever before. It is not simply because regulators require it, although compliance is of the utmost importance. In over 30 years of analyzing samples, our laboratory has observed that defensible data always translates to better business for both the lab and the client.

Under the Microscope

Increased public and private investment into the Liquid Recycling and Environmental Service industries has resulted in greater scrutiny of business practices from start to finish. State and local environmental audits are on the rise nationally. With new amendments to Title 40 CFR, TSCA regulations, and RCRA protocols, it is paramount to have the first line of defense for every word and number. Audits are no longer a matter of if but when.

Without defensible lab reports, our industry would be essentially nonexistent, as we live and die by good data. Numerous facilities across the nation have had their operations disrupted and even halted due to compliance issues misidentified during a simple inspection or full-blown audit. The only undertaking that resumed operations back to glory was none other than obtaining a lab report with good and defensible data. Thriving businesses implement a thorough analytical plan and subsequently can strongly defend their operations.

Follow the Steps

The strength behind defensible data lies in the traceability of each step of the process, from sampling to the final analytical report. The following steps should be emphasized with every

sample sent to a laboratory.

1. Sampling protocols must be consistent with established rules and regulations.
2. The Chain of Custody must be carefully and thoroughly completed.
3. The samples must be appropriately packed.
4. The samples must be shipped in a trusted and timely manner.
5. Samples must be analyzed by a laboratory focused on the Generation, Preservation, and Servicing of good data.

It's all about the Quality

Once a laboratory receives the samples, the sample information should be logged into a Laboratory Information Management System. The date and time a sample is received and where the sample is initially stored are among the initial data. This methodology also allows analysts to be aware of their daily workload, enables the analysts to track a sample's hold time, and be mindful of rush turnarounds that a client may request. The live location of a sample can also be tracked from the data system.

Lab instruments such as GCs and ICPs should be connected to and be able to communicate with the Laboratory Information Management System directly. This facilitates the monitoring of test runs and ensures that inputted results can be free from human error.

More Than Just a Number

Defensible and accurate analytical data goes beyond simply the results. A full lab report requires approval from the lab's own Quality Control and Assurance department and should go through a multi-tiered review. The analysis report for the client should be easy to interpret without any gaps in information on the analysis. For every client report page, many pages of detailed QC data should be available when required.



Finally, because not all seals of approval are equal, quality labs participate in rigorous and respected independent accreditation programs.

Protect and Retrieve

Your lab should adequately store and protect your data, and this includes keeping your private analytical data safe from outside attacks from hackers. A solution to this problem is storing data on a cloud-based server. States often require data to be saved for five years or more. The lab must be able to retrieve your archived lab results, QC details included. You will likely be held liable if your lab of choice cannot generate your data.

A Bright and Data-Driven Future

The liquid recycling and environmental service industries have steadily grown and evolved over the past few decades. They have historically adapted quickly to market change and readily adopted technologies when it translates to more efficient and profitable operations. Even though there is a continuous

increase in the complexity of regulations, your lab must have the checks and balances to manage such changes. Although the future may be hard to predict, one thing is certain. A strong business is built on defensible data. ■

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