



# Getting it Right

## TECHNICAL ABILITY TO GET A VALID RESULT - “GETTING IT RIGHT”

Ability to technically achieve a valid result is crucial in many fields, including scientific research, manufacturing, and engineering. This ability requires several components, including skilled people, extensive knowledge, proper equipment and supplies, and effective processes.

People are a critical component of technical ability. Skilled individuals with expertise in their respective fields are necessary to perform tasks with precision and accuracy. These individuals must possess the knowledge and training to understand the intricacies of the tasks at hand, and to make informed decisions about how to achieve the desired result.

Knowledge is also essential in achieving a valid result. Understanding the principles and theories behind the task at hand is necessary to apply the appropriate techniques and methods. Knowledge enables individuals to make informed decisions, anticipate potential obstacles, and troubleshoot when necessary.

Proper equipment and supplies are also critical to achieving a valid result. Using the appropriate equipment and materials ensures that tasks are performed efficiently and accurately. Proper maintenance and calibration of equipment also contribute to the accuracy and reliability of results.

Effective processes are necessary to ensure that tasks are performed correctly and efficiently. This involves the development of clear and concise procedures that guide individuals through each step of the task. Proper documentation of these procedures also enables others to replicate the task and achieve the same result.

Overall, achieving a valid result requires the coordination of all of these components. Skilled individuals with extensive knowledge must use the proper equipment and supplies to execute effective processes. This combination of people, knowledge, equipment, supplies, and processes ensures that tasks are performed correctly, efficiently, and with a high degree of accuracy and reliability.

Failure to achieve a valid result can have significant consequences, ranging from financial loss to safety hazards. For example, in scientific research, a faulty result can lead to wasted resources, erroneous conclusions, and a loss of reputation. The faulty results can lead to recalls, legal action, and damage to a company's reputation. In engineering, faulty designs can result in structural failures, equipment malfunctions, and safety hazards.

In conclusion, achieving a valid result requires the coordination of several components like Skilled individuals with extensive knowledge must use the proper equipment and supplies to execute effective processes. By ensuring that these components are in place, organizations can minimize the risk of errors and achieve accurate and reliable results.

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### SPECIAL POINTS OF INTEREST

Envitest likes to receive the feedback and same is available in our website to write to us about

- How was your overall experience on services provided by Envitest Lab?
- How easy it is to approach Envitest Lab for Testing requirements?
- How was your queries or concerns addressed?
- How was our Testing Project delivery?
- How was the technical capabilities at Envitest Lab?

# QUALITY THINKING!



GET IT RIGHT FIRST TIME

## WHY GETTING IT RIGHT

The phrase "getting it right" refers to the act of achieving a desired outcome or result with accuracy and precision.

getting it right requires attention to detail. This means paying careful attention to every aspect of the process to ensure that all necessary steps are followed correctly and accurately.

getting it right requires a commitment to quality. This means striving for excellence in everything that is done, and continuously seeking ways to improve the process and the outcome.

getting it right requires a focus on the end

goal. This means keeping the desired outcome in mind throughout the process, and making sure that every decision and action is aligned with achieving that goal.

getting it right requires accountability. This means taking responsibility for the outcome and being willing to be held accountable for any mistakes or shortcomings.

getting it right requires perseverance. This means being willing to put in the effort and time necessary to achieve the desired outcome, even when faced with obstacles or setbacks.

*"Getting it right is a crucial concept in many areas of life, from science and engineering to business and personal relationships"*

### WHAT IS ENVITEST

Our test lab is equipped to meet a variety of commercial, automotive, medical, aerospace and military test standards, as well as a broad range of customer-defined test specifications. Below is a partial list of common test specifications and applications that we frequently test.

### TEST CAPABILITIES

ENVITEST LAB has one of the largest and most complete set of product qualification testing capabilities and services in the world, that is at the forefront of testing and qualifying new product innovations in the Aero-space, Construction, Consumer Product, Defense, Digital Engineering, Energy, Life Sciences, Transportation, and Telecommunications industry sectors.

Envitest Lab can be trusted for,

- ◆ Advice
- ◆ Testing
- ◆ Certification
- ◆ Market access

## GETTING IT RIGHT FOR ISO 17025 TESTING SERVICES

ISO 17025 is an internationally recognized standard that outlines the general requirements for the competence of testing and calibration laboratories. Getting it right for ISO 17025 testing services is essential to ensure that the laboratory can provide reliable and accurate results to its clients. Here are some key considerations by Envitest for achieving ISO 17025 compliance:

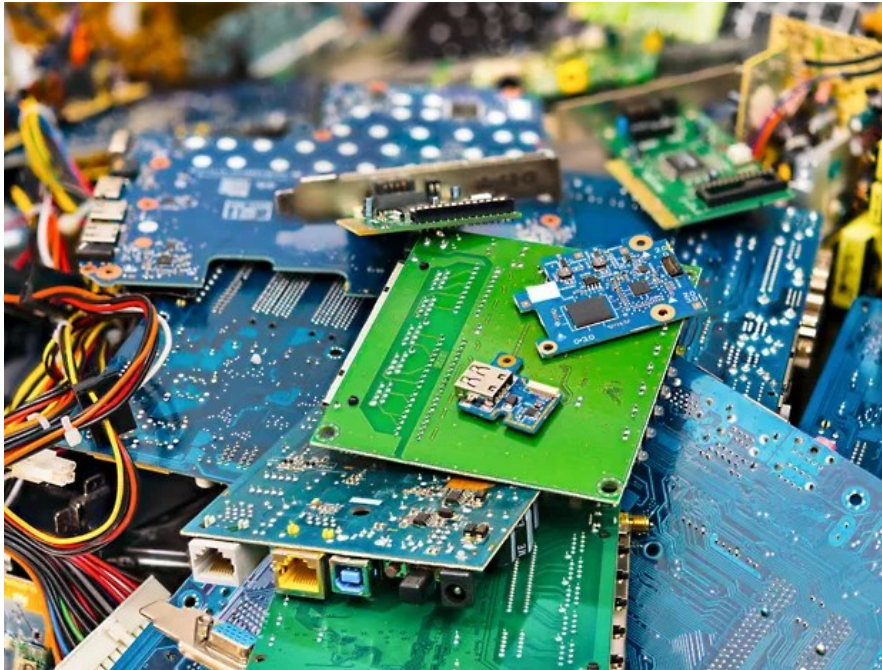
**Quality Management System (QMS):** A QMS is a set of policies, processes, and procedures that define how Envitest operates to ensure consistent quality. Envitest QMS cover all aspects of laboratory operations, including method selection, sample handling, testing procedures, data analysis, and reporting.

**Competency: Envitest** ensure the competency of laboratory personnel. Competent personnel are crucial to the success of any laboratory. Laboratory personnel are appropriately trained, qualified, and experienced to perform their roles effectively.

**Validate testing methods:** Validation is the process of demonstrating that a testing method is fit for purpose and produces reliable and accurate results. Envitest Lab validate our testing methods and ensure they are capable of producing accurate results consistently.

**Control the quality of testing:** Envitest has implemented quality control measures to ensure that the results produced are reliable and accurate, keeping the consistency of results produced. This involves taking various steps like retest / replicate test, proper maintenance of test equipment, review of results consistently for drift etc.

**Test Methods:** Envitest use appropriate test methods and procedures that are validated and fit for purpose. Envitest also ensure that we use appropriate reference systems and internationally accepted process and procedure fit for execution. Periodic participation in Interlab comparison and in proficiency testing programs gives more confidence to our process.



*Testing services requires a commitment to quality and a culture of continuous improvement.*

## RELIABILITY FOR ELECTRONIC PRODUCTS - WHY IS RELIABILITY IMPORTANT?

If you're an Engineering Manager, Design Engineer, Process Engineer or Quality Manager/Engineer working in an electronics environment, then component and product reliability is likely to be a significant issue for you. Why? Because product reliability has a big impact on future sales revenues and on costs. In the case of the latter, there is not only the cost of repairs, recalls or replacements if things go wrong, but the standard of reliability required is a major determinant in the cost of manufacture.

- ◆ What types of testing can you employ to prove the reliability of electronics products?
- ◆ The type of testing that is appropriate will depend a number of factors:
- ◆ Where or how will the product be used?
- ◆ The requirements placed on you (eg. industry standards or customer standards)

### How do you Prove the Reliability of Electronic Products?

Here are some test methods that can help you to prove the reliability of electronic products:

1. **Accelerated Testing:** Induces field failure in the laboratory at a much faster rate by providing a harsher, but nonetheless representative, environment. The product should fail in the same way as it would have failed in the field—but in much less time.

This type of testing is used to:

Discover failure modes (to see what is likely to go wrong)

Predict normal field life (to help set guarantee/warranty periods)

2. **Environmental Testing:** Thermal Cycling, Temperature, Humidity, Vibration etc..

3. **IR Testing:** Insulation Resistance testing is a methodology used to characterise PCB manufacturing and electronics assembly process residues and their impact on reliability.

4. **Corrosion Cycling:** Salt Spray, Fluids, Gas, etc.

5. **Drop or Mechanical Shock**

### Summary:

Best practice suggests you should incorporate reliability testing as part of your product development as early as possible, to ensure that boards can be mounted for testing and that appropriate tests can be designed.

## WHAT IS RELIABILITY?

Perhaps at this point we should clarify what we mean by 'reliability'. **“The probability that a piece of equipment operating under specified conditions will perform satisfactorily for a given period of time”.**

Reliability can and will affect the whole financial model of the product. It's not just about zero failures over x years.

There is a delicate balance to be struck. If failures occur within the warranty period, there will be a financial cost and also a cost to reputation. If they occur outside of the warranty period, then serviceable items can be charged for.

How do you assess reliability?

You will need to consider:

- \* What tests will be used – will you need connections for in test monitoring, will you require SIR type testing, on board monitoring, etc
- \* Pass fail criteria – what actually is a fail for this product?
- \* Benchmarking – This could be the previous generation of the product or a competitor's product, but will be more meaningful than testing on its own
- \* When should testing be done?

Test using applicable conditions to your product and take advice where necessary to increase the likelihood that your test parameters will be reflective of real-world conditions.

## OUR SERVICES

- ◆ Climatic Simulations
- ◆ Dynamics & Vibration
- ◆ Contamination and Ingress
- ◆ Materials / Metallurgical Testing
- ◆ Aircraft Electrical Testing
- ◆ Electrical Safety Testing
- ◆ Optical Fibre Cable Testing
- ◆ Telecom Interface Testing
- ◆ International Approvals

## ABOUT ENVITEST LAB

ENVITEST abbreviated for “ENVIRONMENTAL TESTING”, established in 2017 at Bangalore Electronic City, is a ISO/IEC 17025 certified company with an unlimited vision backed by professionals having great experience in problem solving, with an objective to offer high-quality testing and inspection, pre-compliance and certification, engineering services for the across the globe products at best quality results, consistent process, and affordable cost.

We serve across domains products for the compliance and certifications. Over time we kept on adding the new testing facilities to bring more opportunities for growth but would allow to pro-vide a more complete portfolio of testing solutions to our customers. From our humble beginnings, we have grown from a simple test house who worked on the world’s most complex engineering projects to become a leading test lab of standard and custom test services.

Throughout our journey to become one of the premier worldwide service providers of testing solutions, we have held true to the philosophy that the customer comes first. This dedication to customer service has allowed us to work with leading manufacturers in over 22 industries including aviation, automotive, aerospace, defence, medical, energy, to name a few. Located in Banga-lore, our campus is comprised of two buildings with over 10,000 square feet of space. Each building has been tailored to provide flexibility, comfort, and safety for everyone while providing room for continued growth and innovation.

## ENVITEST LABORATORIES PVT LTD

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ISO/IEC 17025 (NABL) Accredited Laboratory – Certificate # TC7490)

DGAQA Approved Lab – Certificate # 1408/LAB/DGAQA/TECH-COORD/12

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