

Combustion testing today is no longer an option.

It's a necessity.

It used to be that fossil fuel-burning home appliances could be adequately serviced by conducting visual tests. But with today's regulatory, environmental and safety concerns – as well as the risk residential service technicians now face with possible liability – “eye-balling the flame” is no longer a sufficient way to test.

The truth is, an appliance that shows a nice blue flame is probably not burning efficiently. It could, in fact, be burning more fuel than is necessary, adding soot to the system, or more importantly, emitting toxic gases that could eventually put your customers, you – and your business – in real danger.

BACHARACH.
The Measurable Difference

With Bacharach, you can make a measurable difference.

Fyrite® Pro electronic gas analyzers are now available at Bacharach distributors worldwide. The Fyrite Pro family of analyzers includes a series of six upgradeable instruments, which offer residential contractors greater flexibility and customization, at an affordable price. From CO-only tests to complete combustion efficiency analysis, there is a Fyrite Pro model – and optional accessories – to answer every residential service technician's needs.

So, why test?

Because it's better. With the Fyrite Pro. And Bacharach.

**For more information about the
Fyrite Pro series of gas analyzers,
see your nearest Bacharach distributor,
or call 1-800-736-4666.**

BACHARACH.
The Measurable Difference

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1-800-736-4666

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In Canada, call 1-800-328-5217

Why Test?



BACHARACH.
The Measurable Difference

Electronic Combustion Testing.

A smart, simple and safe alternative.

The good news is there are electronic analyzers available today that utilize gas sensor technology. These instruments allow you to precisely measure the components of combustion. There is no guesswork involved. No charts, tables, slide rules or calculators.

Electronic gas analyzers measure the products of combustion continuously. Only with this data can you properly test and adjust a heating appliance or show an appliance needs replaced. Once an appliance is properly adjusted it will burn fuel more efficiently, which means less fuel will be used to satisfy the heat demand. Toxic gases, if present will be detected, smoke will be minimized, and the appliance will operate better.

See the difference for yourself...

When you weigh your options, it's clear that measuring combustion efficiency electronically is the better way. Let's consider each test method...

Visual Test or "Eye-Balling the Flame"

A visual test is quick, but does not serve your customer unless you observe flame rollover. It requires no combustion analyzer. However, a visual test also offers no concrete data, no precise flue gas measurements nor can a visual test detect harmful, toxic emissions. Therefore, when it comes to servicing a heating appliance, there's a lot of guesswork involved. And, because human error is inherent in this test method, problems will go undetected.

Mechanical Tests

Mechanical tests involve the use of individual draft gauges, thermometers, CO Stain length tubes, and CO₂ Fyrite wet chemical absorption instruments. To compute combustion efficiency the individual "snapshot" measurements are entered on a slide rule calculator. This 70 year old method is accurate but slow, and subject to more measurement rules than electronic analyzers.

Electronic Tests

An electronic test is conducted with the aid of an electronic combustion analyzer. Speed, ease of use, automatic sampling, automatic calculations and automatic report generation are all advantages of electronic combustion analyzers. Electronic analyzers also provide individual displays of O₂, CO, temperature, draft, etc. which allow immediate and independent analysis of each adjustment made on a combustion appliance. The continuous readings make adjustment easier and lets you identify light off and regulating problems. Test results appear on the units display and can be instantly transferred to an infrared printer so that the test data can be recorded on paper. Because the test data is accurate and there is no human errors, the before and after print outs can show the value of your service. The time saved is money in your pocket.

The chart below illustrates the differences between the more traditional combustion testing methods and electronic combustion testing. See for yourself how you, your business and your customers can benefit from testing combustion efficiency with an electronic gas analyzer.

More reasons to test electronically.

- Accuracy and Improved Customer Relations. When you work with precise data, you'll service appliances properly the first time. What's more, with a print out of test results, you can better educate your customers. In the end, you'll be saving your customers time and money with a better test method – and service record.
- Greater Productivity. When you test with an electronic device, you'll get accurate test data quickly. You'll be able to service appliances thoroughly, and immediately, which can significantly reduce the rate of call backs you experience.
- Protection against liability. Because electronic devices often offer optional printer interfaces, you are able to capture and document test results for immediate and future use. These records can prove to be invaluable should liability issues arise.
- Enhanced Professionalism. When you use an electronic testing device, you give your customers greater peace of mind knowing that the data you are working with is accurate. And when you share a print out of that data, customers will have more confidence in you and your analysis – something your competition might not offer.

	Eyeball Analysis	Mechanical Tests	Electronic Analyzers (Fyrite Pro)
Reliability	poor	good	excellent
Accuracy	poor	good	excellent
Accurate/Safety Measurements (CO)	no	no	yes
Ease of use	n/a	no	yes
Method of Test	blind	snapshot	continuous
Speed	moderate	slow	fast
Documentation Capability	no	no	yes
Cost of Ownership (3 years)	n/a	moderate	low