



VHG Labs, Inc. Wear Metals
Performance Testing Program (PTP)
Featuring Real-Time On-Line Result Evaluation

General Instructions

Table of Contents

| | |
|----------------------------------------------|---|
| Introduction..... | 3 |
| PTP Test options..... | 4 |
| Ordering a test..... | 4 |
| Register online to the VHG Labs website..... | 5 |
| Logging in to the PTP..... | 6 |
| Entering and submitting your data..... | 7 |
| Interpreting your results..... | 8 |
| Frequently asked questions..... | 9 |

Introduction

The VHG Labs Wear Metals Performance Testing Program (PTP) is designed to provide analytical laboratories with a method of monitoring their analytical performance as measured against Certified Reference Materials (CRM's). Currently, the types of instrumentation included in the program are ICP, viscosity, and particle counting systems.

When you join the PTP, you have six program options from which to choose: Wear Metals, Viscosity, Particle Count, a complete Used Oil Set (consisting of all three of the above), Sulfur or Sulfur and Metals in Lube Oil. There are different lots for all unknowns, so it is important that you enter the correct number for your sample when logging in. (See "Logging in to the PTP," Page 6.)

Wear Metals:

You may analyze the sample for up to 23 common elements (Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V and Zn) and report the concentrations in $\mu\text{g/g}$ (ppm). You may enter all, or only those that you are interested in. However, the sample provided to you will have 23 elements.

Viscosity:

You may analyze the sample for kinematic viscosity and report the results in mm^2/s (cSt) at 40°C and/or 100°C.

Particle Count (for ISO 11171 only):

You may analyze the sample and report the number of particles per mL for particle diameters $>4\mu\text{m}(c)$, $>6\mu\text{m}(c)$, $>8\mu\text{m}(c)$, $>14\mu\text{m}(c)$, $>21\mu\text{m}(c)$, $>38\mu\text{m}(c)$, $>50\mu\text{m}(c)$, $>70\mu\text{m}(c)$.

Note: $\mu\text{m}(c)$ indicates NIST certified ISO MTD size

VHG offers a Complete Used Oil Set:

Includes one sample of each for Wear Metals, Viscosity and Particle Count.

Sulfur:

Analyze the sample for ultra-low sulfur content in one of three matrices (#2 Diesel Fuel, Isooctane, or Mineral Oil) and report the concentration in $\mu\text{g/g}$ (ppm).
Rough range: 32

Sulfur and Metals in Lube Oil:

Analyze the sample for up to 9 common elements (Ba, Ca, Cl, Mg, Mo, P, S, Si and Zn) and report the concentrations in $\mu\text{g/g}$ (ppm).

PTP Test Samples Ordering Information

You may order any of the following test samples:

Wear Metals:

1 bottle, 23 elements, wear metals PTP test sample in 75 cSt. hydrocarbon oil, 25g.

VHG Labs Part No. VPTPMO-25G

Viscosity:

1 bottle, viscosity PTP test sample, 40° C and/or 100° C, 50mL.

VHG Labs Part No. VPTPVISC-50

Particle Count:

1 bottle, particle count PTP test sample, 6 channels [4, 6, 8, 14, 21, 38, 50 and 70 µm(c)], 125mL.

VHG Labs Part No. VPTPPC-125

Complete Used Oil Set:

1 bottle each VPTPMO-25G, VPTPVISC-50 and VPTPPC-125

Part No. VPTPSET1

Sulfur:

1 bottle, sulfur PTP test sample in the matrix of your choice (#2 Diesel Fuel, Mineral Oil or Isooctane), 25g

Part No. PTPSDSL-25, PTPS20M-25 or PTPSISO-25

Sulfur and Metals in Lube Oil:

1 bottle, 9 elements, sulfur and metals PTP test sample in Lube Oil, 25g

Part No. PTPLUBEMO-25

You can call, fax, e-mail, or order directly from our website. Please specify a part number when ordering.

Telephone: (+1) 888.622.7660 (Toll-Free U.S. Only)
(+1) 603.622.7660

Fax: (+1) 603.622.5180

E-mail: custsvc@vhglabs.com

Website: www.vhglabs.com

Register on to the VHG Labs website

To access the PTP program, please follow these easy steps:

1. **First-time Users.** If you are entering the site for the first time, you will have to establish a login name and password for the VHG website. You will only need to do this once, and you will keep the same login name and password permanently. To do this, go to the www.vhglabs.com. On the upper right-hand side of the page, you will see the following **Login/Register** tab



Click on the tab (see image below), then enter your email address and a password of your choosing. (*Alternatively, you may choose the “PTP” tab where it will also prompt you to enter your email password after you have entered your sample ID.*) Once you have typed in your email and password, check the box that says “Register New User”, and click on the green bullet. You should get a response that says “Welcome back.” Please remember to record your password in a convenient location.

The image shows a pop-up window titled 'Register or Login To VHGLabs.com' with a close button (X) in the top right corner. The window contains the following text: 'To login, enter your e-mail address and password in the form below. To register, enter your e-mail address and password in the form below, and select the 'Register as New User' option. Registering is fast and easy, and allows you to save your profile for quick checkout and personalized service!'. Below this text are two input fields: 'E-Mail Address:' and 'Password:'. At the bottom left, there is a checkbox labeled 'Register as New User'. A green play button icon is located at the bottom right of the form.

2. **Returning Users.** In most cases, your computer will acknowledge that you are a returning customer by showing “Welcome Back” at “My Account.” If you do not see this, enter your email address and password in the appropriate boxes after clicking the Login/Register tab.

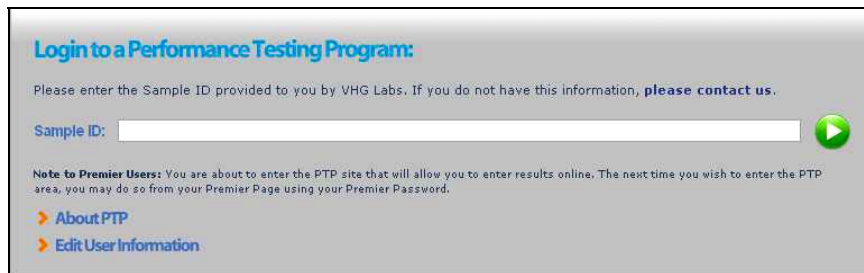
Logging in to the PTP area

1. PTP Results Entry Web Page. Click on the “PTP” tab. In the box provided, enter the Sample ID that came with your PTP sample. You will find it on the bottle.



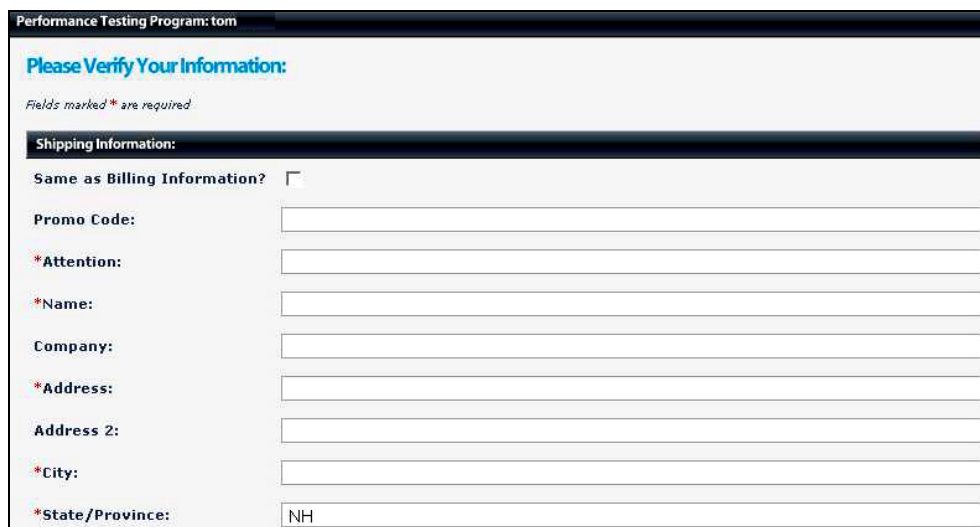
The screenshot shows the top navigation bar with tabs for "Oil PTP", "Library & Resources", "Products", "Contact Us", and "Login/Register". Below the navigation, there is a section titled "Homepage PTP login" with a sub-section "Enter Results:". The "Enter Results:" section contains a text input field with the value "j99865" and a green play button. Below the input field, there is a note: "Note to Premier Client Companies: If you wish to shop for products, please go to the 'My Account' tab and enter your premier password."

Depending on your navigation of the website, you may also see this screen where you can enter the Sample ID.



The screenshot shows a login screen titled "Login to a Performance Testing Program:". Below the title, there is a text input field for "Sample ID:" with a green play button. Below the input field, there is a note: "Note to Premier Users: You are about to enter the PTP site that will allow you to enter results online. The next time you wish to enter the PTP area, you may do so from your Premier Page using your Premier Password." Below the note, there are two links: "About PTP" and "Edit User Information".

After you have typed in your Sample ID Password, you'll be prompted to enter your shipping and contact information. All fields with asterisks (*) are required. Once you've done this once, the program will remember your information, so you won't have to do it again unless you'd like to change something.



The screenshot shows a form titled "Performance Testing Program: tom" with a sub-section "Please Verify Your Information:". Below the sub-section, there is a note: "Fields marked * are required". The form contains several fields: "Shipping Information:", "Same as Billing Information?" (checkbox), "Promo Code:", "*Attention:", "*Name:", "Company:", "*Address:", "Address 2:", "*City:", and "*State/Province:" (with "NH" entered).

2. Entering and Submitting your PTP Sample Results. Once you've run your samples, you're ready to enter your data. If you've purchased the Wear Metals Test, you may enter as many elements as you'd like, up to a total of 23. If you've purchased the Viscosity Test, you may enter one or two values, at 40° C and/or 100° C. For the Particle Count Test, you should enter 6 sets of channel data at 4, 6, 14, 21, 38, and 70 μm(c). For any of the Sulfur Tests, you will enter one value. For the Sulfur and Metals in Lube Oil, you will enter as many elements as you'd like, up to a total of 9. If you do not wish to report an element, leave it blank, and the element will be reported as a "pass" value.

Performance Testing Program: tom49

Shipping Information:
 Tom Rettberg
 VHG-updated record
 276 Abby
 add to address
 Manchester, NH, 03103 USA

Billing Information:
 Tom Rettberg
 VHG-updated record
 276 Abby
 Manchester, NH, 03103 USA
 603622-7660

Date: November 9, 2006, 3:44 pm

[Update Your User Information >>](#)

Please move the cursor to each box and fill in your results in units of ug/g (ppm). Once you have results properly entered and they display to your satisfaction, press "SUBMIT RESULTS". ONCE YOU SUBMIT, NO RESULTS CAN BE CHANGED OR APPENDED.

| Symbol | Element | Analytical Results |
|--------|----------|--------------------|
| Al | aluminum | 79 |
| Ba | barium | 145 |
| B | boron | 15.0 |
| Ca | calcium | 1000 |
| Cr | chromium | 9.5 |
| Cu | copper | |

Type in your results

When you're ready, click on:

[Submit Results](#)

Be sure that you have reviewed your entries before clicking on Submit Results.

If you wish to enter results for a different PTP sample, click on the link "Record/View a Different Sample ID >>" shown at the top right of the screen.

PTP Results: Online interpretation

With the new VHG PTP real-time on-line result evaluation, data interpretation is easy. You'll receive a green, yellow, or red value for your results, letting you know how closely your results compare to the VHG Labs certified values.

Your Current PTP Sample ID: tom45 [Record/View a Different Sample ID >>](#)

Performance Testing Program: tom45

| | |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Shipping Information: | Billing Information: |
| TMR ship to name: VHG 276 ship to addr1 Abby Shipe to addr2 Manch-ship to city, NH-ship to state, 03103-ship USA | TMR VHG 276 abby W Manch, NH, 03103 USA (603)622-7660 |

Date: November 9, 2006, 3:52 pm

[Update Your User Information >>](#)

Please move the cursor to each box and fill in your results in units of ug/g (ppm). Once you have results properly entered and they display to your satisfaction, press "SUBMIT RESULTS". ONCE YOU SUBMIT, NO RESULTS CAN BE CHANGED OR APPENDED.

| Symbol | Element | Analytical Results | Certified Values | Difference | % Difference |
|--------|----------|--------------------|------------------|------------|--------------|
| Al | aluminum | 49 | 50 | -1.00 | 2.00% |
| Ba | barium | 57 | 50 | 7.00 | 14.00% |
| B | boron | 45 | 20 | 25.00 | 125.00% |
| Ca | calcium | 19.77 | 20 | -0.23 | 1.15% |
| Cr | chromium | 1088.00 | 1000 | 88.00 | 8.80% |

Color Coding interpretation:

In the "% Difference" column shown are:

Green = within +/- 10%; Yellow = +/- 10.01% to +/-15%; Red = greater than +/- 15%, for all certified values >20 ppm.

If certified <20 ppm, Green = within +/- 1ppm; Yellow = within +/-2ppm; Red >2ppm. Color feature not active for Viscosity or Particle Size tests.

Note: ppm units refer to ppm by weight, i.e. µg/g

If you'd like a printout of your results, click the "Print This Page" button located at the bottom of the test results screen. You may return to review your data on-line at any time, by simply re-entering the sample ID number on the test login page. (You will not be able to change or re-enter the results, however.)

Frequently Asked Questions

1. Who can join the PTP?

Any laboratory interested in tracking their analytical results.

The general PTP program is a closed program in that data is reported, pooled by VHG, but not otherwise distributed. Participants may view their own data, however, not the reported data submitted by other labs.

VHG also offers a corporate PTP program. In the corporate program, only members of the corporate parent, or companies specifically approved by that corporate parent, may submit data. All of this data is kept completely separate and secure from any other participation or examination of the results, except by the parent company and by VHG Labs.

VHG Labs ensures the confidentiality of all data submitted under both general and corporate systems. Under the corporate system, the data is never revealed, even anonymously, to anyone outside of the parent or VHG Labs.

Under the general PTP system, companies may participate openly worldwide, and have the ability to view their performance against the certified values.

2. How often should I participate in the PTP?

The short answer is, "It's up to you." However, it's a good idea to participate on a regular basis, either monthly, or at minimum, quarterly. This provides you with a consistent method of tracking your performance, and gives you statistics that you can use for QC verification purposes.

3. What happens if I report the wrong results or make a mistake?

Once you submit your numbers and receive a response from the PTP master computer, you cannot change your entries or re-submit. Please be sure of your numbers prior to hitting the "Submit" button. If you do encounter a problem or wish to re-submit, please call VHG Labs directly for assistance.

4. Do I need to calibrate my ICP with VHG Labs standards to run a PTP test? No, you do not. However, if you're not calibrating with VHG Labs standards, you're probably paying too much and missing a higher level of service. We provide the highest possible quality products, a knowledgeable and friendly staff, and extremely competitive pricing for standards and consumables for all sorts of laboratory equipment.

We invite you to see the difference that VHG Labs can make for you and your lab.

5. What if I need help?

Call us! VHG Labs is here to help you.

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Manchester, NH 03865 USA

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