

Gemological Laboratory Equipment List

“It is absolutely mission critical that the jewelry industry preserves, protects, and maintains the consumer’s trust for its own long term viability, survivability and profitability.” La Shawn Bauer

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The intended purpose and function of this article / report is to help gemologists, gemological appraisers, jewelry store owners and their employees to find quality gemological equipment from various manufacturers and vendors from around the world.

It is to help expose these people to the various gemological instruments, tools and equipment that are used on a daily basis within a gemological laboratory environment.

A Professional Grade AGA – Certified Gemological Laboratory along with the dedicated professionally trained gemologists who is constantly updating their knowledge base and skill sets is more critical now than ever before in the retail environment due to the wide range of various gem material that is now being sold to the consumers and also the wide range of natural and synthetic gem material that is being exposed to various treatments. Some of these treatments can be easily detected while others are more complex and difficult to detect by the average jeweler, gemologist and/or gemological appraiser.

It is all about building and maintaining consumer confidence of the jewelry industry as a whole.

A professional Gemologist and/or Gemological Appraiser needs to fully understand and have an in-depth working knowledge of how each piece of equipment works and operates.

(S)He must fully understand what each piece of equipment is capable of doing.

The most important part is the gemologist and/or gemological appraiser must also know what each piece of equipment can’t do.

Table of Contents:

Title Page Disclaimer and Disclosure Statement.....	Page 1
Table of Contents	Page 2 & 3
Gem Ident Test Kit vs AGA – Certified Gemological Laboratory Program.....	Page 4
Accredited Gemologists Association Home Page Hyper-Link.....	Page 4
AGA – Certified Gemological Laboratory Hyper-link.....	Page 4
Gemological Equipment List.....	Page 5
Basic Explanation.....	Page 6
Diamond “Master Color Grade” Comparison Set.....	Page 7 to 10
Gemological Microscope.....	Page 11 to 13
Polariscope.....	Page 14 to 15
Refractometer.....	Page 16 to 17
Monochromatic Light Source / Utility Light.....	Page 18
Dichroscope.....	Page 19
Spectroscopes.....	Page 20
Ultra Violet Light Testing Equipment.....	Page 21
Diamond Proportion “Cut Grading” Analyzing Tools, Equipment and Systems.....	Pages 22 to 29
Hand Held Models.....	Page 22
Table Top Models.....	Page 23
Microscope Model.....	Page 24
Camera – Video Models.....	Page 25
Charts & Graphs.....	Page 26
Computer Software.....	Page 27
3-D Diamond Proportion Scanners.....	Page 28
Cut Grading System Identification and Classification.....	Page 29
Diamond “Color Grading” Lighting Environment Equipment and Systems.....	Page 30
Diamond “Color Grading” Lighting and Grading Identification and Classification.....	Page 31
Colored Stone, “Master Color Grading” System.....	Page 32
Specific Gravity Testing Equipment.....	Page 33
Scales: Legal-For-Trade.....	Page 34
Precious Metals Testing Equipment.....	Page 35 to 36
Thermal Conductivity Probes.....	Page 37
Combination Thermal Conductivity Probes.....	Page 38
Electric Conductivity Probes.....	Page 39
Color Filters.....	Page 40
Table Gauges.....	Page 41
Micro Gauge System of Transparences.....	Page 41
LEVERIDGE Gauge Set, Dial Gauge or Digital Gauge.....	Page 42
Certified Calibration Blocks.....	Page 42
Electronic Digital Calipers.....	Page 43
Certified Calibration Blocks.....	Page 43
Metal Slide Calipers.....	Page 44
Paper Tape Measure, Retractable Steel Tape Measure, Wooden Ruler, Steel Ruler.....	Page 45
Fiber Optic Light System.....	Page 46
Additional Light Sources.....	Page 47
Thermal Hot Point Probe.....	Page 48
Photostand.....	Page 49
Digital Cameras Available.....	Page 50
Digital Imaging Software.....	Page 51

Table of Contents:

Digital Flat Bed Scanner.....	Page 52
Color Laser Printer.....	Page 52
Gemological Reference Library.....	Page 53
Valuation Science and Methodology Library.....	Page 54
Appraisal Reference Library.....	Page 55
Additional Items & Products of Interest.....	Pages 56 to 65
Hardness Points.....	Page 56
Reflectometer.....	Page 56
Portable Laboratory Kits.....	Page 57
Geiger Counters.....	Page 58
Diamond Colorimeters & Precious Metal Analyzer.....	Page 59
Diamond Type Testing.....	Page 60
Microscope Optical Heads.....	Page 61
Microscope Bases.....	Page 62
Microscope Camera Adaptors & Cameras.....	Page 63
Microscope Lighting Rings and Illuminators.....	Page 63
Computer Programs – Gemological Based Software.....	Page 64
Computer Programs – Appraisal Software.....	Page 65
Personal Closing Remarks.....	Page 66
Main Listing of Companies.....	Pages 67 to 68
Current Listing of AGA – Certified Gemological Laboratories.....	Pages 69 to 79
AGA – Certified Gemological Laboratories by State.....	Pages 80 to 82

Gemological Laboratory Equipment List:

Today's “**New Gold Standard**” is the,
“Accredited Gemologists Association's – Certified Gemological Laboratory Program”.

<http://www.accreditedgemologists.org/>

http://www.accreditedgemologists.org/pdf_file/cgl-applicationV2-2009-09.pdf

Everyone needs to understand that an AGA – Certified Gemological Laboratory is totally different than a Gem Identification Test Kit.

A Gem Ident Test Kit usually consists of the “bare-bones” basic testing equipment to test and identify some of the more common basic gem material commercially available.

The basic Gem Ident Test Kit usually consists of;

Polariscope, Refractometer, Spectroscope, Utility Lamp, Ultra Violet Light, 10x Loupe, Specific Gravity Liquid Set, Chelsea Emerald Filter, and Leveridge Gauge with a manual and a High setting tips, A Basic Gem Microscope.

The above mentioned items is nowhere near the equipment and instrumentation needed to tackle the task of identification let alone performing evaluations and valuations of today's gemstones and jewelry that are now being sold to the consumer.

Also the knowledge base and skill sets needed and required to perform these various tasks need constant updating as things change rather quickly in the gem and jewelry industry as well as within the professional appraising industry.

Every gemologist and gemological appraiser should strive to obtain, acquire and maintain a
“World Class” AGA – Certified Gemological Laboratory.

In most cases, it will take years to build your lab to this status so you also need to draw up a game plan to purchase pieces on a regular basis so it won't break your bank account and by purchasing pieces on a regular basis before long you will then have a complete certified gemological laboratory.

Your Certified Gemological Laboratory will be the main item that will instantly separate you from all of the other gemologists in your area. You will have something they don't have and you can use that to your advantage in advertizing this fact to the general public.

This is what separates professionals with professional equipment and instrumentation performing a professional quality job from non-professionals who are merely nothing more than mass-merchandisers.

It is absolutely mission critical that the jewelry industry preserves, protects, and maintains the consumer's trust for its own long term viability, survivability and profitability.

Gemological Laboratory Equipment List:

Diamond Color Master Set:

5-Stone Minimum
Straight Grade or Split Grade

C.Z. Master Stones Unacceptable

Microscope:

Binocular Microscope
Zoom Capability
Magnification Range: Minimum 10x to
Additional Ocular Lens:
Darkfield Illumination:
Overhead Light Source:
Doubling Lens:

Polarizing Filter Set:

Diffusion Plate:

Immersion Cell:

Photomicrography Capability:

Polariscope:

Condensing Lens
Immersion Cell

Refractometer:

with additional polarizing filter attachment

Utility Light:

Sodium Light Filter
Diffused White Light Filter
Pin Point Light Source

Dichroscope:

Spectroscopes:

Single Prism Type Spectroscope
Multiple Prism Type Spectroscope
Adjustable slit aperture with slide focus

Diffraction-Grating Type Spectroscope

Ultra Violet Light Testing Equipment:

Ultra Violet (U.V.) Light Source
Long Wave (L.W.) 365nm
Short Wave (S.W.) 254nm

Ultra Violet (U.V.) Viewing Cabinet

Fluorescent Test Stones:

to guarantee that both Long Wave and Short Wave lights
are functioning properly

Diamond Proportion “Cut Grading” Analyzing Tools, Equipment and Systems:

Diamond “Color Grading” Equipment and Systems:

Controlled lighting equivalent to North Daylight

Colored Stone, “Master Color Grading” System:

Specific Gravity Testing Equipment

Weights and Measurements Instruments:

Scales:

Legal-For-Trade

Precious Metals Testing Equipment:

Standard Acid Test Kit

Thermal and Electric Conductivity Probes:

Color Filters:

Linear Measuring Devices:

Table Gauges
Micro Gauge System of Transparences
LEVERIDGE Gauge Set, Dial Gauge or Digital Gauge
with High Setting Attachment and reference book
Electronic Digital Calipers
Metal Slide Calipers
Paper Tape Measure
Retractable Steel Tape Measure
Wooden Ruler
Steel Ruler

Fiber Optic Light System:

Additional Light Sources:

Incandescent Pen Light
LED Pen Light
U.V. LED Pen Light, Long Wave, Short Wave

Thermal Hot Point Probe:

Photographic and Digital Imaging Equipment and Software:

Photostand:

Lighting System:

Camera Mounting System:

Digital Cameras Available:

Digital Imaging Software:

Digital Scanner:

Gemological Reference Library:

Valuation Science and Methodology Library:

Appraisal Reference Library:

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection Gemological Laboratory Equipment List

On the following pages I will break down the list into each piece of equipment and give a simple explanation as to what the instrument or tool is and what it is used for and also give you several sources where you can obtain and purchase the item.

Before you get your Gemological Laboratory Operational it is best to talk to a Professional Tax and Business Advisor and ask them how to set your Laboratory up so that you can use it as legitimate tax write-off and/or business expense.

You can also ask and explore the possibility of forming your Gemological Laboratory as a separate entity, be it, as an LLC. or as a wholly owned subsidiary of your parent company so that it operates independently from your regular jewelry store as it provides a certain level of protection from various liability issues it can also offer various tax write-offs and/or tax benefits.

Plan ahead, so your New Gemological Laboratory actually becomes an advantage both as a business and as an advertizing advantage to help separate you and your business from the local or regional competitors in your area.

The Two (2) most expensive items that will make up your gemological laboratory is going to be;

- A. Diamond “Master Color Grade” Comparison Set (Five (5) Stone Minimum)
- B. Gemological Microscope

Therefore I will list them first and discuss them first as they are also the most important items that make up your gemological laboratory.

#1. Diamond “Master Color Grade” Comparison Set (Five (5) Stone Set Minimum)

This is mandatory

This will be one of your most expensive investments and yet it also offers you several valuable and distinct advantages.

It is a Tax Write-Off / Business Expense. Talk to your Tax Advisor as to how to claim all of your gemological equipment as a legitimate business expense and how it can help off-set your overall tax exposure.

Your Master Set is also an Investment in that you will more than likely keep your Master Set for several years to several decades. During which time, more than likely, your Master Set will appreciate in value by the time you retire and then sell out or liquidate your business or sell it to another individual.

However the biggest advantage is bragging and advertizing rights announcing to your clients and to would be possible clients in your target market area that you and your store has the only known “Diamond Master Color Grade Set” in the area and/or the only AGA – Certified Gemological Laboratory in the immediate area and that you and your store are the first choice when it comes to being true professionals where the other stores and competitors are nothing more than jewelry related mass merchandisers. They may have a lot of jewelry for sale but they don’t know and can’t tell the difference between right handed or left handed lug nuts.

Make their lack professional knowledge and professional tools and equipment work to your best advantage.

I’ll talk about advertizing and promoting your laboratory, tools, equipment and superior knowledge later in a separate in-depth article.

Picking your Master Set:

The process of selecting and procuring your Diamond “Master Color Grade” Set of diamonds is a little more complex than just picking up the phone and ordering a set. It is a bit more involved and there are many different things you need to think about before you place your order.

Building your own Master Set by yourself:

For those of you who want to build your own custom set of master stones you can but I will caution you that it will take time and it may cost you some serious cash up front.

However if you want a larger set or larger stones because you deal and come across larger stones then this will be one of the ways in which you can custom build your own master set.

You will also need to have a very good relationship with your diamond dealers because you will need to tell them that you want to build your own master set and they will have to work with you in selecting stones that are possible candidates for color masters. You will incur shipping, handling and insurance charges from your dealer to you and then from you to the lab and then from the lab back to you and then you will have to send the stones that don’t make the grade back to your dealer. You will also have to pay the lab for color grading for Master Color Grading. The color grading cost for master color grading status is less than a diamond grading report and you will have to personally contact the lab and get firm quotes from them and you will also have to ask them as to what the time lag is from the time you send them a

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possible candidate stone to the time you get your stone back and you will have to transmit that information back to your diamond dealers so they can be aware as to how long you will have their stones tied up trying to build your master set.

You will also need to understand that you may end up sending 4 or 5 or even 7 stones in before you get one stone that will meet and make the color grade for just one color master. So be well aware of the fees and charges and shipping costs involved as you will be paying out in advance and know that it will take a considerable amount of time before you have your master set done and documented.

G.I.A. vs A.G.S. Graded Master Stones:

Currently there are Two (2) different labs that grade and assign color grade master status to diamonds.
Gemological Institute of America's Gem Trade Laboratory
American Gem Society's Laboratory

Straight Grades vs Split Grades:

Straight Grade Masters are diamonds that are the very top of each of their color grade designation. Remember how the Diamond Color Grading Scale looks like:

Insert Color Grade Scale GIA/AGS Draw Arrows

Straight Grades are by far better than Split Grades. You will pay a slight premium for straight grades but in the long run if you ever decide to retire or sell your master set you will be able to sell your straight grade set faster and get a better price than if you had a split grade set.

But the final ruling and choice will be left up to you the buyer as to if you want a straight grade set or a split grade set.

Selecting the number of stones in your Master Set: **This is mandatory**

You will need to have a total of at least Five (5) Master Stones before you are ready to apply and ask for your laboratory to be considered for certification through the AGA – Certified Gemological Laboratory Program.

Selecting the SIZE of your Master Stone Set:

The most common size of Master Color Grade Diamonds range from 0.34ct. to 0.48ct. on average.

However some companies will custom build a set especially for you of half carat size , three quarter carat size, one carat size or one and one quarter carat size. But be well advised that building larger sized color masters will take time. Don't be surprised if the wait time is anywhere from six months to as much as three years depending on the size and color grade you are trying to build.

Selecting the Color Grades of your Master Set:

The most common master color grades available are, E, F, G, H, I, J, K, L, M.

The reason being is that most diamond price lists and/or price sheets list diamonds available from D to M therefore there is really no need to find lower color grades in most instances.

So look at what you sell or deal with as far as color grade ranges and then pick your stones out accordingly to match what you generally deal in and/or work with.

A good practical Five (5) Stone Set would be, F, G, H, I, J.

One thing you can do is to start with the above Five (5) Stone color master set and then if need be you can always add other individual master stones over a period of time so that over a couple of years you can build your set into a Nine (9) stone Master Set that will have a full spectrum of grades such as, E, F, G, H, I, J, K, L, and M.

If you deal with lower color grades than the above mentioned Nine (9) Stones then you can ask your vendor/dealer to keep an eye out for lower master stones and give them a list of what you are looking for.

However trying to find a Master “Z” Stone is super hard. In fact you will be able to find Chicken Lips quicker than you can locate and purchase a “Z” Master Stone because I’m still trying to find one myself.

Double Certification of your Diamond “Color Master” Set:

Keeping your paperwork:

The most important part of all is to keep and file away all of your paperwork on your master stones and keep them in your safe in a specially marked envelope. Keep everything including the sales receipt, invoices and the special diamond papers each of the stones come in.

You will need all of these papers later on if you decide to sell your master set because the paperwork and supporting documentation is what makes your stones valuable and re-sellable to another professional.

I personally use my flatbed scanner and scan a copy of everything and store it in my computer and on my safety back-up hard drives as an added safety precaution.

C.Z. Master Comparison Stone Set:

To make it perfectly clear to everyone **C.Z. Master Stones ARE NOT ACCEPTABLE, Period!**
It is that simple and that brutally honest and straight forward.

Weight of Evidence, Legal Precedence and Case Law has pretty much squelched the idea that you can go into court with C.Z.'s when the opposing side is armed with a Diamond Master Set you will lose hands down, it is that simple and brutally honest and straight forward.

The only way to win is to prove the other side misused or incorrectly used their diamond master set or the opposing grader was off using and interpolating the color. Your C.Z. Set will have nothing to do with winning a case but will have everything to do with losing your case.

However, with that being said, there are instants in which a C.Z. Set can be used and can come in handy in a laboratory environment. They do have their uses to a limited capacity.

Cleaning, Caring and Maintaining Your Color Master Set of Diamonds:

NEVER EVER handle or touch your Master Stones with your bare hands!!!!

Only use Stainless Steel Tweezers and only use those tweezers for your Master Set only!!!

DO NOT USE Back anodized tweezers to pick up your master stones.

Only touch and pick up your master stones by the girdle only.

Blow your tweezers off each and every time before picking up one of your master stones.

DO NOT let your comparison stone touch the girdle of your master stone while color grading.

Always keep your master set covered when not in use.

Only remove One (1) master stone from your tray at a time and then put it back as soon as you are done with it, and place it in the same location you got it from.

Clean your master stones semi-annually or annually.

Diamond "Color Master" Sets:

Gary W. Wright Company
<http://garywwrightco.com/>

Lazar Kaplan Diamonds
<http://lazediamonds.com/>

#2. Gemological Microscope: This is mandatory

The best advice I can give you is to **purchase a High Quality Gemological Microscope that you can grow into instead of growing out of.**

Buying New vs Buying Used:

Buying new is great if you have the cash on hand to do so, However, you can also find some really great deals on used equipment but be forewarned that you should take care and only deal with companies and/or individuals that stand behind their used equipment with a 100% satisfaction guarantee. Be very careful buying and purchasing from E-Bay unless you know the seller and that you read all of their disclaimers or you might end up buying a pig-in-the-poke.

Building and Piecing together your own “World Class” Microscope:

Building and piecing together your own microscope should not be attempted by those who do not have a technical and mechanical background or you will end up with a lot of parts and pieces and no one to put them together.

Required Features you will need:

A. Zoom Capabilities:

This is mandatory

Minimum of 10x to 45x zoom

B. Magnification Range:

This is mandatory

Minimum of 0.8x that can zoom upward to 45x or higher

C. Additional Ocular Lens:

This is optional

D. Darkfield Illumination:

This is mandatory

E. Overhead Light Source:

This is mandatory

F. Doubling Lens:

This is optional but **highly recommended**

G. Polarizing Filter Set:

This is optional but **highly recommended**

H. Diffusion Plate:

This mandatory



Diffuser Plate
Approx. \$75.00

Product Source:

<http://www.stuller.com/products/products.aspx?gid=59561&cid=1106>

I. Color Grading Disk:

This is optional but **highly recommended**



Color Grading Disk
Approx. \$69.00

Product Source:

<http://www.stuller.com/products/products.aspx?gid=26463&cid=1106>

J. Immersion Cell:

This is mandatory



Immersion Cell:
Approx. \$125.00

Product Sources:

<http://www.gemologicaltools.com/GIA-Immersion-Cell-subtk.htm>

K. Photomicrography Capabilities:

This is optional but **highly recommended**

<http://www.microscopeworld.com/MSWorld/SearchResult.aspx?CategoryID=172>

<http://www.microscopeworld.com/MSWorld/SearchResult.aspx?CategoryID=128>

<http://www.microscopeworld-professional.com/digital.aspx>

<http://www.greatscopes.com/photo.htm>

<http://www.meijitechno.com/cmount.htm>

http://www.meijitechno.com/digital_camera_adapters.htm

http://www.meijitechno.com/digital_CCD_cameras.htm

<http://www.minresco.com/dinolite/dinolite.htm>

<http://www.labtek.net/index.html>

Microscope Complete Units:

Product Sources:

Eickhorst:

<http://www.eickhorst.com/en/gemmological-instruments/microscopes/gemmaster/features/>

GIA:

<http://www.gia.edu/nav/toolbar/instruments/product-catalog/index.html>

HRD:

<http://www.kassoy.com/hrd-gemological-microscopes/>

Kassoy:

http://www.kassoy.com/kassoy-trinocular-microscope-camera_package.html

Kruss:

<http://www.kassoy.com/kruss-gemological-microscopes/>

Meiji:

http://www.meijitechno.com/gemological_applications.htm

Wildman:

<http://www.gemproducts.com/products.html>

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Gemological Laboratory Equipment List

#3. Polariscope: This is mandatory

Condensing Lens / Interference Spheres
Immersion Cell



GIA/GEM Polariscope

Approx. \$349.00

Product Source:

<http://www.stuller.com/products/products.aspx?series=29-4840>

<http://www.gia.edu/nav/toolbar/instruments/product-catalog/index.html>



Kasoy Polariscope

Approx. \$219.00

Product Source:

<http://www.kasoy.com/polariscope.html>



Approx. \$395.00

Product Source:

<http://www.nationaljewelerssupplies.com/p/AMpolar.html>



Rayner Pocket Polariscope

Approx. \$229.00

Product Source:

http://www.kasoy.com/rayner_pocket_polariscope.html



Kruss Fiber Optic powered Polariscope

Approx. \$475.00

Product Sources:

http://www.kasoy.com/kruss_polariscope.html

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List



New & Used Polariscopes:
Approx. \$200.00 to \$300.00
Product Source:
<http://www.gemologicaltools.com/>



Kassoy Interference Spheres
Approx. \$8.00

Product Sources:
<http://www.kassoy.com/interference-sphere.html>



Immersion Cell:
Approx. \$125.00
Product Sources:
<http://www.gemologicaltools.com/GIA-Immersion-Cell-subtk.htm>

A Polariscope is mainly used to test if a gemstone is single or double refractive.

It can also be used to identify Anomalous Doubling due to internal strain in single refractive stones.

You can also find and identify interference colors and then use the Interference Sphere to identify the Optical Character of the gemstone as this can aid in separating similar material from one another

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List

#4. Refractometer: This is mandatory

with additional polarizing filter attachment



GIA / Gem Instruments Duplex II

Approx. \$895.00

Product Source:

<http://www.gia.edu/nav/toolbar/instruments/product-catalog/index.html>

<http://www.stuller.com/products/products.aspx?series=29-4848>



Kruss Professional Refractometer with LED Illuminator

Approx. \$1,500.00

Product Source:

http://www.kassoy.com/kruss_professional-refractometer-with-led-illuminator.html



Kruss Refractometer with LED Illuminator

Approx. \$699.00

Product Source:

<http://www.kassoy.com/kruss-refractometer-w-led-illuminator.html>



Gem-A Refractometer

Approx. \$549.00

Product Source:

<http://www.kassoy.com/refractometer.html>



Refractometer

Approx. \$295.00

Product Source:

<http://www.mineralab.com/Refractometer.htm>

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List



Refractometer with 10gr. R.I. Liquid

Approx. \$245.00

Product Source:

<http://www.prettyrock.com/php/product-detail.php?item=PR> Refractometer
with 10g bottle RI liquid



Gempro Refractometer

Approx. \$525.00

Product Source:

<http://www.nationaljewelerssupplies.com/p/SK2304.html>

New & Used Refractometers

Approx. \$600.00 to \$700.00

Product Source:

<http://www.gemologicaltools.com/>

The Refractometer is used to determine what the refractive index of an unknown gemstone is.

It can also be used to determine if a gemstone is single or double refractive due to the presence of visible birefringence when using a polarizing filter with the refractometer.

However you must use a monochromatic light source usually a sodium light to give you a clear and well defined R.I. Line on your refractometer scale.

You can also chart the visible high and low refractive indexes as you slowly rotate the unknown gemstone every 60 Degrees for a total 360 Degrees, one (1) complete revolution.

Once you have charted the High & Low R.I.'s every 60 Degrees you can then determine what the optical character of the unknown gemstone to help separate from other gemstones that share similar R.I. Properties but different optical characters.

You can also use a simple computer program to determine the Optical Character instead of charting the high and low R.I.'s every 60 degrees. However every good gemologist should learn to do this by hand and you should memorize the process and procedures.

*****Important Note*****

NEVER EVER use only One (1) test to determine what an unknown gemstone might be.

I have personally seen too many gemologists make this fatal mistake of just taking an R.I. and then come to a False / Incorrect Gemstone Identification Conclusion.

The last thing you want to do is look like a bumbling fool in front of the public.

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The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List

#5. Monochromatic Light Source / Utility Light: This is mandatory

Sodium Light Filter

Diffused White Light Filter

Pin Point Light Source



GIA / Gem Instruments Utility Light – Used

Approx. \$400.00

Product Source:

<http://www.gemologicaltools.com/GIA-UTILITY-LIGHT-with-Sliding-Lens-GIA-UTLLT-sl.htm>



New & Used Polariscope and/or Utility Light Monochromatic Light Sources

Approx. \$200 To \$400.00

Product Source:

<http://www.gemologicaltools.com/>

This older style GIA Polariscope has a sodium (monochromatic) filter on the side.

A Monochromatic Light is necessary when using a Refractometer to produce a well defined line on your refractometer scale. A Sodium Filter produces a yellowish light band.

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List

#6. **Dichroscope: This is mandatory**



Gem Calcite Dichroscope

Approx. \$68.95

Product Sources:

<http://www.kassoy.com/gem-calcite-dichroscope.html>



Gem-A London Dichroscope Loupe

Approx. \$70.00

Product Sources:

<http://www.stuller.com/products/tools/>

<http://www.gia.edu/nav/toolbar/instruments/index.html>

<http://www.kassoy.com/gem-a-london-dichroscope.html>

A Dichroscope is used to determine if an unknown gemstone is Dichroic or Trichroic.

#7. **Spectroscopes: This is mandatory**



Kassoy Prism Type Spectroscope
Adjustable slit aperture with slide focus
Approx. \$169.00
Product Source:

<http://www.kassoy.com/spectroscope-direct-vision.html>



Kassoy's Deluxe Portable Prism Spectroscope provides a wavelength scale
Price Approx. \$309.00
Product Source:

http://www.kassoy.com/two-tube_prism-spectroscope.html



Kruss Hand-held Spectroscope/Wavelength
Price Approx. \$585.00
Product Source:

<http://www.kassoy.com/kruss-handspectroscope-wavelength.html>



OPL Diffraction-Grating Pocket Spectroscope
Price Approx. \$98.00
Produce Source:

http://www.gemstonepress.com/mm5/merchant.mvc?Screen=PROD&Store_Code=GP&Product_Code=OPLSPE&Category_Code=GII



OPL Diffraction-Grating Spectroscope
Desk Model with Precision Stand
Price Approx. \$235.00
Product Source:

http://www.gemstonepress.com/mm5/merchant.mvc?Screen=PROD&Store_Code=GP&Product_Code=OPLSPL&Category_Code=GII

The vast majority of American Trained Gemologists have not been trained or taught how to use a spectroscope properly and effectively.

A Spectroscope is one of the most powerful diagnostic and identification tools available if used properly.

#8. Ultra Violet Light Testing Equipment: This is mandatory

Ultra Violet (U.V.) Light Source: Long Wave (L.W.) 365nm, Short Wave (S.W.) 254nm



S.W. & L.W. U.V. Light and Cabinet

Approx. \$244.00

Product Source:

<http://www.kassoy.com/long-wave-short-wave-uv-lamp-viewing-cabinet.html>



Shortwave/Longwave Viewing Cabinet

Price Approx. \$195.00

Product Source:

http://www.gemstonepress.com/mm5/merchant.mvc?Screen=PROD&Store_Code=GP&Product_Code=VC&Category_Code=GII



High-Intensity Longwave/Shortwave UV Lamp (UVP)

Price Approx. \$237.00

Product Source:

http://www.gemstonepress.com/mm5/merchant.mvc?Screen=PROD&Store_Code=GP&Product_Code=UVP&Category_Code=GII



Uv Blocking Spectacles: This is optional but **highly recommended**

Price Approx. \$19.95

Product Source:

<http://www.kassoy.com/uv-blocking-spectacles.html>

#9. Fluorescent Test Stones: This is optional but highly recommended

This guarantees that both Long Wave and Short Wave lights are functioning properly
Synthetic “Flame Fusion” Ruby, Synthetic Light Blue Spinel,

*****Important Note*****

A fully enclosed U.V. Cabinet is by far the best as it shields the unknown gemstone and the gemologist from ambient and stray light sources.

It also helps in determining if a gemstone is just florescent or phosphorescent and to do so a fully enclosed cabinet is the best method.

*****Caution*****

U.V. Light Sources require that you use protective goggles to filter the U.V. Radiation from your eyes!

High Sierra Gem Lab & La Shawn Bauer, GG Email: HighSierraGemLab@gmail.com

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Diamond Proportion “Cut Grading” Analyzing Tools, Equipment and Systems: **This is mandatory**

Contact AGA to find out which “Cut Grading Unit” will pass and qualify.

#10. Hand Held Models: For both Loose and Mounted Diamonds



1st Generation

AGS ASET Tool / Loupe

Tri color scope that is best suited for fancy shapes. Two lens in metal housing

Price Approx. \$50.00

Product Source:

http://www.ideal-scope.com/cart_zoom_item.asp?Id=23&ShowAdd=Y



2nd Generation

Handheld ASET Lip Stick Straight Sided

Price Approx. \$29.95 to \$39.99

Product Source:

<http://www.americangemsociety.org/handheldaset.htm>

Tutorial:

<http://www.americangemsociety.org/uploads/HandheldASETTutorial-710.pdf>



3rd Generation

New Handheld ASET

Price Approx. \$24.95

Product Source:

<http://www.americangemsociety.org/newhandheldaset.htm>

AGS ASET Tutorial

<http://www.americangemsociety.org/uploads/NewHHASETinstructions-979.pdf>



Ideal-Scope Expert Scope

10x magnification. Includes a calibration CZ

Price Approx. \$65.00

Product Source:

http://www.ideal-scope.com/cart_zoom_item.asp?Id=24&ShowAdd=Y



Ideal Light

A bright and portable pocket sized light source perfect for the Ideal-Scope.

Price Approx. \$30.00

Product Source:

http://www.ideal-scope.com/cart_zoom_item.asp?Id=3&ShowAdd=Y

#11. Table Top Models:



Arrow & Heart Viewer

Price Approx. \$49.95

Product Source:

<http://www.kassoy.com/arrow-heart-viewer.html>



Dual-Purpose Hearts & Arrows Viewer

Price Approx. \$22.95

Product Source:

http://www.kassoy.com/dual_purpose-hearts-arrows-viewer.html



Presentation ASET

Price Approx. \$395.00 to \$495.00

Product Source:

<http://www.americangemsociety.org/presentationaset.htm>



Tutorial

<http://www.americangemsociety.org/uploads/PresentationASETtutorial-712.pdf>



GIA Diamond Proportionscope – Used

Price Approx. \$1,000.00

Product Source:

<http://www.gemologicaltools.com/GIA-Diamond-Proportionscope-propscope.htm>

#12. Microscope Models:

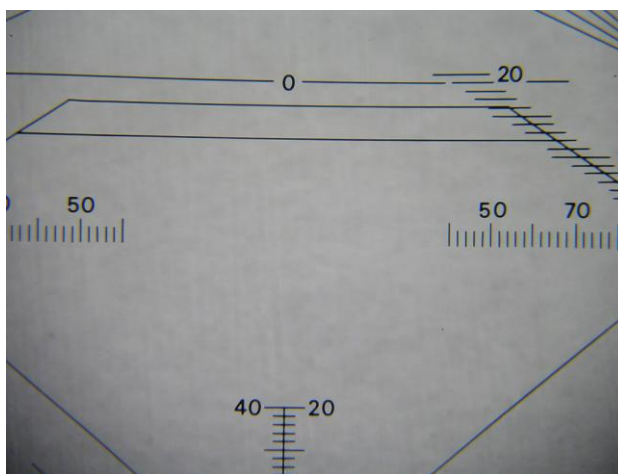
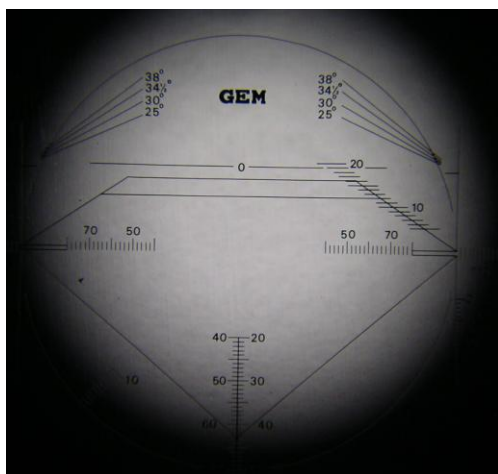
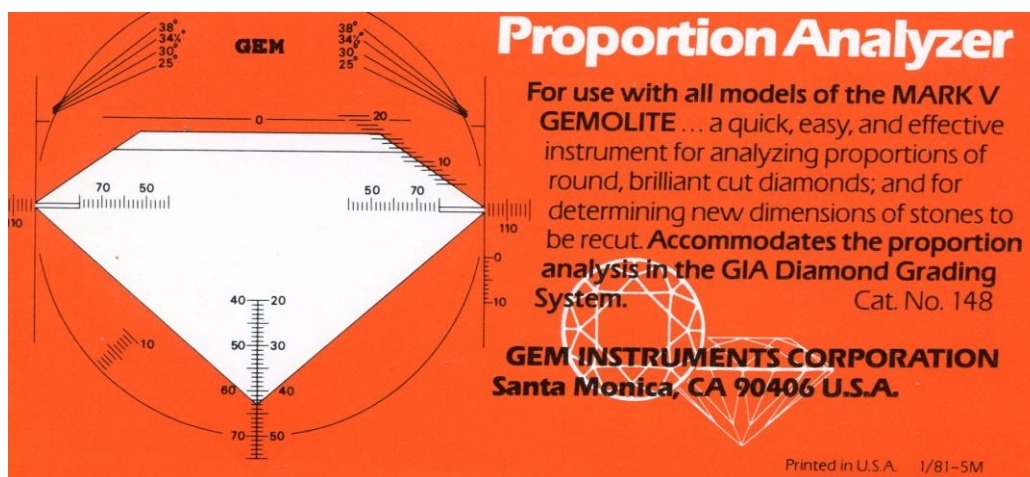
These models use an etched ocular lens that has various scales to aid in measuring the various angles and proportions of a cut and polished diamond.

These kits are currently no longer made and manufactured and you have to make sure the oculars are made and are compatible with your microscope if you purchase used ones.

Special Note

Do your research first before purchasing a used Microscope Proportion Analyzer and make sure all of the accessory parts are included. Ocular, Stone Holder C-Clamp attachment, diffuser plate, ocular eye cup.

Used Price Approx. \$150.00 to \$250.00



This is the image you will see when looking through the specially etched ocular when attached to your microscope.

#13. Camera / Video Systems: Optional



ASET Camera:

Price Approx. \$795.00 to \$995.00

Product Source:

<http://www.americangemsociety.org/asetcamera.htm>

Tutorial

<http://www.americangemsociety.org/uploads/ASETCamerastartupinstructions-749.pdf>



ASET CAM Control Device

Price Approx. \$199.00 to 235.00

Product Source:

<http://www.americangemsociety.org/multipurposelight.htm>

Tutorial

<http://www.americangemsociety.org/uploads/ASETCamLightingEnvironmenttutorial-854.pdf>



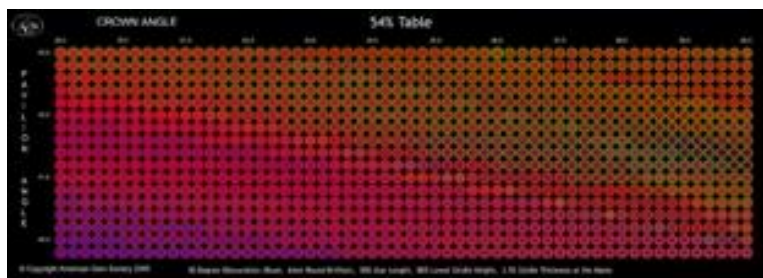
Custom Hand-Made Camera Adaptors

By La Shawn Bauer

Email: HighSierraGemLab@gmail.com



#14. Charts & Graphs of AGS ASET: **Optional**

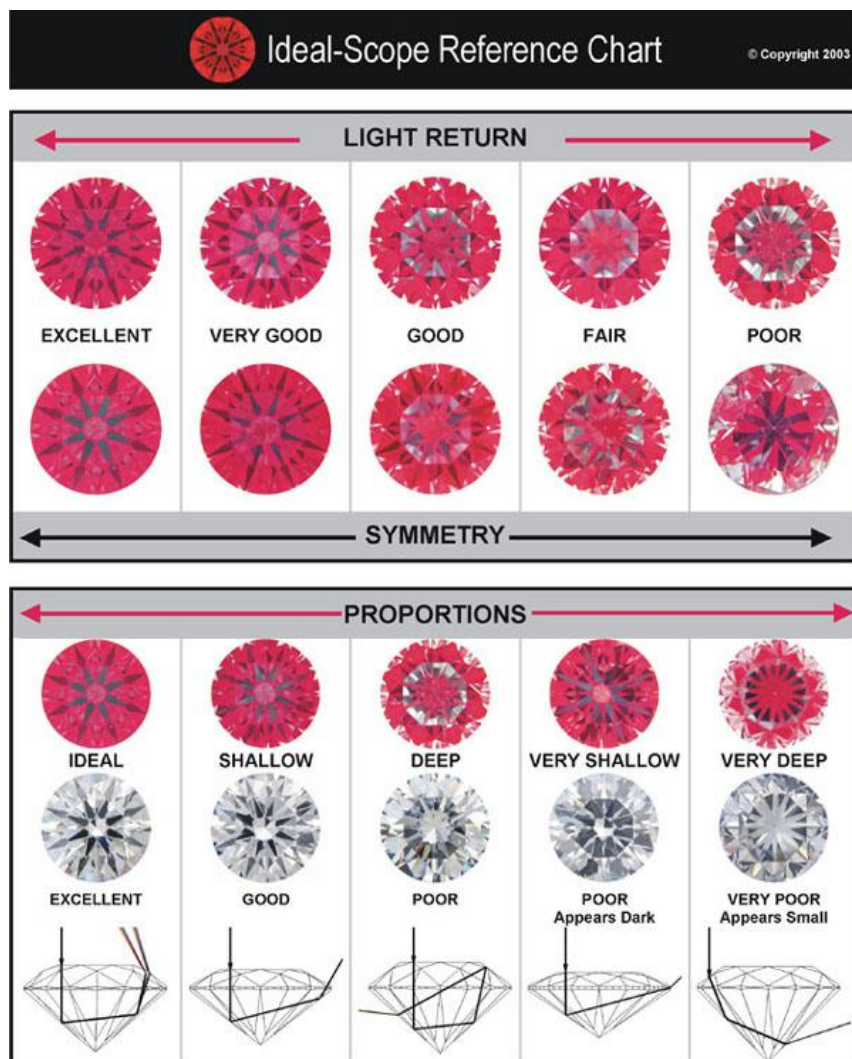


ASET Image Charts:

Price Approx. \$5.00 to \$7.00

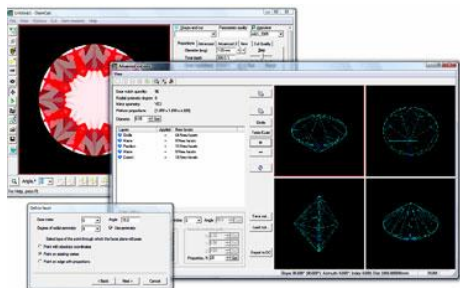
Product Source:

<http://www.americangemsociety.org/asetimagecharts.htm>



http://www.ideal-scope.com/1.using_reference_chart.asp

#15. Computer Software: **Optional**



DiamCalc 3.0

DiamCalc is a system for cut gemstones modeling, which enables the precise calculation of the diamond weight and determination of cut proportions.

Price Approx. \$425.00

Product Source:

http://www.ideal-scope.com/cart_zoom_item.asp?Id=12&ShowAdd=Y

<http://www.octonus.com/oct/products/3dcalc/standard/>



AGS Performance Grading Software® Basic

Price Approx. \$299.00 to \$349.00

Product Source:

<http://www.americangemsociety.org/performancegradingso-1.htm>

Tutorial

<http://www.americangemsociety.org/uploads/PGSBasicTutorial2008revised-746.pdf>



AGS Performance Grading Software

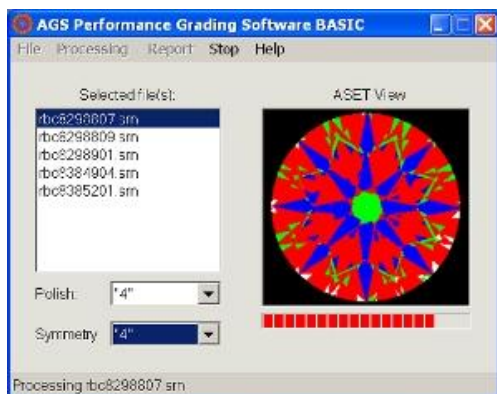
Price Approx. \$995.00 to \$1195.00

Product Source:

<http://www.americangemsociety.org/performancegradingso.htm>

Tutorial

<http://www.americangemsociety.org/performancegradingso.htm>



#16. 3-D Diamond Proportion Scanners: Optional



Sarin
Approx. \$6,200.00 to \$10,000.00
Product Source:

<http://www.kassoy.com/sarin-diascan-s-diamond-cut-evaluation-system.html>



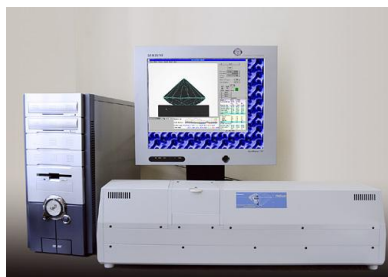
GIA Facet Scan
Approx. \$8,290.00
Product Source:

<http://www.gia.edu/nav/toolbar/instruments/product-catalog/index.html>



OGI MegaScope
Approx. \$
Product Source:

<http://www.ogisystems.com/index.html>



Helium Polish by OctoNus
Price Approx. \$
Product Source:

<http://www.octonus.com/oct/products/helium/polish/>

*****Important Note*****

Before you purchase a 3-D Scanner do your homework and independent research first.

Find out what additional items and software you will need to make the unit do what you want it to do and also find out what the annual service contract or annual software lease price is per year as some units carry a high annual software lease price.

Remember these 3-D Scanners only do loose diamonds and not mounted diamonds.

In the retail environment most gemologists and gemological appraisers will be dealing with and handling mounted diamonds.

Find out how many loose diamonds you grade per day or week or per month and then figure how many loose diamonds you grade on an annual basis and then divide that number into how much the full unit cost is to find out how much it will actually cost you to grade each diamond annually to see if you really need and most importantly can afford to purchase one of these units.

They are nice but extremely expensive for the individual to own and operate on an annual basis.

*****Important Note*****

The Great “Cut Grade” Debate:

Make no mistake, currently there is no universal or standardized “Cut Grading” system in place.

There are numerous models that have been produced and published and there are numerous opinions debating the validity of each “Cut Grading” Model.

It is not my place here to recommend one grading model over the other.

However, it is extremely important that each of you **MUST LIST** what “Cut Grading” System you are using when grading the proportional and cut grading value attributes within your report and you **MUST** list the grading system’s scale and who’s system you are relying on within your report. You simply **CAN NOT** just list the Cut Grade as Good or Very Good or Fair or Excellent. **YOU MUST LIST** the Cut Grading System you are using.

#17. Diamond “Color Grading” Lighting Environment Equipment and Systems: This is mandatory
Controlled lighting equivalent to North Daylight



GIA Gem Instruments DiamondDock

Approx. \$1,995.00

Product Source:

<http://www.gia.edu/nav/toolbar/instruments/product-catalog/index.html>



Spectrowave™ Diamond Grading Cabinet

Approx. \$1,275.00

Product Source:

<http://www.dazor.com/spectrowave-diamond-grading-cabinet.html>

<http://www.kassoy.com/dazor-r-spectrowave-tm-diamond-grading-light-cabinet.html>



Used – GIA Gem Instruments Diamond Lite

Approx. \$450.00

Product Source:

<http://www.gemologicaltools.com/GIA-Diamond-Grading-Light-diagrlt.htm>

*****Important Note*****

The Great Diamond “Color Grading” Debate:

Make no mistake, currently there is no universal or standardized “Color Grading Lighting Environment” system in place.

There are numerous models that have been produced and published over the years and there are numerous opinions debating the validity of each “Color Grading Lighting Environment” Model.

It is not my place here to recommend one grading method or model over the other.

However, it is extremely important that each of you **MUST LIST** what “Color Grading Lighting Environment” System you are using when grading the “Color Grade” value attributes within your report and you **MUST** list the “Color Grading Lighting Environment” system used and are relying on within your report. You simply **CAN NOT** just list the Color Grade without listing and mentioning what “Color Grading Lighting Environment” you are using in correlation to the “Color Grading System” you are also using.

In addition **YOU MUST LIST** the “Color Grading System” you are using also within your reports.

You simply **CAN NOT** just list the color grade of the diamond.

#18. Colored Stone, “Master Color Grading” System: This is mandatory



GemDialogue Color Grading System

Approx. \$450.00

Product Source:

<http://www.kassoy.com/gemdialogue-systems.html>



GemeSquare 2.0 Computer Software Program

Approx. \$540.00

Product Source:

<http://www.stuller.com/content/cms.aspx?id=1182>

<http://www.gemewizard.com/store-square.php>

*****Important Note*****

It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

*****Important Note*****

The Great “Color Grading” of Colored Stones Debate:

Make no mistake, currently there is no universal or standardized Colored Stone “Color Grading” system in place.

There are several colored stone “Color Grading” systems and/or methods currently being used worldwide and you **MUST LIST** the method and/or system you are using to base your color grading on.

You **MUST ALSO LIST** the “Color Grading Lighting Environment” that you are basing your color grade on as each lighting system differs from one to the other and the results will not be the same.

It is not my place here to recommend one color grading method or system over the other.

However, it is extremely important that each of you **MUST LIST** what “Color Grading Lighting Environment” System you are using when grading the “Color Grade” value attributes within your report and you **MUST list** the “Color Grading Lighting Environment” system used and are relying on within your report. You simply **CAN NOT** just list the Color Grade without listing and mentioning what “Color Grading Lighting Environment” you are using in correlation to the “Color Grading System” you are also using.

You simply **CAN NOT** just list the color grade of the gemstone.

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#19. Specific Gravity Testing Equipment: This is mandatory

Specific Gravity Liquids have become frowned upon due to the toxic nature of the chemicals used.

For legal reasons you will want to check with local, state and federal laws regarding your possible legal exposure if you decide to purchase and use specific gravity liquid sets.

The current ecologically safe method is the hydrostatic method by weighing the unmounted gemstone in air and then weigh it again while suspended in water and then use a mathematical formula to calculate the approximately specific gravity of the unknown material.

Since there are so many different electronic digital scales available on the market and a variety of specific gravity attachments you will need to personally check and match the two items so that they will work accurately and correctly.

*****Important Note*****

To get the biggest and best bang for the buck I would highly suggest that you purchase a quality LEGAL-FOR-TRADE scale and then pick out a Hydrostatic Kit that is specifically designed for that particular Legal-for-Trade scale Manufacturer and Model Number.

Approx. \$??? To \$?,???

Product Sources:

<http://www.kassoy.com/legal-for-trade-scales/>

<http://www.stuller.com/products/listing.aspx?cid=538>

<http://www.nationaljewelerssupplies.com/c/scales.html>

<http://www.gemologicaltools.com/Specifis-Gravity-Kit-with-Carat-Scale-hydroSG.htm>

<http://www.mineralab.com/Specific%20Gravity.htm>

*****Important Note*****

I would also suggest you first read and familiarize yourself with Handbook 44 and then also check with your State's Office of Weights and Measurements and get your scales State Certified.

<http://ts.nist.gov/WeightsAndMeasures/h44-07.cfm>

*****Important Note*****

It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

Weights and Measurements Instruments:

#20. Scales: Legal-For-Trade: This is mandatory

Since there is a large selection of Legal-for-Trade Scales you will need to do your research first.

*****Important Note*****

I would also suggest you first read and familiarize yourself with Handbook 44 and then also check with your State's Office of Weights and Measurements and get your scales State Certified.

<http://ts.nist.gov/WeightsAndMeasures/h44-07.cfm>

Approx. \$???.?? To \$?,???.??

Product Source:

<http://www.kassoy.com/legal-for-trade-scales/>

<http://www.stuller.com/products/listing.aspx?cid=538>

<http://www.nationaljewelerssupplies.com/c/scales.html>

It would also be best to have separate Legal-for-Trade Scales, One (1) dedicated and only used for loose diamonds and colored stones that measure in Carats. Then another Legal-for-Trade Scale used for weighing precious metals such as silver, gold, platinum that is capable of measuring in both penny weight and also in grams.

Both scales need to be Legal-for-Trade and both scales should be annually tested and certified by your State's Office of Weights and Measurements.

*****Important Note*****

It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

#21. Precious Metals Testing Equipment: This is mandatory

Standard Acid Test Kit



Approx. \$64.95

Product Source:

<http://www.kassoy.com/deluxe-gold-test-kit.html>



Approx. \$54.95

Product Source:

<http://www.stuller.com/products/products.aspx?gid=23680&cid=541>



Liquid Style Tester

Approx. \$195.99

Product Source:

<http://www.stuller.com/products/products.aspx?series=56-7605>



Gel Style Tester

Approx. \$299.00

Product Source:

<http://www.kassoy.com/tri-electronics-6-24k-economy-electronic-gold-tester.html>

*****Important Note*****

It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

*****Important Legal Notice*****

Gold testing is IN FACT a destructive test!

Get your client's permission first before you begin your testing

*****Caution*****

These are highly corrosive liquids and gels. Make sure you wear safety goggles and protective gloves and have a box of baking soda and a bottle of water and plenty of paper towels within reach in case of accidents, spills and/or leaks.

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Gemological Laboratory Equipment List

Other Product Sources:



<http://www.stuller.com/products/group.aspx?gid=88454>



<http://www.stuller.com/products/products.aspx?series=56-7001>



Rare Earth Magnet: This is optional but **highly recommended**

Rare Earth Magnets are very useful in checking if a platinum item has cobalt in it.

It can also detect if an item has been chrome plated instead of rhodium plated.

These strong little magnets can also be used to detect some synthetic diamonds from natural diamonds due to their metallic inclusions. However that is only an ancillary test and not a definitive test.

*****Important Note*****

It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

#22. Thermal Conductivity Probes: (aka Diamond Detector) **This is mandatory**



Mizar Diamond Detective
Price Approx. \$99.95 to 109.00

Product Source:

<http://www.mineralab.com/Diamond.html>

<http://www.kassoy.com/mizar-diamond-detective-diamond-tester.html>



Presidium Diamond Mate

Price Approx. \$131.00

Product Source:

<http://www.kassoy.com/presidium-diamond-mate.html>

*****Important Note*****

It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

#23. Combination Dual Action Electronic Probes: This is optional but **highly recommended**



Mizar DiamondNite All-In-One Diamond and Moissanite Tester

Price Approx. \$229.00

<http://www.mineralab.com/DiamondNite.htm>



Presidium Multi Tester

Price Approx. \$249.99

Product Source:

<http://www.kassoy.com/presidium-multi-tester.html>



Tri Electronics Diamond Pro

Price Approx. \$259.00

Product Source:

http://www.kassoy.com/tri-electronics-diamond_pro.html



GemOro UltraTester™

Price Approx. \$???.??

Product Source:

<http://www.stuller.com/products/products.aspx?gid=93369&cid=541>

*****Important Note*****

It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

#24. Electric Conductivity Probes: (aka Moissanite Detector)

This is optional but **highly recommended**



The Moissanite Terminator II
Price Approx. \$129.00 to \$149.00
Product Source:

<http://www.mineralab.com/Terminator.htm>

<http://www.kassoy.com/Moissanite-Gemstone-Tester.html>



Presidium Moissanite Tester
Price Approx. \$132.00
Product Source:

<http://www.kassoy.com/moissanite-tester.html>

<http://www.stuller.com/products/products.aspx?series=56-7001>



GemOro Moissanite Tester
Price Approx. \$???.??
Product Source:

<http://www.stuller.com/products/products.aspx?gid=93392&cid=541>

*****Important Note*****

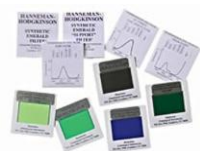
It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

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Gemological Laboratory Equipment List

#25. **Color Filters: This is mandatory**



Chelsea Filter: **This is mandatory**
Approx. \$44.95 to 59.00



Hanneman Filter Set Five (5) Filter Set: This is optional but **highly recommended**
Approx. \$64.00 to \$80.95



Hanneman Jade Filter: This is optional but **highly recommended**
Approx. \$22.00



Hanneman Tanzanite Filter: This is optional but **highly recommended**
Approx. \$34.00 to \$35.95

Product Sources:

<http://www.kassoy.com/gem-identification-filters/>

<http://www.gia.edu/nav/toolbar/instruments/product-catalog/index.html>

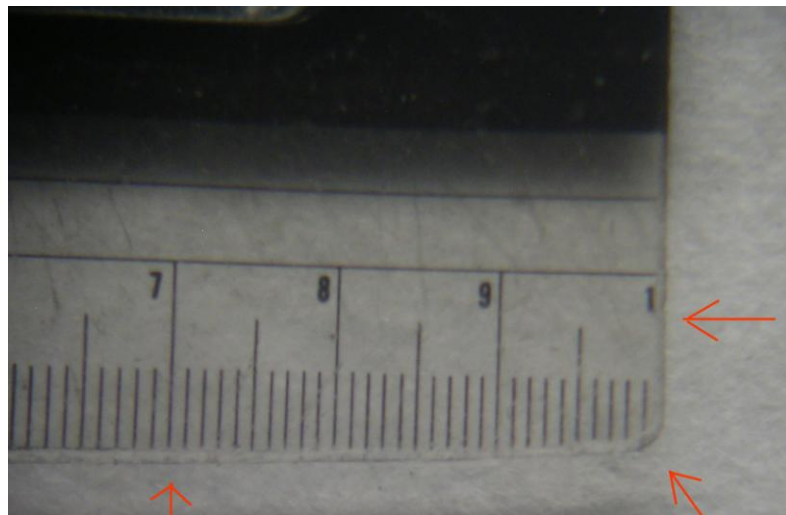
<http://www.mineralab.com/Gem%20Filters.htm>

*****Important Note*****

It is extremely important that you fully read and completely understand the correct operating and testing procedures of each instrument detailed in their operating manual or you will receive False-Positive Results.

Linear Measuring Devices: This is mandatory

#26. Table Gauges: This is mandatory



Currently I have yet to find a supplier of Table Gauges. GIA/Gem Instruments use to manufacture and sell them.

If anyone knows of a source please email me
HighSierraGemLab@gmail.com

*****Special Note*****

I personally trim some of the excess film strip away from the printed scale so that I can overlay the scale into sometimes hard to reach areas on a ring, pendant or brooch mounting to visually measure some of the melee stones.

It is also a good idea to have several back up Table Gauges on hand in a safe place. Only use one table gauge until you can no longer clearly see and read the scales.

#27. Micro Gauge System of Transparences:

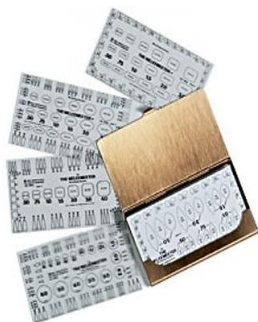


Diamond Weight Estimator:

Price Approx. \$5.00

Product Source:

<http://www.kassoy.com/diamond-weight-estimator.html>



Meleemeeter Set of 10: This is optional but **highly recommended**

Price Approx. \$54.95

Product Source:

<http://www.kassoy.com/meleemeeter.html>

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List

#28. LEVERIDGE Gauge Set, Dial Gauge or Digital Gauge: This is mandatory
with High Setting Attachment and reference book



Presidium Dial Gauge
Price Approx. \$157.00
Product Source:

<http://www.kassoy.com/presidium-dial-gauge.html>



Micromat American Gauge Set
Price Approx. \$249.95
Product Source:

<http://www.kassoy.com/micromat-american-gauge-set.html>



Compact Digital Gauge
Price Approx. \$69.00
Product Source:

<http://www.kassoy.com/compact-digital-gauge.html>

<http://www.stuller.com/products/products.aspx?gid=59420&cid=527>



Presidium Gemstone Gauge
Price Approx. \$289.00
Product Source:

<http://www.kassoy.com/presidium-gemstone-gauge.html>

<http://www.stuller.com/products/products.aspx?gid=59399&cid=527>



Calibration Blocks Set of 2 **This is mandatory**
they measure 5.0mm and 10.0mm
Price Approx. \$75.00
Product Source:

<http://www.kassoy.com/calibration-blocks-set-of-2.html>

*****Important Note*****

It is mission critical that all “**Linear Measuring Devices**” be checked, tested and re-calibrated on a standardized timeframe using “**Certified Calibration Blocks**” to insure optimal measuring accuracy and consistency.

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#29. Electronic Digital Calipers: This is optional but **highly recommended**



Mini Digital Gauge-4" Or 100M

Price Approx. \$39.95

Product Source:

<http://www.kassoy.com/mini-digital-gauge-4-or-100m.html>



Compact Digital Gauge: This is optional but **highly recommended**

Price Approx. \$69.00

Product Source:

<http://www.kassoy.com/compact-digital-gauge.html>

<http://www.stuller.com/products/products.aspx?gid=59420&cid=527>

#30. Calibration Blocks Set of 2



Calibration Blocks Set of 2 **This is mandatory**

they measure 5.0mm and 10.0mm

Price Approx. \$75.00

Product Source:

<http://www.kassoy.com/calibration-blocks-set-of-2.html>

*****Important Note*****

It is mission critical that all “**Linear Measuring Devices**” be checked, tested and re-calibrated on a standardized timeframe using “Certified Calibration Blocks” to insure optimal measuring accuracy and consistency.

#31. Metal Slide Calipers:



Brass Sliding Gauges

<http://www.stuller.com/products/group.aspx?gid=59434>



Boley-Style Vernier Gauge: This is optional but **highly recommended**

<http://www.stuller.com/products/products.aspx?gid=59428&cid=527>

#32. Taylor's Paper Tape Measure: This is optional but **highly recommended**

You can purchase one of these at any Sewing Supply Store

#33. Retractable Steel Tape Measure: This is optional but **highly recommended**

You can get a small one at any Home Improvement Store

#34. Wooden Ruler: This is optional but **highly recommended**

You can get a 12-inch or 18-inch at any school supply department as a discount store

#35. Steel Ruler: This is optional but **highly recommended**

A 6-inch model works the best to measure pendants, brooches or belt buckles or other larger objects.

It also works well when placed next to the item when you photograph it to give a scale of its size and shape.

#36. **Fiber Optic Light System: This is mandatory**



Krüss Fiber Optic Light Source, 8 Volt, 20 Watt halogen lamp

Price Approx. \$565.00 Base Only

Attachments sold separately

Produce Source:

<http://www.kassoy.com/kruss-fiber-optic-light-source.html>



Fiber Optic Light 150 watt – Used

Price Approx. \$350.00

Product Source:

<http://www.gemologicaltools.com/Fiber-Optic-Light-150-watt-GT150FO.htm>



Lumina Fiber Optic Illuminator

Price Approx. \$325.00

Product Source:

<http://gemproducts.com/products.html>

Fiber Optic Light Source Companies:

Fostec:

http://spectraservices.com/Merchant2/merchant.mvc?Screen=PROD&Product_Code=DCR4&Category_Code=FOILLSF

E-Bay

<http://www.ebay.com/>

*****Important Note*****

You can also purchase overhead fiber optic ring illuminators that clamp to the objective lens of your microscope on the newer models to provide a bright overhead light source.

Other types and styles of overhead microscope light rings use Fluorescent or LED Illumination as well.

Additional Light Sources:

#37. Incandescent Pen Light: This is optional but **highly recommended**

The older style filament light bulbs work best to see and judge color change phenomena

#38. LED Pen Light: This is optional but **highly recommended**

These lights produce bright high color temperatures similar to true daylight. Be sure to check the color temperature before purchasing them.

#39. U.V. LED Pen Light, Long Wave: This is optional but **highly recommended**



Precision 3X Uv Detect/Curing

Price Approx. \$25.00

Product Source:

<http://www.kassoy.com/precision-3x-uv-detect-curing.html>



9 UV LED Light

Price Approx. \$25.00

Product Source:

<http://www.kassoy.com/9-uv-led-light.html>

*****Caution*****

U.V. Light Sources require that you use protective goggles to filter the U.V. Radiation from your eyes!

#40. Thermal Hot Point Probe: This is mandatory

Currently I CAN NOT find a source.

However you can also use a electrical wax pen if need be or what I do is use a Straight Pin with the button clipped off and stuck into a champagne cork as a holder and simply use a Bic Lighter to heat the tip of the straight pin until almost red hot and then quickly use it to see if a reaction takes place on the subject material.

*****Important Note*****

Using a hot point pin is actually classified as a Destructive Test.

Therefore YOU MUST get the client's permission first before attempting such a test and then only do the test in an area that is not readily visible.

#41. Photostand: Lighting System: This is mandatory



MK Digital's Gem eBox

Price Approx. \$399.00

Product Source:

<http://www.kassoy.com/MK-Digitals-Gem-eBox.html>



MK Digital's Photo eBox

Price Approx. \$499.77

Product Source:

http://www.kassoy.com/mk-digitals_photo-ebox.html



MK Digital's Photo eBox Plus

Price Approx. \$995.00

Product Source:

<http://www.kassoy.com/MK-Digital-Photo-eBox-Plus.html>

*****Important Note*****

It is not necessary to spend large amounts of money on a Photostand at first.

In fact, you can build your own makeshift Photostand using common items. Two (2) Ott Lights and a small white lamp shade will do a good job.

Remember if you are only documenting the item for an appraisal or insurance documentation then you really don't need commercial grade photographs.

#42. Digital Cameras Available: This is mandatory



Canon Digital Camera Package by MK Digital Direct

Price Approx. \$479.00

Product Source:

<http://www.kassoy.com/Canon-Digital-Camera-Package-by-MK-Digital-Direct.html>

B & H Photo

<http://www.bhphotovideo.com/>

Nikon

<http://www.nikonusa.com/>

Olympus

http://www.olympusamerica.com/cpg_section/cpg_digital.asp

Canon

<http://www.usa.canon.com/home>

Fuji

http://www.fujifilmusa.com/products/digital_cameras/index.html

Pentax

<http://www.pentaximaging.com/slr/>

#43. Digital Imaging Software: This is mandatory

The mass majority of camera companies have developed their own special proprietary imaging software so that you can manipulate the captured digital images using their various software tools.

You can also purchase independent imaging software such as PhotoShop and other high end software.

However, most of these in-depth software programs are very expensive and as a gemologist, and/or gemological appraiser there really isn't any need to justify the expense.

All of the programs that I use on a daily basis were freebees that I got when I purchased my cameras from the various manufactures.

#44. Digital Flatbed Scanner: This is optional but **highly recommended**

Every Gemological Laboratory should have a quality flat bed digital scanner.

This way you can scan and copy Diamond Grading Reports, Old Appraisals, Warranty Papers, Sales Receipts, Diamond Papers, Hand Written Notes, Worksheets and other various items.

*****Important Note*****

One thing I find useful it to digitally scan each and every gemological reference book cover, valuation / appraisal reference book and other assorted books and trade journals as a very simple and effective way to catalog your reference library and then make a CD of the images and give it to your insurance agent and insure not only your lab equipment but also insurance your reference library. You will be shocked and surprised to find out how much you have invested in your reference library so protect it and insure it against loss or damages.

Price Approx. \$100.00 to \$300.00

Best Buy

<http://www.bestbuy.com/>

Office Depot

http://www.officedepot.com/?jsessionid=0000mtkNKBC2IxCeD_MZSRGx-pJ:13ddq0uth

Office Max

<http://www.officemax.com/>

#45. Color Laser Printer: This is optional but **highly recommended**

Today Color Laser Printers are now affordable and reliable. They produce better images than the older style ink jet cartridge color printers and the cost is sometimes better than purchasing ink jet cartridges.

*****Important Note*****

The best advantage is that Color Laser Printers use a dry powder media and will last longer and does not dry up when it has not been used in a while.

With a Color Laser Printer you can also design and print your own brochures and other advertizing media that you mail out or hand out to your clients and you save money in the long run by bypassing the local printer in most cases.

Price Approx. \$400.00 to \$1,200.00

Best Buy

<http://www.bestbuy.com/>

Office Depot

http://www.officedepot.com/?jsessionid=0000mtkNKBC2IxCeD_MZSRGx-pJ:13ddq0uth

Office Max

<http://www.officemax.com/>

High Sierra Gem Lab & La Shawn Bauer, GG Email: HighSierraGemLab@gmail.com

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#46. Gemological Reference Library: This is mandatory

This is by far one of the most over looked areas within a gemological laboratory and that is to have an in-depth and well equipped reference library.

No gemologist or gemological appraiser can know and remember everything they have ever been taught or trained and that is where your reference library comes in handy to the point that it becomes absolutely priceless.

*****Important Note*****

Insure your reference library!!! One of my reference books is out of print and if it was lost or damaged and I had to replace it from a used book source that one reference book alone will cost me over \$600.00 if I want to replace it.

Once a year you should take time out during your down time and check replacement prices on your books and adjust your insurance coverage to match the replace costs and replacement values.

If you ever leave the industry you can also sell your reference library book by book to other gemologists or sell them to a rare book store to help recoup some of your investment.

If you are just starting to build your reference library then you should set up a program to purchase One (1) New Quality Reference Book once a month or once every two months. Read the book thoroughly first during your down time and then record it on your insurance program paperwork sheet and then put it in your library.

READ IT FIRST, that is what books are designed for.

Reference Book Sources:

Gemological Tools Professional Bookshelf
http://www.gemologytools.com/html/buy_books.html

GemStone Press Book Shelf
http://gemstonepress.com/mm5/merchant.mvc?Screen=CTGY&Store_Code=GP&Category_Code=B

Gem World International Bookshelf
<http://www.gemguide.com/products/books.htm>

J.M. Cohen, Rare Books
<http://www.jmcohenrarebooks.com/>

Kassoy Book Shelf
<http://www.kassoy.com/books/>

Mineralab Book Shelf
<http://www.mineralab.com/Books.htm>

Stuller Book Shelf
<http://www.stuller.com/products/listing.aspx?cid=532>

#47. **Valuation Science and Methodology Library:** This is optional but **highly recommended**

USPAP – Uniform Standards of Professional Appraisal Practice

http://www.appraisalfoundation.org/s_appraisal/sec.asp?CID=3&DID=3

Organizations that recognize & promote USPAP Compliance for Gem & Jewelry Appraisers

ASA – American Society of Appraisers

<http://www.appraisers.org/ASAHome.aspx>

ISA – International Society of Appraisers

<http://www.isa-appraisers.org/>

NAJA – National Association of Jewelry Appraisers

<http://www.najaappraisers.com/>

Organizations that DO NOT recognize USPAP Compliance for Gem & Jewelry Appraisers

RMVP – Register Master Valuer Program

<http://mastervaluer.com/>

AGS – American Gem Society

<http://www.americangemsociety.org/>

JVC – Jeweler’s Vigilance Committee

<http://www.jvclegal.org/>

Additional Resources for the Professional Appraiser of Gems & Jewelry

Appraiser Under Oath

<http://www.appraiserunderoath.com/index01.html>

Appraising Demystified

<http://www.appraisingdemystified.com/index2.html>

#48. Appraisal Reference Library: This is optional but **highly recommended**

Price Guide References:

*****Important Note*****

NEVER EVER throw any of your Diamond and/or Colored Stone Supplier's Price Guide Sheets or Catalogs away. File and Save then by Date as this will give you a historical account of prices if you ever have to do a Historical or Retroactive Appraisal based on a given date in the distant past.

The Guide – Gem World International Approx. \$205.00 a year
<http://www.gemguide.com/guide.htm>

Rapaport
<http://www.rapnet.com/>

Online Auction Resources:

<http://www.auctionmarketresource.com/home.php>

<http://www.artfact.com/>

Online Retail Resources:

Additional Items & Products of Interest:

#49. Hardness Point Set



Deluxe Hardness Pick Set

Price Approx. \$79.00

<http://www.mineralab.com/Hardness.htm>

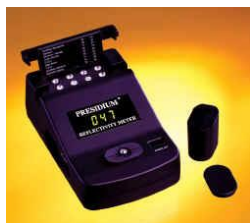
#50. Digital Reflectometer



Gem-n-Eye from Mineralab

Price Approx. \$348.00

<http://www.mineralab.com/Gem-n-Eye.htm>



Presidium Reflectivity Meter

Price Approx. \$175.00

<http://www.mineralab.com/Reflectivity.htm>

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Gemological Laboratory Equipment List

#51. Portable Laboratory Kits:



Krusse Standard Gem Travel Lab

Price Approx. \$3,595.00

Product Source:

<http://www.kassoy.com/kruss-standard-gem-travel-lab.html>



Krusse Professional Gem Travel Lab

Price Approx. \$9,595.00

Product Resource:

http://www.kassoy.com/kruss_professional-gem-travel-lab.html



PortaLab

Price Approx. \$6,000.00

Product Source:

<http://gemproducts.com/products.html>



GIA MAXI LAB - Used

Price Approx. \$5,000.00

Product Source:

<http://www.gemologicaltools.com/GIA-MAXI-LAB-maxi.htm>

#52. Geiger Counters: This is optional but **highly recommended**



Monitor 4 **Pocket Geiger Counter**

Price Approx. \$309.00

Product Source:

<http://www.mineralab.com/Monitor4.htm>



The Inspector Digital **Pocket Geiger Counter**

Price Approx. \$539.00

Product Source:

<http://www.mineralab.com/Inspector.htm>



3007A Survey Meter

Price Approx. \$1,195.00

Product Source:

<http://www.mineralab.com/Detector.htm>

#53. Diamond Colorimeters:



Approx. \$7,900.00

Product Source:

<http://www.kassoy.com/sarin-colibri-colorimeter.html>

#54. Precious Metal Analyzer:



Energy dispersive x-ray fluorescence spectrometers

Price Approx. \$12,785.00

Product Source:

<http://www.kassoy.com/precious-metal-analyzers.html>

#55. Diamond Type Testing: This is optional but **highly recommended**



SSEF Diamond Type Spotter

Price Approx. \$150.00

Product Source:

<http://www.kassoy.com/ssef-diamond-type-spotter.html>



SSEF IIA Diamond Illuminator Short Wave UV Lamp

Price Approx. \$499.00

Product Source:

<http://www.kassoy.com/ssef-ii-a-diamond-illuminator-short-wave-uv-lamp.html>



HRD D-Screen/Case

Price Approx. \$3,295.00

Product Source:

<http://www.kassoy.com/hrd-d-screen-case.html>

#56.



SSEF BLUE DIAMOND TESTER

Price Approx. \$695.00

Produce Source:

<http://www.kassoy.com/ssef-blue-diamond-tester.html>

http://www.gemstonepress.com/mm5/merchant.mvc?Screen=PROD&Store_Code=GP&Product_Code=SBLUE&Category_Code=GII

*****Important Note*****

With the recent advent of HPHT Treated Diamonds these items must be seriously considered.

*****Personal Opinion*****

All of the Major Diamond Grading Laboratories worldwide should seriously conceder indentifying, classifying and then reporting on their printed lab reports the diamond's Class Types, Type I-A, I-B, II-A, II-B and III. Diamond Class Type is, in fact, an Identifying Attribute that SHOULD NOT be overlooked or dismissed.

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#57. Microscope Optical Heads:

Wild:

<http://www.wild-heerbrugg.com/index.html>

http://www.spectraservices2.com/Merchant2/merchant.mvc?Screen=CTGY&Category_Code=UMICSTEREOWILD

Nikon:

<http://nikoninstruments.com/>

<http://spectraservices2.com/UMICSTEREOOLYMPUS.html>

Zeiss:

<http://www.zeiss.com/>

<http://spectraservices2.com/UMICSTEREOZEISS.html>

Olympus:

http://www.olympusamerica.com/seg_section/seg_home.asp

<http://spectraservices2.com/UMICSTEREOOLYMPUS.html>

Wildman:

<http://www.gemproducts.com/products.html>

Meiji:

<http://www.meijitechno.com/index1.htm>

http://www.meijitechno.com/gemological_applications.htm

Leica:

<http://www.leica-microsystems.com/>

<http://spectraservices2.com/UMICSTEREOLEICA.html>

B&L:

<http://spectraservices2.com/UMICSTEREOBNL.html>

New:

http://www.microscopeworld-professional.com/gemological_microscopes.aspx

http://www.microscopeworld-professional.com/stereo_microscopes.aspx

<http://www.nationaljewelerssupplies.com/c/Microscopes.html>

<http://spectraservices2.com/UMICSTEREONIKON.html>

Used:

http://www.corelresearch.com/corelresearch_inventory.htm

#58. Microscope Bases:

Wildman:

<http://www.gemproducts.com/products.html>

Eickhorst:

<http://www.eickhorst.com/en/gemmological-instruments/microscopes/>

GIA:

<http://www.gia.edu/nav/toolbar/instruments/product-catalog/index.html>

Meiji:

http://www.meijitechno.com/gemological_applications.htm

#59. Microscope Camera Adaptors & Cameras: This is optional but **highly recommended**

<http://www.microscopeworld.com/MSWorld/SearchResult.aspx?CategoryID=172>
<http://www.microscopeworld.com/MSWorld/SearchResult.aspx?CategoryID=128>
<http://www.microscopeworld-professional.com/digital.aspx>
<http://www.greatscopes.com/photo.htm>
<http://www.meijitechno.com/cmount.htm>
http://www.meijitechno.com/digital_camera_adapters.htm
http://www.meijitechno.com/digital_CCD_cameras.htm
<http://www.minresco.com/dinolite/dinolite.htm>
<http://www.labtek.net/index.html>

#60. Microscope Lighting Rings and Illuminators: This is optional but **highly recommended**

<http://www.microscopeworld.com/MSWorld/SearchResult.aspx?CategoryID=144>
<http://spectraservices2.com/UFIBER.html>
<http://www.meijitechno.com/illuminators.htm>
<http://www.labtek.net/index.html>

#61. Computer Programs – Gemological Based Software: This is optional but **highly recommended**

GT Pro – Gemological Tools Professional Software Approx. \$69.95

http://www.gemologytools.com/html/purchase_gt_pro.html

Mineral Search 2000 Approx. \$59.00

<http://www.mineralab.com/Software.html>

Smart Opal Chart Approx: \$195.00

<http://www.opalmine.com/other-products/20-smart.html>

GemeWizard GemeSquare Approx. \$345.00

<http://www.gemewizard.com/store-square.php>

I personally own each of these programs and they all have their special uses and functions that I regularly use on a daily and weekly basis.

#62. Computer Programs – Appraisal Software: This is optional but **highly recommended**

QLSS/PAS Approx. \$1,975

<http://qlss.com/>

The Gem Guide Appraisal Software Approx. \$225.00

<http://www.gemguide.net/>

Perfect Diagram Approx. \$150

<http://perfectdiagram.com/>

GeneWizard GeneSquare Approx. \$345.00

<http://www.gemewizard.com/store-square.php>

Personal Closing Remarks:

To have a nice high quality AGA – Certified Gemological Laboratory you can spend anywhere from approximately \$12,000.00 to a high of \$60,000.00.

The average certified lab would be around \$15,000.00 to \$20,000.00.

Think about this for a few moments.

You can have a fully equipped certified laboratory for less than what a good used car goes for.

That used car will have a service life of less than 10 years. Then the resale value of that used car after 10 years of daily driving use is basically ZERO.

The service life of an AGA – Certified Gem Laboratory can easily be 20 to 30 years if not more for the most part. Of course there is general maintenance as with any equipment be it mechanical or electronic. The resale value of your laboratory after 10 years or 20 years or even 30 years will have a better resale value than that used car after an additional 10 years of daily driving use.

\$15,000.00 over a 5-year period is approximately \$250.00 a month or \$8.25 a day!

\$15,000.00 over a 10-year period is approximately \$125.00 a month or \$4.11 a day!

\$15,000.00 over a 15-year period is approximately \$83.33 a month or \$2.74 a day!

I'm sorry but I don't know of a single retail jewelry store in the USA that can't afford to budget or save and allocate a single \$10.00 bill a day towards an AGA – Certified Gemological Laboratory. It is not that expensive when it comes right down to it.

There is basically no excuse for not having a certified gemological laboratory in every single retail jewelry store nation-wide.

The REAL QUESTION IS, are you a Real Professional Jeweler or merely a Mass Merchandiser?

And that, my friends, is the answer as to how to have an advertising coup by separating your Professionally Staffed and Fully Equipped jewelry store from the Mass Merchandisers in your area.

The public needs to know and understand that you and your store take a very serious and committed stance towards being the best professionally trained and highly educated staffed jewelry store in your area and are here specifically for the consumer.

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List

I personally urge everyone to check out all of these companies and their fine gemological products, tools, equipment and instrumentation then make your own purchasing decisions based upon your specific needs.

Main Listing of Companies:

Adamas Gemological Laboratory

<http://www.gis.net/~adamas/>

American Gem Society – Advanced Instrument Division

<http://www.americangemsociety.org/advancedinstrumentsd.htm>

Appraising Demystified

<http://www.appraisingdemystified.com/index2.html>

Appraiser Under Oath

<http://www.appraiserunderoath.com/index01.html>

Dazor

http://www.dazor.com/jewelry_task_lights.html

Eickhorst

<http://www.eickhorst.com/gemmologische-instrumente/>

GemeWizard GemeSquare

<http://www.gemewizard.com/store-square.php>

Gemological Products

<http://gemproducts.com/index.htm>

GemstonePress.Com

<http://gemstonepress.com/>

GemologicalTools.Com

<http://www.gemologicaltools.com/>

G.I.A. / Gem Instruments

<http://www.gia.edu/nav/toolbar/instruments/product-catalog/index.html>

The Guide – Gem World International

<http://www.gemguide.com/guide.htm>

The Gem Guide Appraisal Software

<http://www.gemguide.net/>

Ideal-Scope.Com

<http://www.ideal-scope.com/default.asp>

J.M. Cohen, Rare Books

<http://www.jmcohenrarebooks.com/>

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Gemological Laboratory Equipment List

Kassoy

<http://www.kassoy.com/>

Mineralab.Com

<http://www.mineralab.com/>

National Jeweler's Supplies

http://www.nationaljewelerssupplies.com/Merchant2/merchant.mvc?Screen=CTGY&Store_Code=NJS&Category_Code=gauges

OctoNus.Com

<http://www.octonus.com/>

OGISystems.Com

<http://www.ogisystems.com/>

Perfect Diagram

<http://perfectdiagram.com/>

PrettyRocks.Com

<http://www.prettyrock.com/>

Quantum Leap Software Solution / Professional Jewelry Appraisal Software
QLSS/PAS

<http://qlss.com/>

Register Master Valuer Program

<http://mastervaluer.com/>

Sarin.Com

<http://www.sarin.com/index.asp>

Smart Opal Chart

<http://www.opalmine.com/other-products/20-smart.html>

Stuller

<http://www.stuller.com/products/tools/>

Current Listing of AGA – Certified Gemological Laboratories:

34 total as of 02-16-2010 in the entire world

#1.

#2.

#3.

Joseph A. Mackley, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #03

GG, ASA, Master Gemologist Appraiser®
Mackley & Co. Inc.
1017 Cragfont Way
Knoxville, TN 37923
US

Phone: (865) 693 - 3097
(865) 693 - 3097

Website: <http://mackley.com>

Email

#4.

James S. Seaman, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #04

GG, ASA, Master Gemologist Appraiser®
Midwest Gem Lab
17100 W. Bluemound Rd. #206
Brookfield, WI 53005
US

Phone: (262) 784 - 9017
(262) 784 - 9017
Fax: (262) 784 - 0103

Email

#5.

Nancy Stacy, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #05

GG, ASA, Master Gemologist Appraiser®
JBS Appraisals
712 Bancroft Rd. #436
Walnut Creek, CA 94598
US

Phone: (925) 939 - 4367
(925) 939 - 4367

Website: <http://jewelry-appraisal.com>

Email

#6.

Thom Underwood, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #06

GG, ASA, FGA, ISA, Master Gemologist
Appraiser®
San Diego Gemological Laboratory
1851 San Diego Ave
San Diego, CA 92110
US

Phone: (619) 286 - 6614
(619) 286 - 6614
Fax: (619) 286 - 7541

Website: <http://sandiegogemlab.com>

Email

#7.

Christine York, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #07

GG, Master Gemologist Appraiser®
5909 W. Loop So. Ste. 180
Bellaire, TX 77401
US

Phone: (713) 665 - 1650
(713) 665 - 1650
Fax: (713) 665 - 8824

Website: <http://cwygems.com>

Email

#8.

#9.

Robert F. Trapp, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #09

GG, ISA-CAPP
Trapp Gemological Services
10109 French Pine Ave.
Las Vegas, NV 89129
US

Phone: (702) 243 - 9959
(702) 243 - 9959
Fax: (702) 445 - 6529

Email

#10.

Lorraine Lopezzo, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #10

ASA, FGA, GG, Master Gemologist Appraiser ♦
Lorraine Lopezzo
250 S. President Street, #400
Baltimore, MD 21202
US

Phone: (908) 246 - 3554
(908) 246 - 3554

Website: <http://diamonddiva.com>

Email

#11.

Martha Waugh Hubbard, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #11

GG, Master Gemologist Appraiser ♦
Appraisals of Jewelry by Marti, L.L.C.
3731 Potvin Lane
Tucson, AZ 85742
US

Phone: (520) 400 - 8586
(520) 400 - 8586

Website: <http://appraisalsofjewelrybymarti.com>

Email

#12.

Tracy Aros, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #12

GG
Artabella
1760 E. River Road #119
Tucson, AZ 85711
US

Phone: (520) 751 - 7435
(520) 751 - 7435
Fax: (520) 546 - 5641

Website: <http://artabellajewelryappraisals.com>

Email

#13.

Suzanne Martinez, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #13

GG
Lang Antiques
323 Sutter St.
San Francisco, CA 94108
US

Phone: (415) 986 - 8585
(415) 986 - 8585

Website: <http://langantiques.com>

Email

#14.

James F. Naughter, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #14

ISA, GG
A & A Gemological Lab
PO Box 8503
Albany, NY 12208
US

Phone: (518) 438 - 8872
(518) 438 - 8872
Fax: (518) 372 - 0061

Email

#15.

David R. Boggess, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #15

GG
Certified Jewelry Appraisals
16 Technology Drive #136
Irvine, CA 92618
US

Phone: (949) 727 - 3411
(949) 727 - 3411
Fax: (949) 727 - 9350

Website:
<http://www.jewelrybuyersandappraisals.com>

Email

#16.

Raymond H. Mason, Jr., Accredited Senior Gemologist
AGA Certified Gemological Laboratory #16

GG
Arizona Gemological Laboratory, Inc.
3200 North Hayden Road, Ste. 110
Scottsdale, AZ 85251
US

Phone: (480) 946 - 9574
(480) 946 - 9574
Fax: (480) 948 - 1239

[Email](#)

#17.

Paul Cassarino, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #17

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(585) 359 - 3900
Fax: (585) 359 - 8932

Website: <http://thegemlab.com>

[Email](#)

#18.

Neil Thomas Beaty, Accredited Senior Gemologist
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Denver, CO 80216-8238
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(303) 223 - 4944
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Website: <http://gemlab.us>

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#19.

Michael Cowing, Accredited Senior Gemologist
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(410) 721 - 5211

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#20.

John H. Vivian, Accredited Senior Gemologist
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#21.

John A. Caruso, Accredited Senior Gemologist
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Gemological Evaluation & Marketing Services,
Inc.
PO Box 312
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(617) 529 - 4367

Website: <http://thegemlab.org>

Email

#22.

Karl Y. Nakamura, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #22

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Honolulu, HI 96814
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(808) 597 - 8223

Fax: (808) 597 - 1363

Website: <http://www.iridiumjewelers.com>

Email

#23.

Vickie L. Adams, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #23

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Adams & Associates Appraisers, Inc.
18662 MacArthur Blvd. Ste. 200
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(949) 851 - 1081

Fax: (714) 850 - 1961

Website: <http://adamsappraisers.com>

Email

#24.

Craig A. Lynch, Accredited Senior Gemologist
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3730 West Michigan
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(602) 264 - 3210

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#25. **Temporarily Closed - Relocating**

La Shawn Bauer, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #25

GG
High Sierra Gem Lab, LLC
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Reno, NV 89515-0591
US

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Website: <http://highsierragemlab.com>

Email

#26.

Susan Eisen, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #26

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#27.

Sue Whitaker, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #27

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Email

#28.

Mary B. Reich, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #28

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Fax: (505) 884 - 4431

Website: <http://www.gemspeaking.com>

Email

#29.

Carole C. Richbourg, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #29

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342 State Street, Suite 3
Los Altos, CA 94022
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(408) 219 - 1175

Fax: (408) 716 - 3012

Website: <http://finejewelryappraiser.com>

Email

#30.

Christopher G. Jacobs, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #30

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Phone: (619) 248 - 8628

(619) 248 - 8628

Fax: (619) 955 - 8736

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Email

#31.

Gary L. Smith, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #31

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Website: <http://www.smithsjlrs.com>

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#32.

Ted A. Irwin, Accredited Senior Gemologist
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Website: <http://www.nwgem.com>

Email

#33.

Tom Seguin, Accredited Senior Gemologist
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#34.

Craig M. Walters, Accredited Senior Gemologist
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(503) 679 - 8778

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#35.

Nina M. Woolford, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #35

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#36.

Theresa Newman Brossmer, Accredited Senior Gemologist
AGA Certified Gemological Laboratory #36

GG, ASA Master Gemologist Appraiser♦
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Glendora, CA 91741
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Phone: (626) 335 - 6002
(626) 335 - 6002

Website: <http://gem-appraisals.com>

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#37.

Monica L. Caldwell, Accredited Senior Gemologist
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Tucson, AZ 85704
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Phone: (520) 742 - 3687
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Fax: (520) 742 - 6146

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AGA – Certified Gemological Laboratories by State

Alabama – Zero

Alaska – Zero

Arizona – (5) #11, #12, #16, #24, #37

Arkansas – Zero

California – (8) #05, #06, #13, #15, #23, #29, #30, #36

Colorado – (1) #18

Connecticut – Zero

D.C. – Zero

Delaware – Zero

Florida – (1) #33

Georgia – Zero

Hawaii – (1) #22

Idaho – Zero

Illinois – Zero

Indiana – Zero

Iowa – Zero

Kansas – Zero

Kentucky – Zero

Louisiana – Zero

Maine – Zero

Maryland – (2) #10, #19

Massachusetts – (1) #21

Michigan – Zero

Minnesota – Zero

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List

Mississippi – Zero

Missouri – Zero

Montana – Zero

Nebraska – Zero

Nevada – (2) #09, #25-Temporary Closed – Relocating

New Hampshire – Zero

New Jersey – Zero

New Mexico – (1) #28

New York – (2) #14, #17

North Carolina (1) #27

North Dakota – Zero

Ohio – Zero

Oklahoma – Zero

Oregon – Zero

Pennsylvania – (1) #31

Rhode Island – Zero

South Carolina – Zero

South Dakota – Zero

Tennessee – (1) #03

Texas – (2) #07, #26

Utah – Zero

Vermont – Zero

Virginia – (1) #35

Washington – (3) #20, #32, #34

West Virginia – Zero

The La Shawn Bauer Collection – A Systematic Approach to Appraisal Data Collection
Gemological Laboratory Equipment List

Wisconsin – (1) #04

Wyoming – Zero

Canada – Zero

Outside North America – Zero

34 – States have Zero AGA – Certified Gemological Laboratories in their State

Only 16 States have an AGA – Certified Gemological Laboratory in their State