

Putting a New Spin on Fecal Testing

Due to its improved sensitivity over traditional gravity methods, fecal testing by centrifugal flotation has emerged as the new gold standard. Not only has centrifugation become the method of choice among academicians, but an ad hoc industry group, the Companion Animal Parasite Council (www.capcvet.org) has included the procedure in their recommended guidelines for practitioners.

Studies performed at a number of veterinary colleges have suggested a parasite recovery rate for centrifugal processing of as much as 2 to 3 times that for gravity flotation. This becomes particularly important when parasites are present in low numbers as is often the case with Whipworm infections.

In addition to improving the recovery rate, centrifugation does a better job of separating parasite ova from fecal debris. This results in a clear, easier to read specimen.



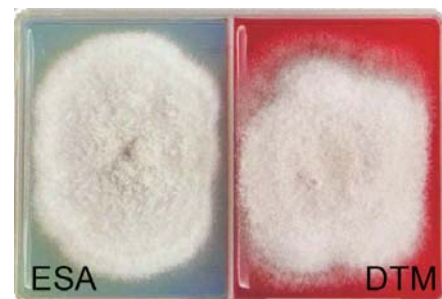
In order to achieve optimum results specialized equipment and supplies will need to be purchased and staff will have to be trained in their proper use. Although the procedure can be performed with a fixed angle centrifuge, a variable speed swing arm or "swinging bucket" centrifuge such as the Powerspin MX will deliver superior results. Conical centrifuge tubes, cheesecloth, or gauze are also required. (*For a cleaner method, see FPC kit on page 2.*)

With its clean looks and quiet operation, the Powerspin MX swing arm centrifuge delivers all of the features expected from a unit costing 3 or 4 times more. (*Continued on page 2*)

Fecal Centrifugation Procedure

- Mix 2 to 3 g of fresh feces with 20 ml of flotation solution. Sugar solution (Sheather's) is preferred.
- Strain through cheesecloth or gauze into a 15 ml conical centrifuge tube. Fill the tube even with the top to form a slight meniscus.
- Place tube into a balanced swing arm centrifuge and apply a cover slip. Seat slip with slight finger pressure.
- Spin at 1200-1500 rpm for 5-10 min. with coverslip in place.
- Lift coverslip directly upward and place on microscope slide.
- Scan slide for parasites under 10X objective and for protozoa at 40X.

**For a more detailed procedure, please visit www.vetlab.com/powerspinmx.htm.*



Dual Media Culture Plate Simplifies Identification of Dermatophytes

Culturing for Dermatophytes (Ringworm) is a routine procedure in veterinary practice. While pathogenic fungi typically produce a color change that can suggest infection, microscopic examination is required for a definitive diagnosis.

DermatoPlate Duo™ is a unique, dual chamber culture plate with removable cover that simplifies inoculation and sampling of growth for microscopic exam. One side of the plate contains traditional DTM with red color indicator while the other side contains specialized Enhanced Sporulation Agar (ESA). Enhanced Sporulation Agar promotes the formation of diagnostic macroconidia which can lead to earlier confirmation of infection. An alternative to DermatoPlate Duo is DermatoPlate S-Duo which contains DTM and Sabaroud Dextrose Agar. For those who prefer just DTM agar but like the advantage of a removal cover, a single chamber DermatoPlate DTM is also available. (*Continued on page 3*)



PowerSpin MX Swing Arm Centrifuge

(From Page 1) The Powerspin MX features a 6 place horizontal spin rotor that accommodates tubes from 2 to 15 ml, an easy to clean stainless steel chamber, and variable speed control from 1000-3400 RPM.

The front panel touchpad and sharp LCD display makes setting time and speed an effortless operation. In addition, the Powerspin MX automatically stores the previous settings for quick and efficient repeat testing. A hydrometer for checking solution Sp. Gr. Is included at no charge.

New Product Removes Lab Stains From Countertops, Clothing, Hands Instantly

There is absolutely nothing like it! Erado-Sol rapidly removes Iodine, Wright's, Gram stain, etc. from anywhere in the lab. Simply rub in gently, rinse with water, and stain is gone in a matter of seconds.

To remove fresh blood from clothing, place a small amount on each stain and launder or just rinse thoroughly with water. Comes as a foaming solution in a convenient 8 oz. pump bottle. **13.50 ea.**



Fecal Concentrator System Eliminates Mess, Reduces Odors, Improves Recovery

A common objection to centrifugal processing of fecal samples has been the mess and odors associated with the procedure. The FPC® fecal parasite concentrator system eliminates these concerns with a clean and efficient closed system for recovering helminth eggs, protozoan cysts, and coccidia.

FPC® replaces open strainer or gauze filtration with two 15 ml polypropylene tubes interconnected with a precision molded plastic strainer. Ova and parasites pass through the 0.6 diameter holes while excess fecal debris is retained.

In addition to the tubes and strainers, the 100 test FPC® kit includes wooden applicators and sampling spoons. Appreciative hospital staff will easily master the simplified procedure.

FPC 100 Test Kit 113.00

Fecal sample is added to specimen tube containing Zinc Sulfate or Sheather's (Sugar) solution, capped and mixed.



Centrifuge tube (top) with strainer is affixed to specimen tube (bottom).



Tube assembly is inverted allowing specimen to strain into centrifuge tube.



Conical tube with filter removed is now ready to be centrifuged.



Avian Leukopet Replaces Eosinophil Unopette®

When BD discontinued their Eosinophil Unopette® two years ago, avian practitioners were left scrambling for an alternative method for performing WBC counts. One route taken by some practitioners was to compound and aliquot in-house their own phloxine stain. Unfortunately, this required a significant investment in pipettes, glassware, chemicals, and weighing apparatus.

Keep avian hematology an in-house procedure with the Avian Leukopet™ prefilled test kit. Leukopet™ utilizes the same 0.1% phloxine stain, dilutions, and formulas as the original Unopette® procedure.



Each Leukopet™ kit comes with either 50 or 100 prefilled phloxine tubes and a 25 ul Minipet® and disposable pipet tips for dispensing the blood sample. If you prefer to use your own pipets and tubes, ready to use 0.1% phloxine solution can be purchased separately.

Avian Leukopet™ 50 Test 83.00
100 Test 156.00

New Analyzer a Breakthrough in Portable, Affordable Hematology



Given the Chempaq Vet's portability, solid state circuitry, and convenient room temperature storage reagent PAQ's, the unit is ideal for mobile practice. It can easily be carried into the client's home or barn.



Chempaq Test Paq

For large practices that operate 24/7, a unit placed in the critical care ward will allow clinicians to run a quick CBC after hours when lab staff aren't available.

PAQ's come packaged 25 to a box at a cost per PAQ of 7.50. The Chempaq analyzer lists for 6995.00 but introductory and show specials are frequently offered. Leasing is available.

The revolutionary Chempaq Vet offers a no-nonsense, cost effective hematology solution for the mobile practice or the small practice in need of a basic entry level analyzer. Using time tested Coulter principle technology, the Chempaq Vet delivers total WBC, HCT, Hgb, and a 3 part differential in less than 3 minutes. Each patient test is run using a self contained single use reagent cassette (PAQ) eliminating instrument maintenance, waste, and bulky fluid packs. A sample requirement of just 20 ul allows testing of even the smallest patients.

The compact Chempaq Vet is exceedingly simple to operate making staff training a snap. Just dispense the sample into the PAQ cassette, press the start button to open the chamber, choose species (dog, cat, or horse), and insert the charged PAQ. The door will automatically close and analysis will begin. When the test is finished, the chamber will open and results will be displayed on the analyzer's LCD screen upon removal of the used PAQ. For hard copy results, an optional printer is available.

(DermaPlate Continued from page 1)

All DermaPlate Duo plates come individually wrapped in an airtight nylon pouch to prevent dehydration and extend shelf life. A complete DermaPlate Starter System comes with (10) DermaPlate Duo plates; (1) bottle each of Lactophenol Cotton Blue stain and KOH/DMSO clearing solution, a roll of 300 Fungitape® flexible cover slips for easy preparation of microscopic wet mounts, and a bonus full color laminated identification chart.

DermaPlate Duo (DTM/ESA)
DermaPlate S-Duo (DTM/Sab)
 Bx/10 26.75 Bx/25 55.75
DermaPlate (DTM only)
 Bx/10 25.00 Bx/25 52.25
DermaPlate Starter Kit 96.00



Alternative Reagents Can Save VetLyte® Users up to 30%



If your hospital uses the (Idexx) Vet-Lyte®, you're already aware of the significant expense required to maintain the instrument in it's ready state. Just one fluid pack and a bottle each of conditioning and cleaning solutions can cost over \$200!

Diamond's ISE Fluid Packs are an exact replacement for the brand name Snap-Pak® used with the Vet-Lyte® and AVL 9100-series electrolyte analyzers. Manufactured under strict ISO9000 standards and used in the field for over 5 years by hundreds of veterinarians, these solution packs have passed every test of equivalence.

Our alternative ISE Fluid Packs are priced at just 89.00 each. Cleaning, conditioning, and deproteinizing solutions as well as electrodes and maintenance kits are also available at exceptional savings. Expert technical service and support are provided through the manufacturer.

Snap-Pak is a trademark of AVL Scientific, Inc.
 Vet-Lyte is a trademark of Idexx Laboratories

Lactate Pro® Makes Whole Blood Testing Fast and Affordable

Measurement of blood lactate as an indirect indicator of tissue perfusion and systemic oxygenation has been used in human medicine for over 30 years. Of late, numerous studies published in the veterinary literature have documented the clinical usefulness of blood lactate testing in the treatment of shock, sepsis, GDV, and a variety of other life threatening conditions.



The Lactate Pro handheld monitor provides veterinarians, with an accurate and affordable means for measuring lactate levels in whole blood in just 60 seconds. Although developed initially for the sports training industry, the Lactate Pro is currently the only whole blood monitor that is approved for use in human emergency rooms. In a head to head comparison conducted at the Louisiana State Veterinary College, Lactate Pro outperformed all other handheld lactate units when compared with the reference method. In addition, Lactate Pro's small sample requirement (5 ul) makes serial lactate testing feasible for even the smallest patients.

Lactate Pro Monitor 449.00
Test Strips Pkg. 25 69.50

Specialized Media Facilitates Pathogen ID

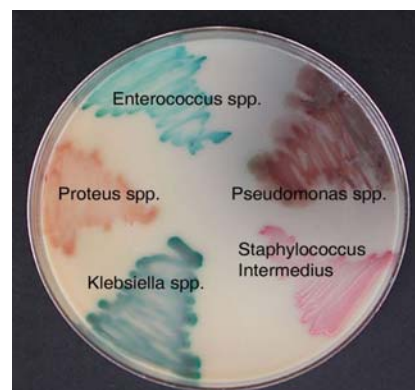
Spectrum™ agar is a unique differential medium that can be used with traditional culture methods to establish a presumptive identification of certain common bacterial organisms known to cause animal disease. When plated on Spectrum™ agar, each organism for which the product has been validated reacts with chromogens contained within the medium to produce a uniquely pigmented colony with distinct morphology. Identification is made by comparing the reactions to a special color chart provided free with first order.

The Spectrum-Plus™ biplate combines Spectrum™ agar and traditional blood agar into a single plate that is ideal for culturing mares prior to breeding. Although blood agar is a non-selective medium that supports the growth of most Gram positive and negative bacteria, it

is especially useful for detecting the presence of hemolytic Streptococci. This dual media combination provides a more complete picture than culturing with blood agar alone.

Spectrum™ and Spectrum™ Plus agar are packaged in boxes of 10 individually wrapped plates for extended shelf life.

Spectrum Agar; Pkg. 10 35.75
Spectrum Plus; Pkg. 10 40.75



Coming Soon! Spectrum-M™ for comprehensive mastitis screening.

Compact Analyzer Provides Electrolytes, Blood Gas, Time Critical Chemistries

The IRMA TRUpoint is a sophisticated, portable analyzer that uses biosensor technology to quickly and accurately measure time critical parameters such as electrolytes, blood gas, Lactate, BUN, Creatinine, Glucose, and HCT in just 2 minutes. All tests are performed using clean, efficient single-use test cartridges. Specimen requirements are only 0.2 ml allowing even the smallest patients to be tested.



IRMA TRUpoint Analyzer

Among the IRMA TRUpoint's many outstanding features are its high-tech interactive touch screen format, room temperature storage test cartridges, and built-in electronic QC. In addition, an easy-to-use luer lock sampling port and overflow chamber helps to minimize wasted cartridges that result from inadvertent introduction of air bubbles and/or sample overflow. Reference ranges for up to 7 species can be programmed into the system for automatic flagging of abnormal results.

The IRMA TRUpoint comes complete with an AC adapter as well as a rechargeable battery pack for portability. Cartridges are packaged in boxes of 10 or 25 at a cost per test of 5.00-7.00, the lowest of any competing analyzer.

In-House Screening for Bleeding Disorders

Barry Mitzner, D.V.M.

Patients presented with spontaneous bleeding are a regular occurrence in general practice. In addition to being prepared to treat these animals, veterinarians must have the diagnostic tools close at hand to guide them towards the most effective treatment. Of equal importance is the ability to identify prior to surgery those patients harboring a subclinical bleeding disorder.

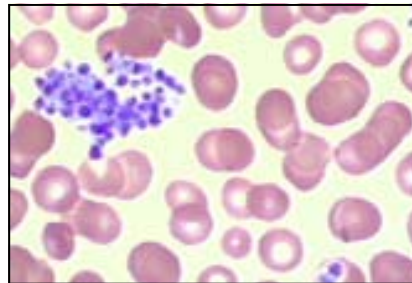
Some of the typical findings associated with bleeding disorders are petechia and ecchymoses, hematoma, epistaxis, prolonged seepage from wounds or venipuncture sites, and prolonged post-surgical bleeding. Since none of these clinical findings are pathognomonic for any specific disease, in and of themselves, laboratory testing must be utilized in order to sort bleeding patients into three broad categories, i.e., thrombocytopenia, platelet dysfunction, and clotting factor deficiency.

Thrombocytopenia

Thrombocytopenia is perhaps the most common cause of spontaneous bleeding that's seen in small animal practice. There are several reliable methods for assessing platelet number and at least one of those methods should fall within the diagnostic capability of every practice. Because every bleeding patient should get a CBC and blood smear evaluation, platelet adequacy can be assessed during the differential count. Scan the smear for an evenly distributed monolayer of cells and count the platelets in several high dry (40X) or (100X) oil immersion fields. A high dry field should have at least 10-15 platelets per field. An oil immersion field should have 5 or more.

Considering the ease of the procedure, a platelet estimate should be done for every patient bound for surgery.

Many of today's hematology analyzers provide a platelet count along with other routine parameters. Although most of these instruments do a reasonably good job of counting platelets, there are some idiosyncrasies associated with animal platelets that can interfere with the automated count. Clotted specimens and platelet clumping are among the most frequent culprits. Feline samples are particularly susceptible to clumping. A scan of the blood smear and/or analysis of the platelet histogram (if available) can provide a crosscheck and help to identify such analytical problems.



Platelet Clumping

If the practice doesn't have a platelet capable analyzer, platelet counts can still be obtained using manual methods. A Neubauer hemacytometer, Unopette® #5855 (Becton Dickinson, Franklin Lakes, NJ) 15 minutes, and a little practice are all that's needed to perform the procedure. There has been some disagreement among clinicians as to how depressed the platelet count must be before spontaneous bleeding occurs. The most often quoted benchmark is 40,000 platelets per cu/mm of blood.

Platelet Dysfunction

Patients with platelet dysfunction comprise the second category of "bleeders" seen in practice. There's a long list of known causes for platelet dysfunction that include drug interaction, systemic disease, and inherited disorders. Of that group, VWD (Von Willebrands Disease) tops the list.

The Buccal Mucosal Bleeding Time (BMBT) is the most common in-office test used to identify platelet dysfunction. It's a simple test to perform and medium to large dogs will usually tolerate testing without anesthesia. Patients with a known breed predilection for VWD or a prior episode of platelet dysfunction should be tested before surgery. Materials required for the BMBT include the Surgicutt® spring loaded disposable lancet device (International Technidyne Corp; Edison, NJ), blotting paper circles, and a stopwatch or watch with a sweep second hand. While some practitioners have attempted to perform this test using scalpel blades or needles and gauze sponges, such unorthodox methods will add additional variables that could lead to misinterpretation of results. For less than a few dollars, you can get a calibrated incision of uniform length and depth as well as even absorption of the blood drops. (Why not do it right?) Dogs will usually stop bleeding in less than 3 minutes, cats in less than 2.5. Thrombocytopenia can sometimes prolong the BMBT; however, a platelet count or a pre-assessment of platelet adequacy via the blood smear can rule this out as a secondary cause.

(Continued on page 6)

Clotting Factor Disorders

Clotting factor problems make up the third major group of bleeding disorders seen in practice. This group includes primary hemophilia's that are often breed related, exposure to rodenticides and other toxins, systemic disease such as liver disease that can alter the production of clotting factors, and consumptive disease such as Disseminated Intravascular Coagulation (DIC). Because the thrust of this discussion deals with basic screening tests, a detailed description of the coagulation pathways; i.e., intrinsic, extrinsic, and common are beyond its scope. If you can rule out thrombocytopenia or platelet dysfunction and confirm that a clotting factor problem exists, you'll be miles ahead when deciding on your first response treatment.

The Activated Clotting Time (ACT) is a relatively simple test that will screen for problems associated with every major clotting factor except factor VII. A prolonged ACT time however is not diagnostic per se for any specific disease. Its value lies in suggesting the presence of a factor problem that will require additional testing for definitive diagnosis. The ACT is similar to the APTT (Activated Partial Thromboplastin Time) in its response; however research has shown the ACT to be somewhat less sensitive. It's believed that before the ACT will be prolonged, 95% of the clotting factors must be depleted. In contrast, the APTT requires only 70% depletion for an abnormal test.

Materials required for the ACT test include a collection tube containing diatomaceous earth (ACTube, Vetlab Supply, Miami, FL) a 37 degree dry bath (heat block), and a stopwatch or clock with a sweep second hand. The original Becton Dickinson ACT Vacutainer #6522 has been discontinued.

Many practices attempt to run ACT's without using a heat block, opting instead to incubate the tube by gripping in the hand or placing the tube in a pocket against the body. Such practices add additional variables to a test that already has some inherent variability. Given the reasonable cost of the materials and supplies needed to perform the test correctly, it's inexcusable for a practice to offer any less than its best effort when a borderline result could lead to misdiagnosis. The iStat (Heska Corporation, Ft. Collins, CO) can perform a semi-automated ACT.

Normal dogs will have an ACT of less than 2 minutes. Cats typically clot in less than 1 minute. Severe platelet deficiencies can moderately prolong the test. To rule this out, perform a total platelet count or inspect a blood film for platelet adequacy.

The SCA 2000® (Synbiotics Corporation, San Diego, CA) and the newer version CoagDX (Idexx Laboratories, Westbrook, ME), and the Vetscan VSpro are examples of in-clinic analyzers that can be used to run both PT's (Prothrombin time) and APTT's in-house. In contrast to the ACT, the PT will detect Factor VII problems; thus, it's a better presurgical test for Beagles and Malamutes, two breeds predisposed to this particular deficiency. Since Prothrombin is produced in the liver, the PT can also be used to assess liver function.

Presurgical Screening

Although mainstream practitioners have embraced the use of surgical lasers, ultrasound, telemedicine, and other high tech tools, it's interesting to note that some practices still do not routinely assess the patient's clotting ability prior to surgery.

Basic coagulation testing is well within the means and capability of every practice. A platelet count or estimate as part of the CBC, and for these breeds predisposed to VWD a BMBT, should be the minimum presurgical work-up. Animals with a known history of clotting factor problems or a breed predisposition should have an ACT run. Beagles and Malamutes should also get a PT.

Dr. Mitzner is the Director of Professional Services for Vetlab Supply. He also directs the Research Center for In-house Diagnostics, a laboratory consulting firm.

Turnkey System Makes ACT Easy and Affordable



The Activated Clotting Time can be used to quickly evaluate secondary hemostasis. It is similar to the Activated Partial Thromboplastin Time (APTT) since it tests for all clinically significant clotting factors except Factor VII. The ACT may be useful in the diagnosis and management of rodenticide toxicosis, hepatopathy, Hemophilia A and B and other disorders associated with decreased clotting factors. The complete ACT system features our ACTube™ replacement for the discontinued BD ACT tube, 37° heat block with 12 mm tube insert, thermometer, stopwatch, and 25 AcTubes™.

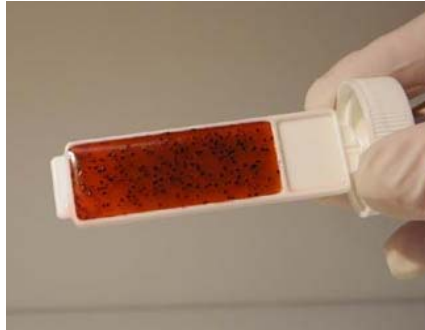
ACT System 343.00
Add'l ACTubes Pkg. 100 74.25

Screen for Urinary Tract Infection in Just 24 Hours

Tired of sending urine specimens to the lab only to have them come back as “no growth”? UriCult® can help you verify the presence of infection before sending it to the lab. Originally developed for rapid screening of human patients, the UriCult® paddle can provide a presumptive identification of many common pathogens as well along with a semi-quantitative colony count .

UriCult® consists of a two sided “paddle” containing selective and non-selective media that fits securely into its own screw cap plastic vial. One side of the paddle contains C.L.E.D. agar that changes color in the presence of various organisms including Klebsiella, E. coli, Pseudomonas, and others. The opposite side contains EMB agar, a selective medium that supports the growth of most Gram negative bacteria.

To test a sample, the Uricult paddle is immersed in or flooded with the aseptically collected sample and returned to its vial for incubation at 37° C for 18-24 hours.

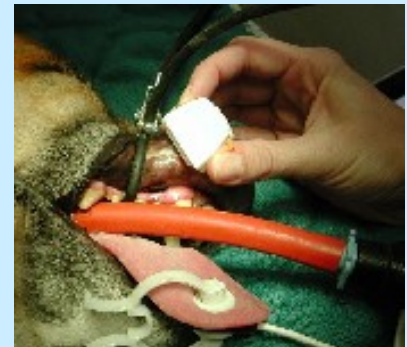


Following incubation a colony count can be performed and a presumptive identification made by comparing the results to a color chart. Positive cultures can be sent in their sealed vial to the lab for confirmation and antibiotic susceptibility testing.

Uricult CLED/EMB Pkg. 10 25.00
Incubators from 365.00

Complete BMBT Kit Tests for Platelet Dysfunction

Platelet dysfunction can be associated with a variety of systemic disorders and patients with dysfunctional (non-adherent) platelets may fail to clot even when platelet counts are normal. Used to assess platelet function, the Buccal Mucosal Bleeding Time (BMBT), should be a part of the diagnostic workup for any patient presented with bleeding disorder. Consideration should also be given to running a BMBT prior to surgery for those breeds predisposed to VWD (von Willebrands Disease).



Surgicutt® is a spring-loaded single use lancet that delivers a precisely calibrated incision controlling procedural variables that could affect interpretation of results. The kit includes all components necessary to run 10 tests including Surgicutt® lancets, blotting paper, and stopwatch. (See article in this issue for complete instructions or go to www.vetlab.com and click on Quicklearn for step by step tutorial.)

BMBT 10 Test Kit 69.00
Surgicutt (Only) 43.00/pkg. 10

For more product information fax this form to 305.232.8421

- Powerspin MX Swing Arm Centrifuge
- Hydrometer
- DermatoPlate Duo Culture Plate
- FPC Fecal Parasite Concentrator
- Avian Leukopet
- Erado-sol Stain Remover
- Alternative VetLyte® Reagents
- Chempaq XBC Vet Analyzer
- Lactate Pro Analyzer
- IRMA TRUpoint Analyer
- Spectrum Culture Plates
- ACT System
- BMBT System
- Uricult UTI Screen
- Analyst III Chemistry System
- Other _____

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Call us for information on hundreds of innovative products we offer for your in-house lab. Our product lines include supplies for microbiology, hematology, cytology, microscopy, and a wide choice of new and reconditioned laboratory equipment.



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Visit us online at www.vetlab.com



Third Generation Analyst Chemistry System Offers Lowest Operating Cost, Greatest Flexibility

The release of the Analyst III in 2007 represented the culmination of years of research into what veterinarians most wanted in an in-house chemistry analyzer. In addition to its new space-saving design, the Analyst III adds economical single test capability to its longstanding reputation for providing comprehensive chemistry panels priced well below other competitors in its class.

The Analyst III is the first in its line to feature an integrated pipettor, autocalibration, and complete testing flexibility. Like its predecessors, all tests are run in approximately 10 minutes using self contained multiple test rotors. Sample requirement for the Analyst III remains at just 90 ul of plasma or serum allowing for testing of small patients. Walkaway



minute of prep time improves laboratory efficiency. Other improvements to the Analyst III are patient data entry capability via a keyboard and 8.5 X 11 customized printout of results.

The Analyst III fully configurable rotor system eliminates the need to inventory multiple packages of slides, strips, or reagent panels. The revamped VetFlex 7 rotor lets users choose up to 7

tests from a menu of 13 available assays making it perfect for species and organ specific panels.

Analyst® Vet 16 Profile

ALT (GPT)	Creatinine
ALP (GOT)	Glucose
AST	GGT
Albumin	CK
Amylase	Tot. Protein
BUN	Tot. Billi
Calcium	Uric Acid
Phosphorous	<i>and more!</i>
Cholesterol	

The cost per VetFlex rotor is an economical \$10; about the same price as running 3 tests on many analyzers. The Analyst Vet-16 rotor runs 16 critical plus 3 calculated assays at a cost per panel of \$12.50. A T4 rotor is also available.

Did you know? You may be able to deduct 100% of the cost of capital equipment this year if purchased by December 31.

Vetlab Supply

"Tomorrow's Laboratory Solutions Today"

18131 S.W. 98th Court
Palmetto Bay, FL 33157



Attn: Laboratory