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From the President

50 years ago, Advanced Instruments, Inc. produced its first freezing point osmometer. Since then, we've become the worldwide leader in osmometers for hospital, pharmaceutical and biotech markets. We have tens of thousands of instruments in operation on every continent and tens of millions of osmolality measurements are made on our products every year.

With all of this experience, you'd think that we knew everything there was to know about osmometers. But we're still learning!

Our customers continually invent new applications for our measurement. Our markets change and demand better accuracy, better data handling and improved calibration and conformance to an ever-changing tangle of regulations.

We've packaged everything that we've learned into our newest instrument, the Model 3320 Single Sample Micro-Osmometer. This newest addition to our product-line is designed to withstand the rigors of everyday use in a busy clinical lab setting. The Model 3320 integrates better measurement data handling, easier operation and simplified maintenance in a slim, space saving ergonomic package.

We're confident that you'll love the new 3320 and we look forward to receiving your feedback. After all, that's how we learn!

John Coughlin
 President,
 Advanced Instruments Inc.

Advanced Instruments Introduces Model 3320 Osmometer

In celebration of Advanced Instruments' 50 years of providing diagnostics excellence, we are excited to announce that our newest osmometer was introduced on June 1, 2005. The Model 3320 single-sample osmometer is the third new osmometer that we have introduced in the last 12 months.

We have received rave reviews over the last eight years for the production of the Model 3300 osmometer, and many thought it would be difficult to duplicate our successes.

Well, we have raised the bar once again.

Through collaboration among end-users, field sales reps, engineering, manufacturing, service personnel, and distributors, we believe we have produced an impressive, state-of-the-art freezing-point instrument.

The Model 3320 has a simple, ergonomically pleasing design, which translates into maintenance-free operation and seamless test procedure workflow.

We have also delivered some additional features that came as a result of customer feedback. These include user-selected calibration to optimize instrument linearity and precision, on-board statistics, multi-language capability, and downloadable firmware upgrades.

The Model 3320 also comes equipped with a new, low-ejection force sampler that promotes stress-free operation and a compact consumable accessory kit that is easy to open and tastefully designed.

We are proud of our accomplishments and happy to deliver another new Advanced® Osmometer – the brand of choice.



To call for a quote, arrange a demonstration, or for more information please contact us via:

toll free: 800-225-4034 or
 +1-781-320-9000

fax: 781-320-8181

email: info@aicompanies.com

web: www.aicompanies.com



Thank you for your interest and support of Advanced Instruments' products, we look forward to a strengthened partnership with you.

Clinical Laboratory Improvement Amendments

Clinical Laboratory Improvement Amendments (CLIA 88) were passed into law in 1988 and set forth uniform quality standards for laboratory testing. The Final Rules for implementing this law were published by the Centers for Medicare and Medicaid Services in January 2003 and became effective April 24, 2003. The Rules contain a number of changes that will have a significant impact on quality management practices in laboratories. They define a laboratory as “any facility that performs laboratory testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention, and treatment of disease, or assessment of health”. This Rule focuses on quality systems and includes components that are important for assuring the quality of laboratory testing services in all settings, including commercial, hospital, and physician office laboratories.

About 176,000 laboratories are certified under CLIA. These new rules will have the greatest impact on the 38,000 laboratories that are authorized to perform high or moderate complexity testing. To simplify the Final Rule, “high and moderate complexity” test methods have been reclassified into one, “non-waived” test method category. Additional key changes to the Final Rule include 1) method validation performance requirements for all non-waived methods including accuracy, precision, reportable range (linearity) and reference intervals (normal values); 2) determination of calibration and control procedures based upon performance specifications; 3) elimination of requirement for FDA clearance of manufacturer’s QC instructions; and 4) responsibility of laboratories to maintain control procedures that monitor the complete analytical process, performance specifications, immediate error detection, and long-term accuracy and precision.

We provide various consumable products to Osmometer and Bilirubin Stat-Analyzer users so that laboratory managers can readily comply with these new CLIA requirements. Note that bilirubin and osmolality are now categorized as non-waived methods.

Product Description	CLIA Requirement
Protinol® Protein-Based Osmolality Control	Daily QC, 2 levels
Renol™ Urine Osmolality Control	Daily QC, 2 levels
Osmolality Linearity Set	Linearity/Reportable Range
Clinitrol™ 290 Reference Solution	Calibration Verification/QC
Accuref™ 290 Reference Solution	Calibration Verification/QC
Bilirubin Equivalents, 5 and 20	Daily QC, 2 levels
Osmometer Standards	Calibration/Performance

Support Network Is Key To AI Success

We held a Service Training class in September of 2004 in our Norwood, Massachusetts facility for our International Dealers. Class size was limited, but we were fortunate enough to have 9 Service Engineers from around the world participating in this week-long training class.

Although the engineers’ level of experience varied, we were successful in standardizing and enhancing everyone’s familiarity and level of expertise across five different instruments, including the 3300, 210, 2020, 2400 and 3D3 line of Osmometers.

As an original instrument manufacturer, we encourage continual training at our Norwood facility, which is well supplied with the equipment and genuine parts necessary to operate an efficient training class with minimal interruption.

Proper service training can reduce customer down-time and the need for on-site visits. Our training classes are designed to provide dealers with the skills needed to develop confidence and knowledge in troubleshooting.

We continue to receive positive responses from previous attendees and look forward to meeting all of our dealer representatives in the future.



Osmometer Consumables Updated To Comply With IVDD

Starting in December 2003, the EU required compliance to the In Vitro Diagnostics Directive (IVDD). The primary concern of the IVDD was to make sure that personnel could understand and operate *in vitro* diagnostics equipment properly and safely. This directive applied to all Advanced Instruments Osmometers and Bilirubinometer instrument labels, user guides, shipping containers, and associated consumables.

Advanced Instruments established a cross functional team in early 2002 to determine how the new directive affected our products. In all, over 360 parts, documents and containers were revised.



Improved service and ease of use for global customers

Today, instrument operating interface messages and user guides are translated into eight languages - French, Italian, Spanish, German, Greek, Swedish, Danish, and Finnish. Internationally accepted symbols were added for easy identification to instrument connection and keypad labels. All of the associated calibrators, controls, consumables and consumable product packaging and inserts are reviewed and updated to include international symbols and additional identifying information. Shipping containers are revised to meet the same European requirements.

Successful on-time completion of the project ensures that Advanced Instruments can continue to provide the high level of quality products and services that our European Union customers have come to expect.

Cancer Cell Application for QCount® Colony Counter

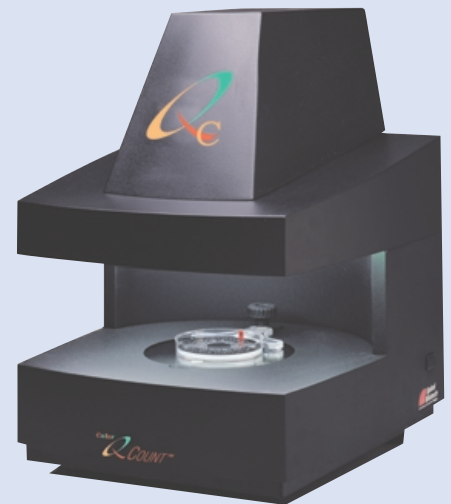
Accurate assessment of anti-tumor agent mechanisms is essential in the development of cancer therapies. Colony formation in liquid culture and semi-solid media has been traditionally used to help scientists with this problem. Immusol Pharmaceuticals, Inc. and Spiral Biotech have been working on an adaptive application for these techniques utilizing the QCount automated colony counter.

Immusol introduced anti-tumor compounds (specifically RNAi-mediated silencing vectors, tumor suppressors, and antineoplastic agents) to a semi-solid culture media that contains specific cancer cells. The dish with this cancer cell/anti-tumor agent is then allowed to “grow”. At pre-set intervals, the number of cancer cells is then counted and evaluated. Simply, if the number of cells reduces in number, the compound is effective.

Normally, each suspension would see hundreds and hundreds of cancer cells. These cells are very small and very hard to see. Researchers would spend hour upon hour counting these plates. Also, each researcher would interpret these tiny colonies differently. In other words, if one person counted the plate, their colleague would come up with a completely different answer! By utilizing QCount, Immusol was able to accurately count these tiny colonies in about 1/100th the time AND supply an unbiased, consistent count. Immusol has saved thousands and thousands of dollars in time and resources by utilizing the QCount in their “soft agar assay” counting.

The QCount not only provides a count of the cancer cells (which indicates “cloning efficiency”, or cellular reproductive capability), but researchers at Immusol also found that by utilizing the QCount’s colony size measurement feature, they can assess the proliferation rate of the cancer cell. This was an exciting conclusion because Immusol researchers were able to determine that their “oncogen” was actually having an affect on the cancer cell simply because the cell was shrinking in size. They would have never figured this out observing the assays with the naked eye. From this, they were able to evaluate the effectiveness of several new compounds used in the fight against colon cancer.

The results are stunning. The implications are noble. And Spiral Biotech could not be prouder to be associated with Immusol, Dr. Gisela Claasen, Dr. Henry Li (et al) and the research being performed.



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Upcoming EVENTS

Advanced Instruments will be participating in these upcoming exhibitions

7/26 – 7/28 Annual Meeting of the American Association for Clinical Chemistry (AACC), Orlando, Florida
Meet us at Booth #2518

9/21 – 9/23 The 44th ICAAC, (International Conference of Antimicrobial Agents and Chemotherapy), New Orleans, Louisiana
Meet us at Booth #538

10/19 – 10/21 ME/NH Medical Technologists 2005 Northeast Laboratory Conference, Portland, Maine
Meet us at Booth #3

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Your Call Is Important To Us!

So we'll try to answer it in person. Laura is our receptionist. She answers calls placed to our main switchboard during office hours. The only thing better than having Laura answer your call is having Laura greet you in our lobby. Her smile will light up your day, and she may even have a plate of cookies that she baked last night.

If you called for product information, to place an order or to inquire about an order, Laura will put you through to our Customer Service Team. With 42 years of combined experience, we can get you the information you need. Give us a call. Find out why our customers rate us #1 for service!



Customer Service Team:
from left - Rosie, Lisa, Donald-Customer Service Manager, Laura, and Andrea

Technical Support

24-Hour Support, 7 Days a Week

Technical Support is available around the clock for all Advanced Instruments, Delta Instruments, Fiske® Associates and Spiral Biotech products. Contact us toll free at 1-800-225-4034, x2191 or at +1-781-320-9000. FAX us at +1-781-320-8181 or by email at techsupport@aicompanies.com.