

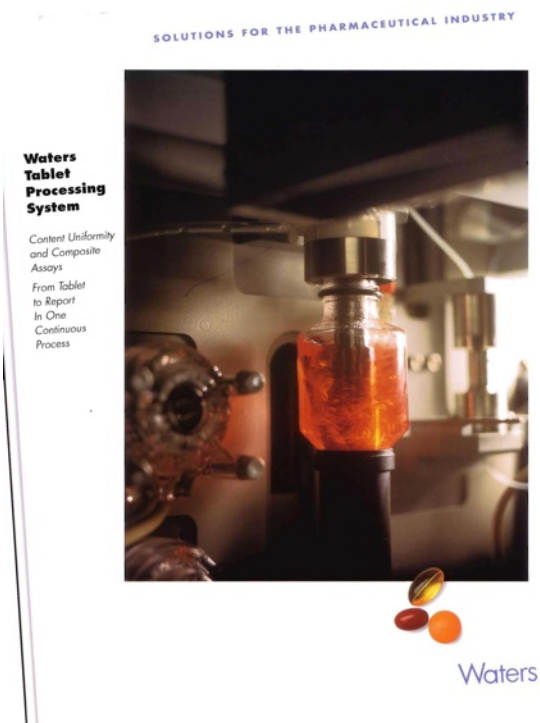
FloDesign, Inc. Instrument Design Capabilities

Art Martin joined FloDesign, Inc. in 2007 after a long career in robotics engineering and analytical instrument design. Early in his career, Art was mentored by several of the best product designers in class. While his early career track was in manufacturing management of specialty equipment, he developed an intrigue for machine design where he became proficient in the mechanical and electrical design of automated film handling machines based on relay logic. During the advent years of microprocessors, Art expanded his understanding of electronics to include microprocessor system design including motion control, data acquisition and controls.

In 1981, Art joined Zymark Corporation, a fledgling laboratory robotics company, where he completed a specialized degree from UMASS concentrating on the emerging field of robotics. At Zymark, Art had the opportunity to participate in the successful launch of the first “laboratory automation” company. During his tenure at Zymark, Art was engaged in instrument design and interfacing. Of particular interest, Art was the technical liaison with Hewlett Packard during the early design stages of the GC auto-sampler, a workhorse in the industry.

In 1986, Art founded his own company (SFA, Inc.) where he led a team in the development of a product line of instruments and software for the pharmaceutical industry. Nearly fifteen years of prior experience in start-up companies resulted in the success of bringing two significant product lines to market through joint marketing ventures with two industry leaders.

The Waters Tablet Processing System (WTPS) was designed by SFA to meet the growing need for automated tablet analysis in pharmaceutical quality control. Working close with Merck Sharpe & Dohme, Art developed and patented a Tablet Extraction device that proved most effective in quickly dissolving and releasing the active ingredients out of products with complex matrices. Solving the problem of Tablet Extraction allowed for the full development of an automated workstation capable of validated sample preparation and subsequent injection into a Waters Liquid Chromatograph where the final analysis was directly uploaded to their data package.



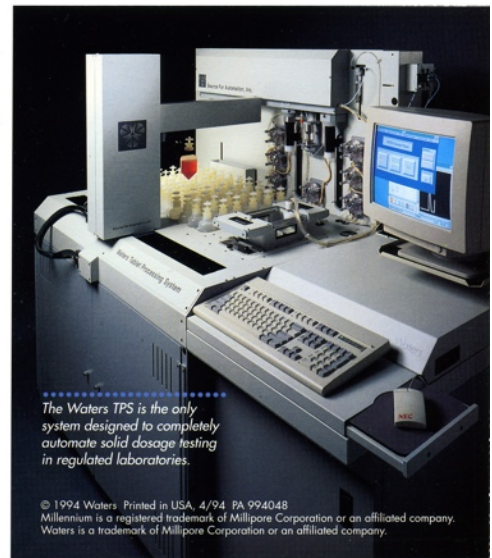
The release of the WTPS in 1990 was widely accepted and quickly became the industry standard. It became the workhorse in laboratories around the world including facilities in the US, Japan, Puerto Rico, Germany, Portugal, Ireland and the United Kingdom.

The Waters TPS—The New Prescription for Productivity

The Waters TPS brings a whole new level of precision and productivity to solid dosage testing. Its seamless automation and centralized control makes information management almost effortless. And it comes completely validated and prequalified.

You'll see such a welcome improvement in lab productivity, precision, and throughput, you'll wonder how you ever managed without it. It's also easy on your operating budget with typical payback periods from 6 to 9 months.

For more information about the Waters TPS, call 1-800-252-4752 or fill out and return the prepaid reply card.



The Waters TPS is the only system designed to completely automate solid dosage testing in regulated laboratories.

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With the successful launch of the WTPS, SFA turned its' direction toward another analytical method that was still be manually performed in pharmaceutical laboratories around the world. The Tablet Dissolution analysis was a time-consuming and tedious test that required an operator to manually monitor and prepare samples on a very precise time schedule. The development of the Automated Dissolution Module by the team at SFA would lead the industry to a new paradigm. The patented technology was so novel, it attracted the interest of Shimadzu Corporation, a leading instrument company know worldwide for its' diverse instrument line. The analytical results of a dissolution test were typically the result of a UV spectrophotometer. Shimadzu was a major player in the market. The ADM was formally introduced in 1996 and quickly became a global standard.

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モジュール設計の全自動溶出試験機
ADM

溶出試験液注入 → 錠剤投入 → 溶出試験
→ ベッセル洗浄 → 次の試験液と錠剤セット
の各サイクルが
プログラムに従って全自動で行えます。

特長

- 溶出試験液注入、錠剤投入、測定、試験液排出、ベッセル洗浄、のサイクルが自動的に処理される全自動溶出試験機です。
- モジュール構造で、1ベッセルから、4ベッセルまで自由に組み合わせる事が可能です。
- 錠剤を最大12錠セット可能なサンプルラック。
- 溶出試験液をベッセルに注ぐ前にプリヒートしておくチェンバーを備え、試験液交換時間が洗浄時間も含め5分と短く（通常30分）ハイスループットです。
- バド方法、バスケット法に対応しています。
- UV、LC東方と連動可能、溶出状況はCCDカメラ2台（Option）でモニターできます。

品質管理に

複数台のADMを組み合わせる事で、最大のスループットを挙げられます。各モジュールが独立しているため、保守が容易で、バックアップ対応に備えています。

開発に

溶出試験液スイッチシステム（Option）を使えば、最大でも種類の試験液を切り替えるから溶出試験ができます。溶出試験液の種類やパールの回転数等の溶出条件を種々変更して、最適な溶出条件を求める場合や、錠剤の標準溶出時間を溶出条件を変更しながら決める場合等に威力を発します。

As a result of the successful rollout of these two product lines, SFA was in a position to relinquish the support of the product lines to the respective marketing teams resulting in a controlled exit after nearly sixteen years of product development and manufacturing.

Art remained active in the pharmaceutical industry where he consulted at Wyeth Ayerst as a computer and instrument validation expert. Within a year, Art was re-engaged full-time at Foster-Miller, Inc. where he was Program Director of a large multi-million dollar project engaged in the development of a fully automated laboratory for a major pharmaceutical company. The project was successfully delivered in 2004 at

which time Art chose to co-found Kardia Corporation, an engineering contract company based out of Charlton, MA. Kardia was successful in delivering a number of projects before Art met up with Stan Kowalski, III, a colleague of his who had purchased FloDesign, Inc. from the original founder, Dr. Water Presz. Stan and Walt were in the throes of spinning out a Wind Turbine Company and were looking for a CEO to take the reins of the parent company.

Art joined FloDesign, Inc. in 2007 as President and CEO. He had worked out an equitable dissolution of Kardia and brought along the senior mechanical engineer and a number of close consulting colleagues. The next couple of years would prove to be extremely exciting at FloDesign. With the successful spin-out of FloDesign Wind Turbine, subsequent spin-outs in the fields of Hydrokinetic Water Turbines, Ultrasound Water Filtration and State-of-the-Art Propulsion Pods have been achieved. FloDesign, Inc. has also been the recipient of three Phase I SBIRs and has recently been awarded two Phase II SBIRs.

With all of the success, and a great team of engineers, FloDesign, Inc. is seeking opportunities in instrument design. In particular, we have expertise in high speed auto sampling and liquid management systems. Our team has experience in mechanical design and the development of complex control systems. Please contact us to discuss your requirements and allow us to develop a comprehensive proposal for you.

Contact:

Art Martin, President
FloDesign, Inc.
380 Main Street
Wilbraham, MA 01095
(413) 596-5900 ext. 228
amartin@flodesign.org