



Caliper
LifeSciences
Working Innovation

Faster Innovation for Future Growth

Ramla Khammar, Key Account Manager

Caliper Life Sciences: Working Innovation



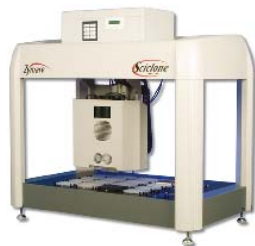
Micro Titer Plate

- Advanced Liquid Handling, Robotics and Systems
- Commercial Infrastructure
- Financial Stability



LabChip®

- Next Generation Technology
- Extensive Patent Estate
- Innovation Machine



Sciclone Liquid Handler
Sample Preparation



LabChip Instruments
Screening/Profiling



Staccato
Integrated System

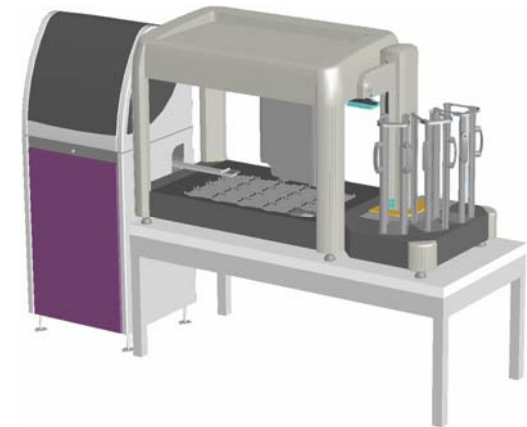


Caliper Life Sciences

Unique and Proprietary Core Technology Franchise

Macrofluidics

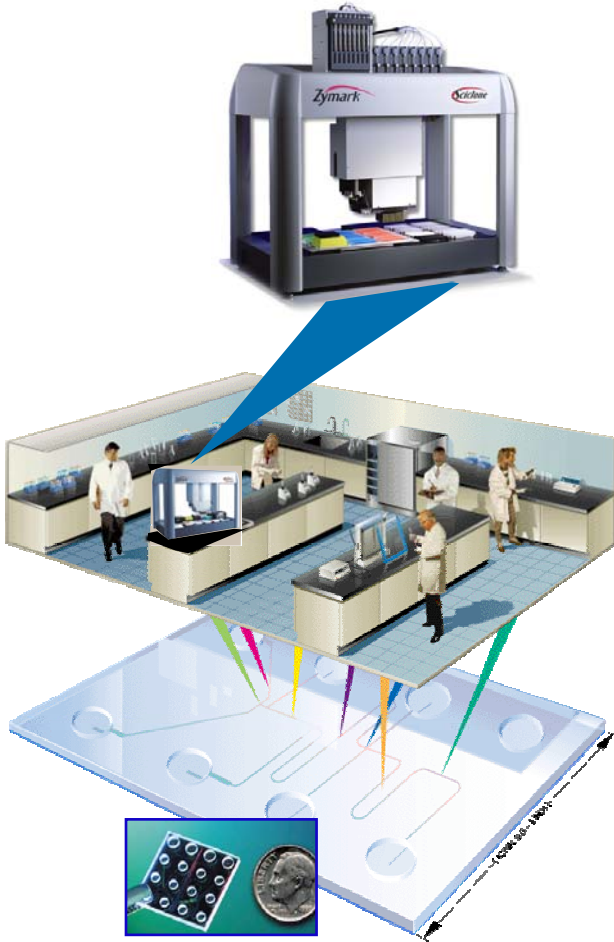
- Liquid Handling
- Automated Workstations
- Integrated Systems



Complete spectrum of automation technologies

- “Intelligent” Nanoliter Dispensing
- Proprietary LabChip Technology

Microfluidics



LIQUID HANDLING & ROBOTICS

Standardized Building Blocks for Robust Automation

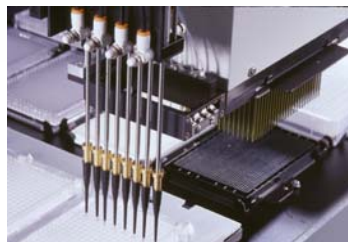
- Liquid Handlers
- Robotic Workstations



The Sciclone ALH 3000



- Open, Modular Design for Unrivalled Versatility & Scalability
- State-of-the-Art Liquid Handling Performance
- Intuitive, Powerful Software
- Extremely Robust & Reliable
- 80 Sciclone in Europe



Applications Analysis

Genomic Applications:

- Plasmid prep/replication
- PCR/Sequencing
- Gene Expression
- DNA/RNA Extraction
- siRNA screening

Proteomics Applications:

- Protein Sample Preparation
- HT Transfections

Drug Screening:

- Compound Mgmt.(replication/reformatting)
- Screening Assays -
 - Cell Based
 - Molecular
- ADME
 - Metabolism (p450/microsomal assay)
 - PK studies (SPE)

Pre-Validated Protocols

Agencourt

PCR Clean-Up

AMPPure magnetic bead kit

RNA Amplification

RNAClean (in progress)

Total RNA Purification

RNA-Prep (in Que)

Promega

Genomic DNA Purification

Wizard® SV 96 Genomic DNA Isolation - mouse tail clipping

Wizard® SV 96 Genomic DNA Isolation - tissue culture samples

PCR Clean-Up

Wizard® SV 96 PCR Clean-Up System

Plasmid Purification

Wizard® SV 96 Plasmid Purification

RNA Isolation

SV 96 Total RNA Isolation System

Millipore

Solubility Analysis

Multiscreen Plates

Permeability Analysis using PAMPA

CaCo2 plates

Sigma

DNA Purification

Extract 'n' AMP - Blood

Extract 'n' AMP - Tissue

Extract 'n' AMP - Plant

Recombinant Protein Purification/ Enrichment

iLAP kit for isolating HIS Tagged proteins

FLAG fusion proteins

Phynexus

Protein Purification/Enrichment

Phy Tips for isolating HIS tagged proteins, MAB's, GST tagged proteins, etc

Eppendorf 5' 3'

DNA Purification

BAC Purification

ABI/Integragen

Sequencing/Genotyping

SNPlex System for High Throughput Genotyping

Amersham/GE Healthcare

DNA Sequencing

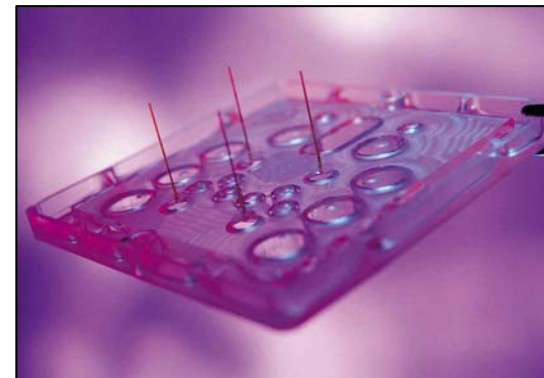
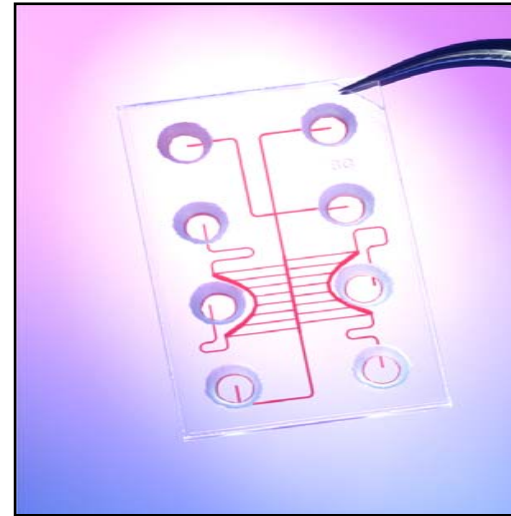
TempliPhi sequencing template amplification kit

DYEnamic ET Terminator Sequencing Kit

MICROFLUIDICS

Caliper LabChip™ Technology

- Application Specific Channel Network
- Active Fluidic Control
 - Electrokinetics
 - Pressure/Vacuum
- Nanoliter scale volumes
- Glass, Quartz, Plastic
- Sipper Chips
- ISO 9001



Full Suite of Separations Products / Systems

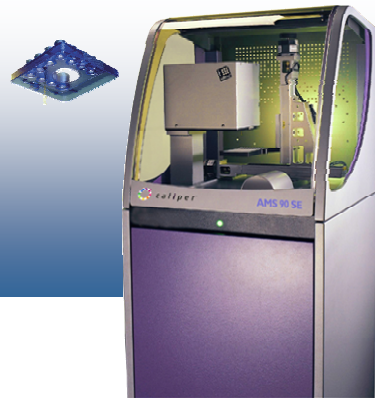
Gene
Expression

Protein
Characterization

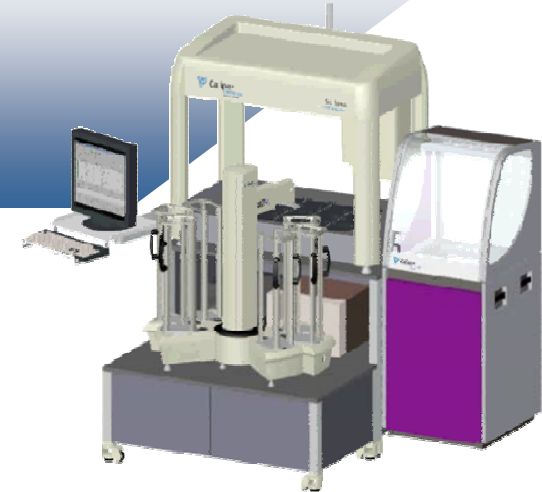
Protein
Expression

RNA
Isolation

Cell
Assays



LabChip 90

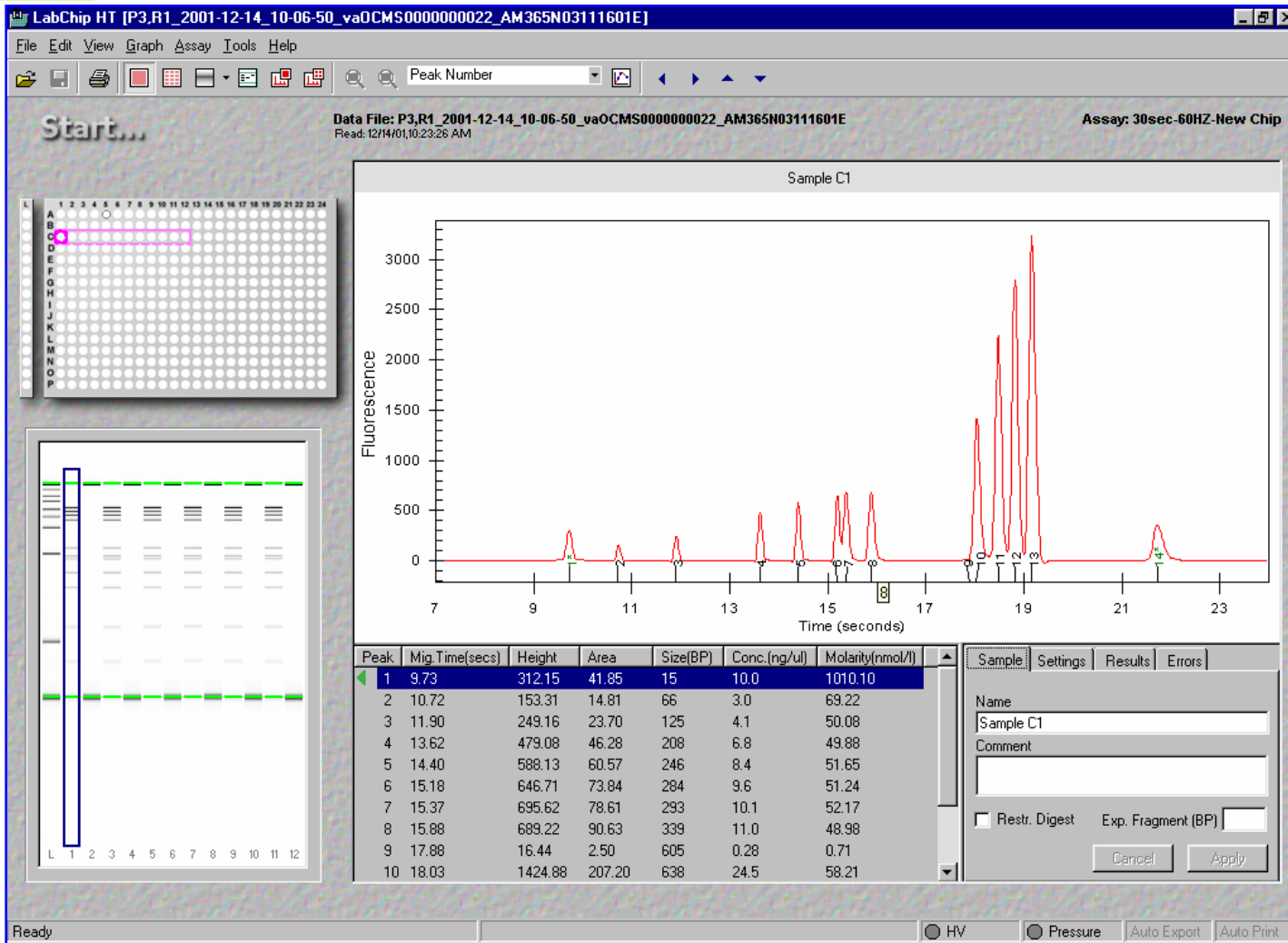


Stacatto LC90

Exquisite Data Quality
Labor Savings vs. Gels
Digital information
Easy-to-use

Higher Throughput

LabChip 90 Data Representation



Benefits of using Lab-on-a-chip technology

Automation

- *Running gels is time consuming, tedious, tiresome*
- Automation of manual steps in gel process coupled with automatic data reporting eliminates the manual process and associated hassles
- Scientists can actually spend time *investigating* rather than spending thinking/experimental time running gels
- Decisions can be made faster
- Makes up-stream automation possible, allow automation of the whole sample prep and analysis process
- More samples can be processed in less time
increases laboratory throughput

Benefits

Data Quality

- Highly reproducible results across chips, users, instruments and most importantly **time** – gel results are variable
- Results are reliable last month, today and next year – customers can be secure in decisions made from LC90 data
- Results can be shared and compared between experiments, multiple groups and multiple sites
- **More** data at end of process than with gels

DNA Applications

In PCR Analysis and Quality Control for:

Gene detection -

Pathogen detection –

GMOs detection -

Microarray production –

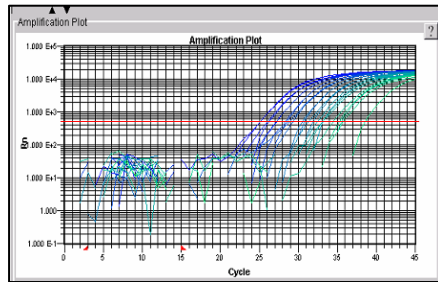
Genotyping –

Etc... -

Protein Applications

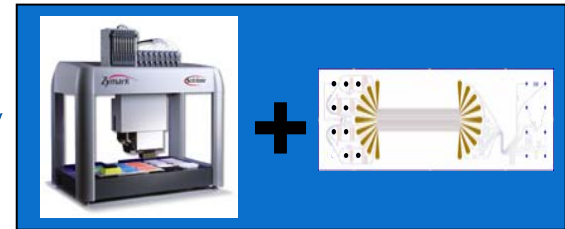
- expression level and solubility monitoring of protein production for supplying screening and structural biology groups
- biomarker discovery and target validation studies - expression level monitoring, purification process QC
- Structural biology - expression level and solubility monitoring, QC of protein production
- antivenom QA of venoms they buy, QC of antivenom product (antibodies)
- structural biology group doing expression level monitoring, purification process QC
- making industrial enzymes from environmental genes

Molecular Diagnostics: PCR-on-a-Chip Opportunities



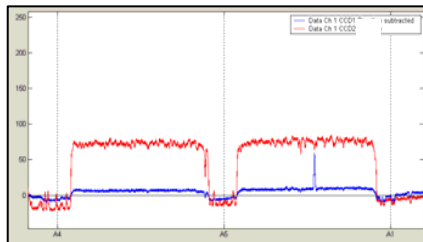
Quantitative PCR

Enables use of precious samples



Sample Prep + PCR

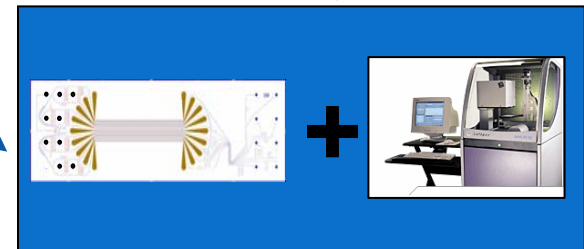
Enables sensitive, automated detection of rare molecules



Rare Molecule Detection

Chip-based PCR

Integration of work flow



PCR + Separation

Partnering to Provide Real Solutions



 **Agilent Technologies**

2,600 BioAnalyzer 2100

500,000 chips in 2004



Faster Innovation For Future Growth

- Caliper is sponsoring its first “Innovation Summit” later this year
- We will bring together numerous thought leaders to discuss technology innovation and adoption
- We are currently interviewing people to develop cases studies for this summit
- If you're interested, please let me know



Thank you

Ramla.khammar@CaliperLS.com

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