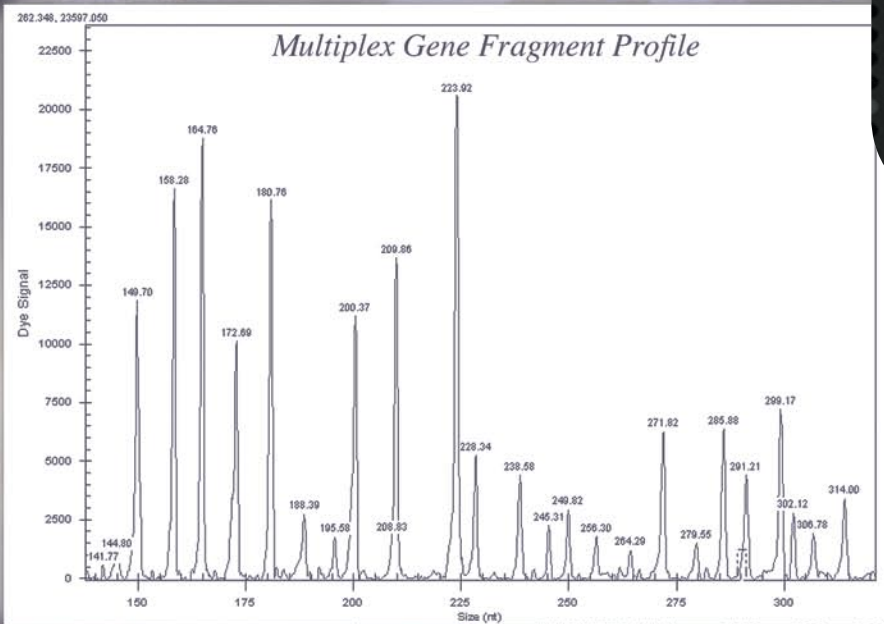





# Automated Multiplexed Gene Expression Profiling

## *Process Solutions*



*Multiplex  
Quantitative  
High-throughput*

Allyl isothiocyanate 010 uM	1.787	1.69	1.658	1.712	0.109
Allyl isothiocyanate 050 uM	1.787	1.69	1.658	1.712	0.067
Allyl isothiocyanate 100 uM	1.999	1.82	1.624	1.814	0.188
Butylated hydroxytoluene 010 uM	1.555	1.582	1.513	1.55	0.035
Butylated hydroxytoluene 050 uM	1.994	1.876	N/A	1.935	0.084
Butylated hydroxytoluene 100 uM	1.576	1.854	1.736	1.722	0.14
Chloro-1,3-phenylenediamine (9) 010 uM	1.552	1.719	1.516	1.596	0.108
Chloro-1,3-phenylenediamine (4) 050 uM	1.622	2.05	1.591	1.754	0.257
Chloro-1,3-phenylenediamine (4) 100 uM	1.821	1.486	1.482	1.596	0.195
Chlorophenoxymethylpropionic acid 010 uM	1.308	1.494	1.434	1.412	0.095
Chlorophenoxymethylpropionic acid 050 uM	1.733	1.558	1.586	1.619	0.099
Chlorophenoxymethylpropionic acid 100 uM	1.671	1.621	1.863	1.718	0.128
Chlorobutanol 010 uM	1.601	1.552	1.78	1.644	0.17



As a scientist, you understand the challenges of working with limited amounts of sample, tight deadlines and complex studies.

## Beckman Coulter has a better way... *a complete solution.*

Our integrated GenomeLab™ solutions and team of experts will help you to deliver the high throughput and quantitation needed for downstream applications. Whether it be qPCR, microarray or multiplex gene expression profiling, we help take you from samples to signatures. Simply put, our systems help eliminate the bottlenecks and put you on the fast track to getting the results you need.

- A complete solution for the entire process that is designed and validated to seamlessly work together
- Flexible and expandable to meet your needs—from preparation to data analysis

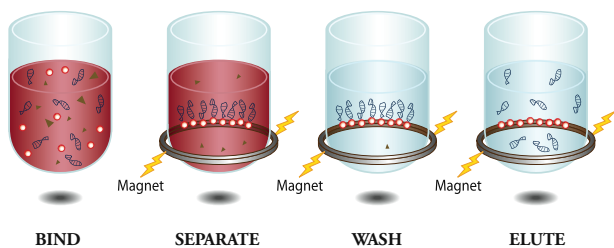


# Automated Multiplexed Gene Expression Profiling *from samples to signatures.*

## ISOLATE • PREP

### Isolate and Purify Total RNA

The process begins with Agencourt® Solid Phase Reversible Immobilization (SPRI®) paramagnetic bead-based chemistries from Beckman Coulter. Isolate and purify total RNA from a variety of sample types ranging from cultured cells, tissues, formalin-fixed paraffin embedded (FFPE) tissues, or blood. Agencourt chemistries deliver a high yield and purity of total RNA for downstream applications such as microarray, RT-PCR, qPCR and multiplex gene expression analysis. More consistent recovery of high yield and high quality total RNA is efficiently obtained whether it is manually extracted from a single tube or fully automated in 96-well plate formats on the Biomek® Series automated laboratory workstations.



### Quantitate and Normalize Total RNA

Purified total RNA is quantitated on the DTX Multimode Plate reader, using absorbance or fluorescence, then normalized on a Biomek® Series automated laboratory workstation. The DTX Series also provides multiple detection modes to address the needs of most genomics, proteomics or cellular analysis applications. This detector's intuitive software platform delivers instrument control and easy protocol development, as well as integration with the Biomek.

### Automated Nucleic Acid Sample and Target Preparation

Automate gene expression sample preparation and reaction setup reliably, accurately, and efficiently with the Biomek® Series automated laboratory workstations. A suite of validated methods automate: total RNA isolation and purification using SPRI® technology, sample normalization and reaction setup.

Whichever way you measure gene expression, Beckman Coulter has a complete solution. GeXP methods automate sample preparation and reaction set up for multiplexed gene specific XP-PCR amplification. Multiplexed gene fragments are now ready for expression analysis and evaluation on the GenomeLab™ GeXP. Or you can use the ArrayPLEX automated application to provide target RNA preparation for the Affymetrix GeneChip® Arrays.



\*All trademarks are property of their respective owners.

# PARE • ANALYZE •

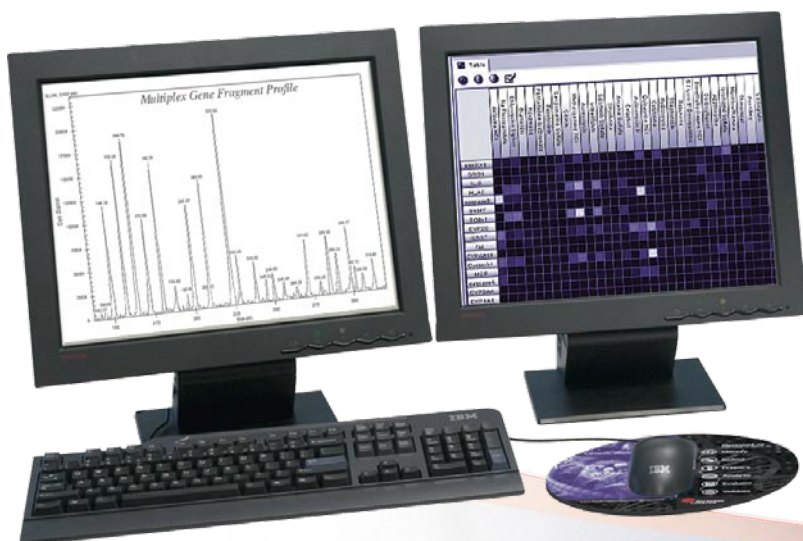
## Complete Process Solutions

Designed and validated to work together, SPRI<sup>®</sup> magnetic beads, DTX Plate Reader, Biomek<sup>®</sup> Liquid Handler, GeXP Methods, and GenomeLab<sup>™</sup> GeXP with eXpress Profiler deliver a complete solution for gene expression analysis.



## Automated Assay Design and Analysis Tools

Take the uncertainty out of assay design with the GenomeLab<sup>™</sup> eXpress Profiler software. This all inclusive package provides fast, automated primer design and multiplex development at your fingertips. Automatically confirm gene fragments, calculate relative gene expression values, and complete first pass data analysis and evaluation.



# EVALUATE

Separate and quantify 30 genes  
in a single reaction and up to  
5,760 genes per run.

## Multiplexed Gene Expression Analysis

Cost effectively separate and quantify the expression of up to 30 genes in a single reaction and up to 5,760 genes per run. Fill the gap between whole genome arrays and single gene qPCR with the GenomeLab™ GeXP and remove bottlenecks in your gene expression studies today. By using scalable, multiplexed XP-PCR, you can analyze more genes per reaction and more samples per run than with qPCR, achieving higher throughput and significantly lower costs. The GeXP is ideal for evaluating candidate and signature gene sets that can provide key information relating to biological state, induced response or drug toxicity.



Preformulated,  
ready-to-use reagent kits

### Multiple applications for gene expression

- ✓ Discovery of Gene Targets
- ✓ Pathway Analysis
- ✓ Biomarker Discovery
- ✓ Microarray Data Validation
- ✓ RNAi Studies
- ✓ Drug Characterization
- ✓ Development of Signatures
- ✓ Monitor Gene Regulation



Simplify • Automate • Innovate



Beckman Coulter...  
advancing discoveries that  
will help reshape tomorrow.

**Our specialized suite of integrated genetic analysis solutions is designed to simplify, automate and innovate genomic processes to help you accelerate the identification of new markers, with biological, diagnostic and therapeutic relevance.**

*Training and Consultation*

With Beckman Coulter, you receive our expertise each step of the way. Our vast array of services spans pre-sale consultation, installation, training, applications and support. In everything we do, we're committed to helping your laboratory be the most efficient and cost effective operation possible.

*Applications Support*

From field application support to technical telephone and online assistance, our focus is on providing expert service wherever and whenever it is needed. And our online application resource, eLabNotebook™, delivers the kind of extra value that translates into a competitive advantage.

*Field Service*

Our world-class field service specialists have earned an industry-wide reputation for excellence. Wherever you are, a global network of technical experts is available online, on-site, and by phone to help with all your support needs.

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*Developing innovative solutions in Systems Biology.*

**Simplify** **Innovate**  
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