



Merck Messenger

Merck Ltd
June/July 2004



Welcome to Merck

We would like to take this opportunity to thank all our customers who have given us positive feedback in response to our previous two Merck Messengers. Our new look newsletter offers customers great deals on some of our traditional as well as new and innovative products. If you have any suggestions for improvements please contact any of our Sales and Marketing staff... we would love to hear from you.

Sales and Marketing:

Manager	Craig Trembath
Upper North Island	Eric Nieberg
Upper North Island	Tulaki Tu'unikuafe
Lower North & South Island	Barry Scott
Academic and Research	Carmella Lee
Technical Support	Leigh Burling

Lab Products Clearance Sale

Thank you to those customers who made the most of our glassware, plastic ware and lab equipment promotion. Look out for another one later in the year!

Customer Seminars

The response to our customer seminars Microbiology (9th March, Hamilton) Laboratory Reagents (30th March, Auckland) held recently were excellent. Both were one-day, free of charge seminars featuring Merck International Product Specialists. Thank you to all of you who made it along. We are glad you enjoyed them.

Index

Chemicals and Reagents

ACS validation.....	2
Nitrogen determination according to Kjeldahl	2
apura Karl Fischer.....	3
Merck solvents	4

Chromatography

Proteospher.....	5
Chromolith CapRod.....	5
ChromCircle 2004	6

Microscopy

Gram stain kits.....	7
Histosec	7

Microbiology

ReadyBag Salmonella.....	8
--------------------------	---

Biosciences

Proteinase K.....	9
2004/05 Catalogues.....	10
'Juice' Transfection Reagents.....	11
Antibodies.....	12

Food and Environmental

COD tests for non-Merck photometers..	13
TOC cell tests.....	13
Alkaline phosphatase	14
Merckoquant analysis.....	14

Apparatus

Transferpette-8/-12.....	9
--------------------------	---

How can we help?

GR for Analysis

Merck's 'GR for analysis' chemicals and reagents are validated according to the latest, 9th Edition ACS (American Chemical Society)

Following 'Good Laboratory Practice' (GLP) or other quality systems is now easier than ever. Merck's 'Guaranteed Reagent' (GR) for analysis reagents meet ACS quality specification ensuring reliability, availability, convenience, packaging versatility and quality our customers require and demand.

For quality control in the pharmaceutical industry, Merck goes one step further and offers chemicals and reagents validated according to the European Pharmacopoeia. Look for Merck's GR, ACS, Reag Ph Eur grade chemicals and reagents.



For a brochure on ACS validation, circle Reader Reply No. **1**

Kjeldahl Method

Performing nitrogen determination according to Kjeldahl?



Merck's range of Kjeldahl tablets are now available in 3.5g and 5g tablet sizes.

Kjeldahl tablets accelerate the nitrogen digestion reaction. The tablets consist of sulfate and metal salts. The sulfate salt raises the boiling point of sulfuric acid while the selenium, copper, titanium or mercury salts shorten the digestion time.

Kjeldahl catalysts are available in various formulations:

- mercury- and selenium-free
- Wieninger
- Missouri

For a brochure, circle Reader Reply No. **2**

Water determination acc. to Karl Fischer

apura is Merck's range of reagents for performing consistently accurate and reliable Karl Fischer titrations. The range includes:

- **One and two component reagents**
More distinct titration endpoint
Solvent can be altered depending on the sample matrix
- **Coulometric reagents**
All reagents are contained in one solution
Contains iodides instead of iodines
Used for determining low water contents (<1%)
Available in frit (for coulometric devices with diaphragm) and fritless (universal)
- **Solvents for fats and oils**
Good solubility of oils and fats in solvent
No addition of dissolution aids solvents immediately ready for use
Chloroform-free
- **Ketones/Aldehydes**
Determination of water present in aldehydes and ketones
No toxic alcohols
- **Water standards**
Reliable standard materials, - traceable to SRM from NIST
Batch specific certificates
Manufactured under strictest controls

For an apura brochure, circle Reader Reply No.

3



Now available!

Free-of-charge application database for water determination acc. to Karl Fischer
Contains technical information and 350 applications notes

For application database, circle Reader Reply No.

4

Using a Mettler or Metrohm titrator?

We have free-of-charge adaptors available for Merck apura reagents.

Call us on 0800 42 62 52 to order.

Don't compromise on quality

For results you can stake your reputation on first time, every time...
For the lowest impurities and highest specifications...
Insist on Merck solvents for clear baselines

Gas Chromatography

- SupraSolv® for gas chromatography
 - Sample preparation
 - Analysis of medium to high boiling substances
 - ECD detection
- UniSolv® for gas chromatography
 - Sample preparation
 - Analysis of highly volatile hydrocarbons
 - FID and ECD detection, - especially for GC/MS applications



Liquid Chromatography

- LiChrosolv® Isocratic grade
- LiChrosolv® Gradient grade
 - Highest quality for gradient elution
- LiChrosolv® Hypergrade
 - For determinations of PAH and special applications in Pharma and QA
 - Recommended for LC/MS applications

For a brochure,
circle Reader Reply No.

5

Merck's MegaSafe 4L Bottles

- Specially developed S40 thread withstands higher contact pressure and ensures tighter seals
- Broad stable base
- Virtually unbreakable high quality screw cap with original Merck tamper-proof seal
- Specially formed lip ensures optimal drip-free pouring
- Adapter available for all common withdrawal systems

Now available exclusively through Merck....
Technical-grade chemicals and solvents
from Andrew Chemicals

Available ex-stock. Please see insert of our range of technical-grade chemicals and solvents.

A N D R E W

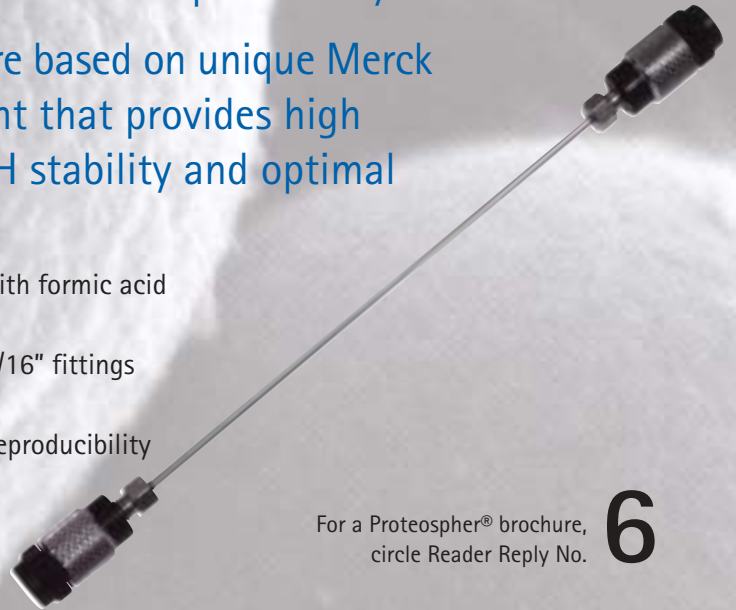
Optimised for LC-MS

ProteoSpher®

Micro and Capillary Columns for Peptide Analysis

ProteoSpher® columns are based on unique Merck C18e, 3µm, 100Å sorbent that provides high capacity, outstanding pH stability and optimal surface chemistry.

- Exceptional performance, even with formic acid
- Optimal online MS detection
- Easy installation with standard 1/16" fittings
- Robust, long-life columns
- Guaranteed column-to-column reproducibility



For a ProteoSpher® brochure, circle Reader Reply No.

6

Chromolith™ CapRod™

Monolithic Capillary for LC-MS

Chromolith is based on proprietary sol-gel technology producing highly porous, monolithic rods of pure silica with a unique pore structure. CapRod is the combination of the speed of monolithic silica technology with the sensitivity of nano-LC.

- Easy installation for online LC-MS
- High flow rates at low pressure
- Excellent peak pattern with formic acid
- High sensitivity with 100µm internal diam.



For a Chromolith™ CapRod™ brochure, circle Reader Reply No.

7

ChromCircle 2004

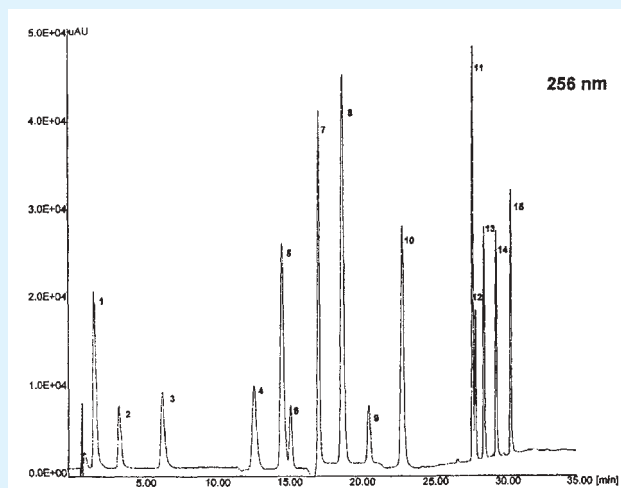
Merck is a market leader in chromatography with constant innovations and 100 years experience.

ChromCircle is Merck's database of over 3,500 HPLC applications available free-of-charge to our chromatography customers

The quick and easy navigation guides you through product description, specifications, separation examples, characterisations, tricks and tips, trouble-shooting and guidelines. It includes samples preparations and chromatographic conditions.

ChromCircle also includes CCBS - "Cumulative CAMAG Bibliography Service", the most comprehensive compilation of literature in the field of TLC and HPTLC with about 7700 abstracts of publications from 1982 to 2003 (courtesy of CAMAG, Muttenz/Switzerland).

Data from the Merck ChromBook 2004 is also included, with product information on solvents, HPLC columns and sorbents, TLC plates and GC products



For a copy of ChromCircle 2004,
circle Reader Reply No.

8

All the information is accessible online at:
chrombook.merck.de

The Chrombook website is continuously updated, and has links to the TLC database at CAMAG.



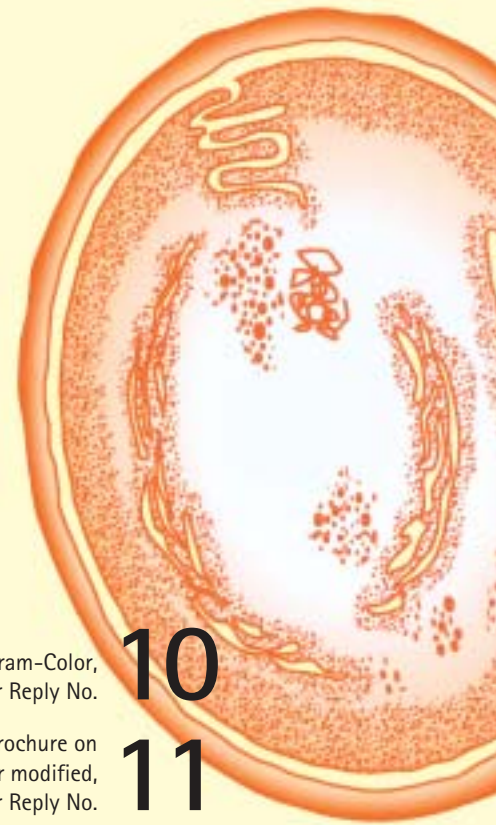
For a copy of ChromBook 2004,
circle Reader Reply No.

9

Gram stain kits

Gram staining is one of the most important staining techniques in microbiology. Microorganisms that retain the primary stain (crystal violet) and appear dark blue or dark violet are known as Gram-positive and those that do not retain the stain and therefore appear red are known as Gram-negative. This stain retention is determined by the structure of the bacterial cell wall.

Merck has developed two Gram staining kit that satisfies even the highest diagnostic demands and yet are simple and user-friendly at the same time. The Gram-color Kit contains all the necessary solutions and can be modified to be used in curvettes, automatic stainers and on staining benches. The Gram-color modified has the advantage of being phenol-free and guarantees intensified staining results.



Item	Description	Pack size
111885.0001	Gram-color	5 x 500mL
101603.0001	Gram-color modified, phenol-free	5 x 200mL

For a brochure on Gram-Color, circle Reader Reply No.

10

For a brochure on Gram-Color modified, circle Reader Reply No.

11

Histosec®

First class quality paraffin for routine use, immunohistochemical staining and microwave applications

- Carefully selected paraffins with polymer additive, with or without DMSO
- Defined melting range (56° – 58°C)
- Stable in and compatible with all histoprocessors
- No loss of quality through repeated melting
- Excellent sectioning, - easy cutting

Item	Description	Pack sizes
111609	Histosec pastilles	2.5kg, 10kg (4 x 2.5kg), 25kg
115161	Histosec pastilles without DMSO	2.5kg, 10kg (4 x 2.5kg), 25kg

For a Histosec brochure, circle Reader Reply No.

12

Enrichment made simple... just add water!

Introducing ReadyBag Salmonella

Buffered Peptone Water (BPW), irradiated for the non-selective pre-enrichment of pathogenic Enterobacteriaceae in foodstuff according to ISO 6579-2002

Now all you have to do is open ReadyBag, add your sample, sterile water – and you're ready for the blender.

It couldn't be easier!

Each ReadyBag contains a pre-weighed amount of irradiated granulated media from Merck

Advantages of ReadyBag Salmonella

- Just in time enrichment – you only have to add sterile water and sample material
- No autoclaving needed – media is irradiated to save time and cost
- No weighing required. Each ReadyBag Salmonella contains 5.75g of BPW to which 225mL and sterile water and 25g (or 25mL) of sample material is added
- Granulated media – easy to dissolve and no dust
- Larger bag sizes available (on request)

Item	Description	Pack size
107231.0001	ReadyBag Salmonella	100 bags

For free samples and a brochure,
circle Reader Reply No.

13



Proteinase K

Proteinase K is a highly active, stable endopeptidase isolated by scientists at Merck's Darmstadt Biochemical Research Dept in 1970 from *Tritirachium album* Limer.

The protease was given the designation K due to *T. album*'s ability to grow on keratin as the sole source of carbon and nitrogen. Proteinase K can digest both native and denatured proteins and our preparations are DNase and RNase-free.

Applications:

- Isolation of high molecular weight nucleic acids, RNAs and DNAs by degradation of contaminating proteins in yeasts, bacteria, tissue lysates and mammalian cell lysates
- Inactivation of enzymes such as DNase and RNase in sample materials
- Topology probe for the location and orientation of membrane-bound proteins
- Improving PCR cloning efficiencies
- Inactivation of enzyme cocktails in ribonuclease protection assays

Item	Description	Pack size	List price	Promotion price
124568.0100	Proteinase K, chromatographically purified	100mg	\$ 214.80	\$ 150.36
124568.0500	Proteinase K, chromatographically purified	500mg	\$ 644.44	\$ 451.11
107393.0010	Proteinase K solution 0.01Mol, in Tris/HCl pH7.5	10mL	\$ 350.86	\$ 245.60

Bulk sizes are also available. Prices exclude GST and only available direct from Merck.

Promotional prices valid until 31 July

Multi-channel pipettes

Newly improved Brand Transferpette®-8/-12

Now with replaceable nose cones and Vitron seals that increase the life of your pipette.

- Ergonomic shape for perfect fit
- Low forces required for tip ejection
- Freely rotating manifold
- Autoclavable manifold, no need for dismantling
- Compatible with most manufacturer's tips
- Certified quality
- Calibrate it yourself in 20 seconds!

Item	Description	List price	Promotion price
703604	Transferpette®-8, 2.5-25µL	\$ 1,319.50	\$ 923.65
703606	Transferpette®-8, 5-50µL	\$ 1,319.50	\$ 923.65
703608	Transferpette®-8, 10-100µL	\$ 1,319.50	\$ 923.65
703610	Transferpette®-8, 20-200µL	\$ 1,319.50	\$ 923.65

Promotional prices valid until 31 July. Prices exclude GST and only available direct from Merck.



For a brochure, circle Reader Reply No. **14**

New 2004/05 Merck Biosciences catalogues

Calbiochem Biochemicals and Immunochemicals Catalogue 2004/05

Signal Transduction | Cancer | Apoptosis | Cell Cycle

This catalog features the complete product line from Calbiochem and former Oncogene Research Products in an easy-to-use alphabetical format for your convenience. It includes over 7000 products with more than 1200 new products, as well as an updated categorical index and an extended immunochemical section with more than 3000 antibodies and kits.

For a copy of the Calbiochem catalogue,
circle Reader Reply No.

15



Novagen Catalogue 2004/2005

Protein Expression | Proteomics | Molecular biology

Novagen offers a variety of products for gene cloning, expression, and analysis, along with unique companion products. Includes over 1000 products in the major categories of High Throughput Compatible, Cloning Transformation/Transfection, Phage Display, Protein Expression, Transcription/Translation, Gene and Protein Analysis, Protein Purification, Nucleic Acid Purification, PCR, and Molecular Size Markers.

For a copy of the Novagen catalogue,
circle Reader Reply No.

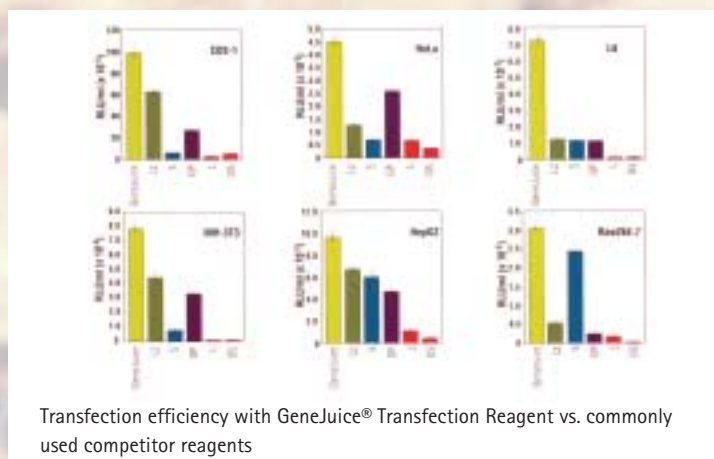
16

20% off Juice Family Transfection Reagents

Customers have come to trust the Novagen brand for great DNA transfection results using GeneJuice® DNA Transfection Reagent. There are now 'Juice' reagents for reliable protein and siRNA transfection into mammalian cells and DNA transfection into insect cells.

GeneJuice DNA Transfection Reagent for Mammalian Cells

- Proprietary formulation
- Highly efficient DNA transfer for both stable and transient transfections
- Minimal cellular toxicity
- Compatibility with both serum-containing and serum-free media
- Simple protocol – no need for media changes
- Ideal for high-throughput (HT) transfection in multi-well plate formats



Insect GeneJuice DNA Transfection Reagent for Insect Cells

- Proprietary liposome formulation optimized for maximal transfection of insect cells (Sf9, S2 and High Five™** cell lines)
- Can be used for co-transfection of transfer plasmids with linearized viral DNA to construct recombinant baculovirus

RiboJuice siRNA Transfection Reagent for Mammalian Cells

- Efficiently delivers small interfering RNA into a wide range of mammalian cell lines for targeted cell suppression

ProteoJuice Protein Transfection Reagent

- Efficiently delivers protein into mammalian cells, allowing studies of protein:protein interaction, protein turnover, cell signaling pathway, apoptotic pathways and transcription factor-mediated gene regulation

Item	Description	Pack size	List price	Promotion price
70967-5	GeneJuice Transfection Reagent	0.3mL	\$ 244.80	\$ 195.84
70967-3	GeneJuice Transfection Reagent	1.0mL	\$ 511.20	\$ 408.96
71259-3	Insect GeneJuice Transfection Reagent	0.3mL	\$ 230.40	\$ 184.32
71259-4	Insect GeneJuice Transfection Reagent	1.0mL	\$ 480.00	\$ 384.00
71115-3	RiboJuice siRNA Transfection Reagent	0.3mL	\$ 384.00	\$ 307.20
71115-4	RiboJuice siRNA Transfection Reagent	1.0mL	\$ 828.00	\$ 662.40
71281-3	ProteoJuice Transfection Reagent	0.125mL	\$ 592.80	\$ 474.24
71281-4	ProteoJuice Transfection Reagent	4 x 0.125mL	\$ 1927.20	\$ 1541.76

Promotional prices valid until 31 July, delivery charges apply

*Invitrogen trademark

For a 'Juice' family transfection reagent brochure, circle Reader Reply No.

17

20% off Antibodies

For a limited time, get 20% off any purchase of two or more primary antibodies from Merck Biosciences

2004 Antibody Sourcebook

- Includes antibodies from Calbiochem® (incorporating Oncogene Research Products™) and Novagen
- More than 3,000 antibodies and kits
- Alphabetically listing by antigen for your convenience
- Trial sizes available
- New antibodies added daily on website
- Including application and species reactivity data

For a copy of the Antibody Sourcebook, circle Reader Reply No.

18



Antibodies for Cancer Research

- Antibodies and kits for cancer research categorized into Angiogenesis, Apoptosis, Cell Adhesion, Cell Cancer and Other antibodies for Cancer Research
- Technical articles
- Product highlights
- Including application and species reactivity data

For a copy of Antibodies for Cancer Research, circle Reader Reply No.

19

Until stocks last, receive a free t-shirt from Calbiochem® with your purchase of 2 or more primary antibodies. Please quote size, M, L and XL available. Promotion prices ends 31 July.



Food and environmental

COD vials for non-Merck photometers

Merck introduces USEPA approved COD vials (15.8mm OD) for use with non-Merck photometers such as Hach*, Lovibond or any other photometers with a 16mm round cell adaptor. Lot specific certificates of quality are available online. These COD vials are also supported by Merck Analytical Quality Assurance using the CombiCheck system.



*No re-programming necessary. Vials work with original program

Merck no.	Tests/pack	Equivalent Hach product no.	COD range mg/mL	Special price (List price \$160)
118750.0001	25	24158-25	0 - 40	\$ 110.00
118751.0001	25	24258-25	0 - 150	\$ 110.00
118752.0001	25	21259-25	0 - 1500	\$ 110.00
118753.0001	25	24159-25	0 - 15000	\$ 110.00

Prices are GST exclusive and only available direct from Merck.

Merck Spectroquant® TOC Test

Water Analysis turned on its head!

- Very simple handling
- Special membrane allows only CO₂ to mix with indicator solution
- Environmentally compatible, - non-toxic, no heavy metals
- User-oriented measuring range

Available test kits:

- 14878.0001 TOC Cell Test (Pk of 25) 5 - 80mg/L
 14879.0001 TOC Cell Test (Pk of 25) 50 - 800mg/L



For more information, circle Reader Reply No. **20**

See our stand at the NZIFST/DIANZ Conference

testing from Merck

Milk analysis with Merck Reflectoquant® System



Alkaline Phosphatase (116123.0001)

- Measuring range 1.0 – 10.0U/L
- Improved in-process control of pasteurization
- Detects if pasteurization temperature is too low
- Detects if thermization temperature is too high
- Confirms that raw milk cheese production has been under temperature control
- Reduce potential batch rejection and ensures quality products

D301 NZFSA Approved Dairy Testing Method (Dec 03)

Other milk testing parameters available:

- Calcium (5 – 125mg/L)
- Lipase (10 – 400 μ L/L)
- Peroxidase (5 – 200U/L)
- Urea in milk (50 – 500mg/L)
- Potassium (1.0 – 25.0mg/L)

For a brochure on alkaline phosphate,
circle Reader Reply No.

21

For a brochure on milk analysis with RQFlex,
circle Reader Reply No.

22

Simply clean!

Meckoquant® strips for checking cleaning and disinfection processes

- Ensures effectiveness of the disinfection process
- Risk of residue contamination is minimized
- On-site analysis provides immediate information
- Contributes to ensuring the quality of food products
- Optimizes the use of personnel and chemical resources

For more information,
circle Reader Reply No.

23



Merck Ltd
PO Box 1246
Palmerston North
Freephone 0800 42 62 52
Fax 06-356 7311
Email info@merck.co.nz
Website www.merck.co.nz

