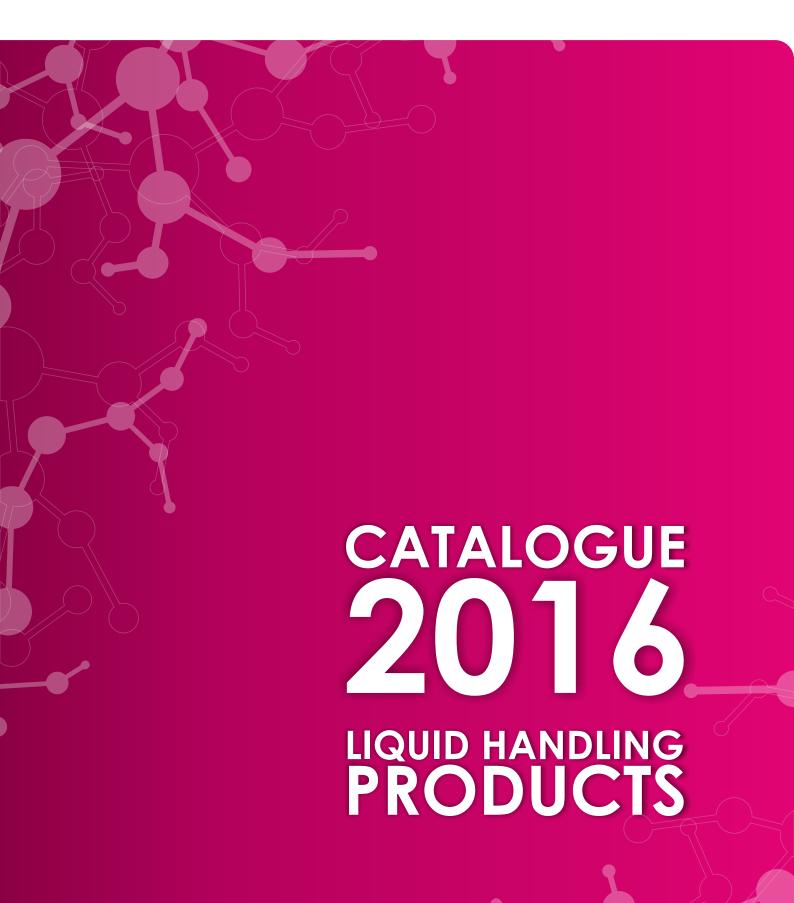


a division of Harvard Bioscience, Inc.

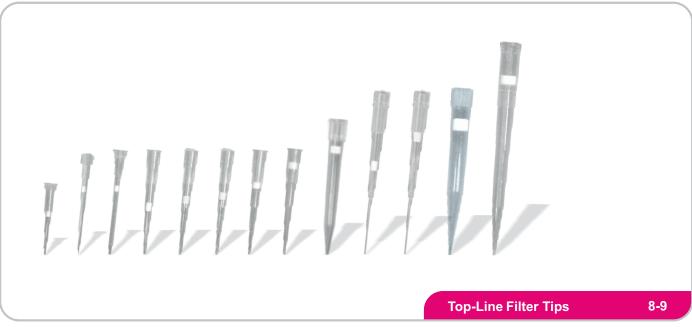


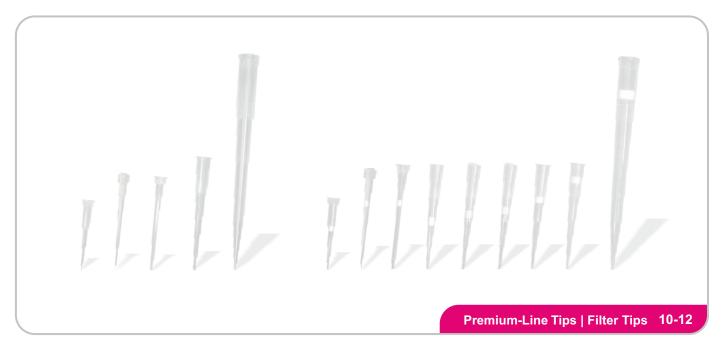
Liquid Handling	Page
Tubes	
PCR Tubes	
Features   Specifications   Order Information - PCR Tubes 0.2 ml   0.5 ml flat and domed cap	31
Micro Tubes	
Features   Specifications   Order Information - Micro Tubes 0.5 ml   1.5 ml   2.0 ml	32
Centrifuge Tubes	
Features   Specifications   Order Information - Centrifuge Tubes 15 ml   50 ml	33
Cryo Tubes	
Features   Specifications   Order Information	34
Cryo Box	
Features   Specifications   Order Information	35
Filtration   Ultra Filtration   DNA Purification	
Mini Spin Column Systems	
Features   Specifications   Order Information	39
Deep Well Microplate   Filter Microplate	
Features   Specifications   Order Information	40
Vacuum Manifold	
Features   Specifications   Order Information	40
Appendix	
Terms and Conditions	41-42

# Liquid Handling

# TIPS | FILTER TIPS









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# **Top-Line Tips**

#### Innovation for Science





- Universal fit and ejection of tip
  - Optimized cone geometry for a secure fit
- Quick and easy volume check
   Graduation marks on tip at standard volumes
- Precise pipetting without loss of sample

Conical tip opening prevents drop formation at the end of the tip

Elimination of sample contamination

Tips made of autoclavable, non-wettable, virgin polypropylene

- Maintain sample integrity
   Sterile packs available
   (beta irradiation)
- Available in racks and bags



Compatibility of Top-Line Tips with pipet4u® pipettes, see Compatibility Chart

### **Specifications Top-Line and Macro-Line Tips:** according to

General requirements CE-marking certificate

Sterility certificate
RoHS Compliance certificate
Environmental Management certificate
USP-Plastic Test, Class VI, certificate
Conformity testing certificate
GMP/GLP certificate



ISO Standard 8655
EU-Directive 98/79/EG, competent
authority code DE/CA90
EN 552/ISO 11137 and DIN EN 556
EU Directive 2002/95/EC
ISO Standard 14000 and ISO Standard 14001
ISO Standard 10993
DIN Standard 12600
WHO Technical Report Series 908,
37. Report, Geneva2003



# **Top-Line Tips**Innovation for Science

Tip	Tip Length	Cat. No.	Pack Type	Sterilized	Sales Unit
0.1-10 μl, clear Top-Line Tip	34.1 mm	1-000-60-0 1-000-81-0 1-000-96-0 1-001-60-0 1-001-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x1000 20x1000 10x96 2x1000 10x96
0.1-10 μl XL, clear Top-Line Tip	45.2 mm	1-060-60-0 1-060-81-0 1-060-96-0 1-061-60-0 1-061-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x1000 20x1000 10x96 2x1000 10x96
0.5-10/20 μl, clear Top-Line Tip	45.7 mm	1-050-60-0 1-050-81-0 1-050-96-0 1-051-60-0 1-051-96-0 1-052-96-0***	Bag Bag 96-Rack Bag 96-Rack 96-Rack	:	2x1000 20x1000 10x96 2x1000 10x96 10x96
1-200 μl, clear Top-Line Tip	50.8 mm	1-110-60-0 1-110-81-0 1-110-96-0 1-111-60-0 1-111-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x1000 35x1000 10x96 2x1000 10x96
1-200 μl, yellow Top-Line Tip	50.8 mm	1-110-60-1 1-110-81-1 1-110-96-1	Bag Bag 96-Rack		2x1000 35x1000 10x96
1-200 μl, clear Top-Line Gelloader Tip	67.0 mm	1-130-50-0 1-130-96-0 1-131-50-0 1-131-96-0	Bag 96-Rack Bag 96-Rack	:	1x1000 10x96 1x1000 10x96
5-300 μl, clear Top-Line Tip	55.0 mm	1-103-60-0 1-103-81-0 1-103-96-0 1-104-60-0 1-104-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x1000 20x1000 10x96 2x1000 10x96
100-1000 μl, short, clear blue Top-Line Tip	70.1 mm	1-207-06-2 1-207-50-2 1-209-06-2 1-209-50-2 1-209-80-2	60-Rack Bag 60-Rack Bag Bag	:	10x60 1x1000 10x60 1x1000 10x1000
100-1000 μl, long, clear Top-Line Tip	86.0 mm	1-200-50-0 1-200-80-0 1-200-96-0 1-201-50-0 1-201-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x500 20x500 10x96 2x500 10x96
100-1000 μl, long, blue Top-Line Tip	86.0 mm	1-200-50-2 1-200-80-2 1-200-96-2	Bag Bag 96-Rack		2x500 20x500 10x96

#### **Pack Type**





# Macro-Line Tips Innovation for Science



Tip	Tip Length	Cat. No.	Pack Type	Sterilized	Sales Unit
	126.0 mm				
1-5 ml, clear blue Macro-Line Tip		1-211-84-0 1-215-84-0	Bag Bag		8x250 8x250
	126.0 mm				
1-5 ml, clear Macro-Line Tip		1-210-84-0 1-214-84-0	Bag Bag		8x250 8x250
	147.5 mm				
				-	
1-5,5 ml, clear Macro-Line Tip		1-212-84-0 1-216-84-0	Bag Bag		8x250 8x250
	150.0 mm				
1-10 ml, clear Macro-Line Tip		1-213-50-0 1-217-50-0	Bag Bag		10x100 10x100





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# **Top-Line Filter Tips**

#### Innovation for Science



Universal fit and ejection of tip

Optimized cone geometry for a secure fit

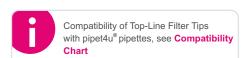
- Quick and easy volume check
   Graduation marks on tip at standard volumes
- Precise pipetting without loss of sample

Conical tip opening prevents drop formation at the end of the tip

Elimination of sample contamination

> Tips made of autoclavable, non-wettable, virgin polypropylene

- Maintain sample integrity
   Sterile packs available
   (beta irradiation)
- Available in racks and bags



# Specifications Top-Line Filter Tips: according to

General requirements CE-marking certificate

Sterility certificate
RoHS Compliance certificate
Environmental Management certificate
USP-Plastic Test, Class VI, certificate
Conformity testing certificate
GMP/GLP certificate



- No sample contamination
   Filters are made of virgin high quality hydrophobic polyethylene without additives
- No pipette contamination
   Filters block aerosols and liquids (vaporous, radioactive, biohazardous or corrosive samples) through micropore filter technology (MPS technology, filter pore size 8-10 µm)



ISO Standard 8655
EU-Directive 98/79/EG, competent
authority code DE/CA90
EN 552/ISO 11137 and DIN EN 556
EU Directive 2002/95/EC
ISO Standard 14000 and ISO Standard 14001
ISO Standard 10993
DIN Standard 12600
WHO Technical Report Series 908,
37. Report, Geneva2003



# **Top-Line Filter Tips**Innovation for Science

Filter Tip	Tip Length	Cat. No.	Pack Type	Sterilized	Sales Unit
0.1-10 μl, clear Top-Line Filter Tip	34.1 mm	2-000-70-0 2-000-96-0 2-001-70-0 2-001-96-0	Bag 96-Rack Bag 96-Rack	:	5 x 1000 10 x 96 5 x 1000 10 x 96
0.1-10 μl XL, clear Top-Line Filter Tip	45.2 mm	2-060-70-0 2-060-96-0 2-061-70-0 2-061-96-0	Bag 96-Rack Bag 96-Rack	:	5 x1000 10x96 5 x1000 10x96
0.5-10/20 μl, clear Top-Line Filter Tip	45.7 mm	2-050-70-0 2-050-96-0 2-051-70-0 2-051-96-0 2-052-70-0** 2-052-96-0**	Bag 96-Rack Bag 96-Rack Bag 96-Rack	:	5 x 1000 10 x 96 5 x 1000 10 x 96 5 x 1000 10 x 96
1-20/30 μl, clear Top-Line Filter Tip	50.8 mm	2-116-70-0 2-116-96-0 2-126-70-0 2-126-96-0	Bag 96-Rack Bag 96-Rack	:	5 x 1000 10 x 96 5 x 1000 10 x 96
1-50 μl, clear Top-Line Filter Tip	50.8 mm	2-111-70-0 2-111-96-0 2-121-70-0 2-121-96-0	Bag 96-Rack Bag 96-Rack	:	5 x 1000 10 x 96 5 x 1000 10 x 96
1-100 μl, clear Top-Line Filter Tip	50.8 mm	2-112-70-0 2-112-96-0 2-122-70-0 2-122-96-0	Bag 96-Rack Bag 96-Rack	:	5 x 1000 10 x 96 5 x 1000 10 x 96
1-200 μl, clear Top-Line Filter Tip	50.8 mm	2-113-70-0 2-113-96-0 2-123-70-0 2-123-96-0	Bag 96-Rack Bag 96-Rack	:	5 x 1000 10 x 96 5 x 1000 10 x 96
30 μl, clear Top-Line Gelloader Filter Tip	67.0 mm	2-130-96-0 2-131-96-0	96-Rack 96-Rack	•	10 x 96 10 x 96
100 μl, clear Top-Line Gelloader Filter Tip	67.0 mm	2-132-96-0 2-133-96-0	96-Rack 96-Rack	•	10 x 96 10 x 96
5-300 μl, clear Top-Line Filter Tip	55.0 mm	2-115-70-0 2-115-96-0 2-125-70-0 2-125-96-0	Bag 96-Rack Bag 96-Rack	:	5 x 1000 10 x 96 5 x 1000 10 x 96
100-1000 µl, short, clear blue Top-Line Fil	70.1 mm	2-209-06-2 2-209-70-2 2-210-06-2 2-210-70-2	60-Rack Bag 60-Rack Bag	:	10 x 60 10 x 500 10 x 60 10 x 500
100-1000 μl, long, clear Top-Line Filter Tip	86.0 mm	2-201-70-0 2-201-96-0 2-211-70-0 2-211-96-0	Bag 96-Rack Bag 96-Rack	:	10 x 500 10 x 96 10 x 500 10 x 96

#### Pack Type





# **Premium-Line Tips | Filter Tips**

#### Low Retention



- Universal fit and ejection of tip
   Optimized cone geometry for a secure fit
- Quick and easy volume check
   Graduation marks on tip at standard volumes
- Precise pipetting without loss of sample
   Conical tip opening prevents drop formation at the end of the tip
- Elimination of sample contamination
   Tips made of autoclavable, non-wettable, virgin polypropylene
- Maintain sample integrity
   Sterile packs available
   (beta irradiation)
- Available in racks and bags
- Compatibility of Premium-Line Tips |
  Filter Tips with pipet4u® pipettes, see
  Compatibility Chart

- No sample contamination
  Filters are made of virgin high quality hydrophobic polyethylene filters without additives
- No pipette contamination
   Filters block aerosols and liquids (vaporous, radioactive, biohazardous or corrosive samples) through micropore filter technology (MPS technology, filter pore size 8-10 µm)
- Maximum sample recovery
   Minimal sample loss
   High-precision pipetting
   Proprietary Low Retention
   surface coating



### Specifications Premium-Line Tips | Filter Tips: according to

General requirements CE-marking certificate

Sterility certificate
RoHS Compliance certificate
Environmental Management certificate
USP-Plastic Test, Class VI, certificate
Conformity testing certificate
GMP/GLP certificate

ISO Standard 8655
EU-Directive 98/79/EG, competent authority code DE/CA90
EN 552/ISO 11137 and DIN EN 556
EU Directive 2002/95/EC
ISO Standard 14000 and ISO Standard 14001
ISO Standard 10993
DIN Standard 12600
WHO Technical Report Series 908,
37. Report, Geneva2003

# **Premium-Line Tips**

# Low Retention

Tip	Tip Length	Cat. No.	Pack Type	Sterilized	Sales Unit
0.1-10 μl, clear Premium-Line Tip	34.1 mm	4-000-60-0 4-000-81-0 4-000-96-0 4-001-60-0 4-001-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x1000 20x1000 10x96 2x1000 10x96
0.1-10 μl XL, clear Premium-Line Tip	45.2 mm	4-060-60-0 4-060-81-0 4-060-96-0 4-061-60-0 4-061-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x1000 20x1000 10x96 2x1000 10x96
0.5-10/20 μl, clear Premium-Line Tip	45.7 mm	4-050-60-0 4-050-81-0 4-050-96-0 4-051-60-0 4-051-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x1000 20x1000 10x96 2x1000 10x96
1-200 μl, clear Premium-Line Tip	50.8 mm	4-110-60-0 4-110-81-0 4-110-96-0 4-111-60-0 4-111-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x1000 35x1000 10x96 2x1000 10x96
100-1000 μl, long, clear Premium-Line Tip	86.0 mm	4-200-50-0 4-200-80-0 4-200-96-0 4-201-50-0 4-201-96-0	Bag Bag 96-Rack Bag 96-Rack	:	2x500 20x500 10x96 2x500 10x96





# **Premium-Line Filter Tips**

Low Retention

Filter Tip	Tip Length	Cat. No.	Pack Type	Sterilized	Sales Unit
	34.1 mm	5-001-70-0 5-001-96-0	Bag 96-Rack	:	5 x 1000 10 x 96
0.1-10 μl, clear Premium-Line Filter Tip					
	45.2 mm	5-061-70-0 5-061-96-0	Bag 96-Rack		5 x1000 10x96
0.1-10 μl XL, clear Premium-Line Filter Tip					
0.5.40/00 J. J. D. J. J. Filt. Tiv.	45.7 mm	5-051-70-0 5-051-96-0	Bag 96-Rack	:	5 x 1000 10 x 96
0.5-10/20 μl, clear Premium-Line Filter Tip					
	50.8 mm	5-116-70-0 5-116-96-0	Bag 96-Rack	:	5 x 1000 10 x 96
1-20/30 µl, clear Premium-Line Filter Tip					
	50.8 mm	5-111-70-0 5-111-96-0	Bag 96-Rack	:	5 x 1000 10 x 96
1-50 µl, clear Premium-Line Filter Tip					
	50.8 mm	5-112-70-0 5-112-96-0	Bag 96-Rack	:	5 x 1000 10 x 96
1-100 µl, clear Premium-Line Filter Tip					
	50.8 mm	5-113-70-0 5-113-96-0	Bag 96-Rack		5 x 1000 10 x 96
1-200 µl, clear Premium-Line Filter Tip					
	86.0 mm	5-201-70-0 5-201-96-0	Bag 96-Rack	:	10 x 500 10 x 96
100-1000 μl, long, clear Premium-Line Filt	er Tip				





# Rackbox System

### without Tips















Racks are made out of 98% AHN owned recycled material

#### Effortless and secure working

Easy one hand opening and closing of rackbox

Secure rackbox closing

Rackboxes can be stacked for easy storage

#### Universal fit

Racks are compatible with multi channel pipettes (9 mm spacing)

#### Sterile handling

Autoclavability of rack and rackboxes

 Rackboxes available in small and large size, racks in 8x12 format and 6x10 format

Rackbox	Colour	Cat. No.	Pack Type	Sterilized	Sales Unit
0.1 - 20 μl, 8x12	clear Box black Rack	4-500-00-0	Carton		1x10
200 μl, 8x12	clear Box black Rack	4-500-01-0	Carton		1x10
300 μl, 8x12	clear Box black Rack	4-501-00-0	Carton		1x10
1000 μl, long, 8x12	clear Box black Rack	4-502-00-0	Carton		1x10
1000 μl, short, 6x10	clear Box black Rack	4-503-00-0	Carton		1x10

# **EasyIDTip**

# Rackbox System















- Easy identification of pipette tip
   Colour coded racks allow a quick and easy determination of the pipette tip and the suitable pipette
- Eco-friendly refilling
   The EasyIDTip rackbox can be refilled environmentally friendly with racks from the EasyIDTip Reload Pack
- Secure fit of pipette tips
   Pipette tips sit in the EasyIDTip rack stable in wells, this enables an easy handling with multichannel pipettes
- Secure stacking of the rackboxes
   The EasyIDTip rackbox is equipped with locating lugs which allow a secure stacking of the boxes, bench space can be used optimally
- Easy identification of the source of supply
   Logo is molded into the lid of the rackbox
- Control of the remaining pipette tips
   The transparent lid of the rackbox allows a quick visual check
- Secure and comfortable handling
   The EasyIDTip rackbox is equipped with a reliable latch which prevents an unintended opening of the box

The EasyIDTip rack clips securely into the rackbox without excessive force, nevertheless it can be easily removed again

To facilitate the handling for users with small hands, the tabs of the EasyIDTip rack are located on the long side

# EasylDTip Rackbox System





	Tip		Pack		Sales
EasyIDTip Rackbox	Length	Cat. No.	Туре	Sterilized	Unit
EasylDTip Low Retention Tip 0.1-10 μl, clear	34.1 mm	EI4-000-96-0 EI4-001-96-0	10 Boxes 10 Boxes		10x96 10x96
EasyIDTip Low Retention Tip 0.1-10/20 μl XL, clear	45.2 mm	EI4-060-96-0 EI4-061-96-0	10 Boxes 10 Boxes	•	10x96 10x96
EasylDTip Low Retention Tip 1-200 μl, clear	50.8 mm	EI4-110-96-0 EI4-111-96-0	10 Boxes 10 Boxes		10x96 10x96
EasyIDTip Low Retention Filter Tip 0.1-10 μI, clear	34.1 mm	EI5-001-96-0	10 Boxes	•	10x96
EasylDTip Low Retention Filter Tip 0.1-10 μl XL, clear	45.2 mm	EI5-061-96-0	10 Boxes	•	10x96
EasylDTip Low Retention Filter Tip 1-20/30 μl, clear	50.8 mm	EI5-116-96-0	10 Boxes	•	10x96
EasylDTip Low Retention Filter Tip 1-50 μI, clear	50.8 mm	EI5-111-96-0	10 Boxes	•	10x96
EasyIDTip Low Retention Filter Tip 1-100 μI, clear	50.8 mm	EI5-112-96-0	10 Boxes	•	10x96
EasyIDTip Low Retention Filter Tip 1-200 μI, clear	50.8 mm	EI5-113-96-0	10 Boxes	•	10x96

#### Easy refilling in 3 steps:





Open the EasyIDTip Reload Pack and take out one tray.



Remove the foil and open the lid of the tray, take out one Reload rack.



Refill the rackbox with the Reload rack.

# EasylDTip Rackbox System





EasyIDTip Reload	Tip Length	Cat. No.	Pack Type	Sterilized	Sales Unit
EasylDTip Reload Tip 0.1-10 μl, clear	34.1 mm	ER1-000-96-0 ER1-001-96-0	10 Racks 10 Racks		10x96 10x96
EasylDTip Reload Low Retention Tip 0.1-10 μl, clear	34.1 mm	ER4-000-96-0 ER4-001-96-0	10 Racks 10 Racks	•	10x96 10x96
EasyIDTip Reload Tip 0.1-10/20 μI XL, clear	45.2 mm	ER1-060-96-0 ER1-061-96-0	10 Racks 10 Racks	•	10x96 10x96
EasyIDTip Reload Low Retention Tip 0.1-10/20 μI XL	45.2 mm clear	ER4-060-96-0 ER4-061-96-0	10 Racks 10 Racks		10x96 10x96
EasylDTip Reload Tip 1-200 μl, clear	50.8 mm	ER1-110-96-0 ER1-111-96-0	10 Racks 10 Racks		10x96 10x96
EasylDTip Reload Tip 1-200 μI, yellow	50.8 mm	ER1-110-96-1	10 Racks		10x96
EasylDTip Reload Low Retention Tip 1-200 μl, clear	50.8 mm	ER4-110-96-0 ER4-111-96-0	10 Racks 10 Racks		10x96 10x96
EasyIDTip Empty Rackbox 0.1-200 μI for refilling with racks of the EasyIDTip Reload Pack		ER4-500-00-0	10 Boxes	•	10x1

#### Easy refilling in 3 steps:





Open the EasyIDTip Reload Pack and take out one tray.



Remove the foil and open the lid of the tray, take out one Reload rack.



Refill the rackbox with the Reload rack.

# PIPETTES

Liquid Handling







# pipet4u® Performance

### High Performance Manual Pipettes







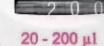
fully
autoclavable
121° C | 250° F
1.05 bar | 15 psig (Pounds)
15 min

Accurate and reliable pipetting

Reverse pipetting option for accurate and precise aspirating and dispensing of viscous liquids

Innovative soft grip for more comfort

Lock counter mechanism<sup>2</sup> prevents volume changes while pipetting



pipet4u® Pipette Racks are available, see pipet4u® Accessoires Compatibility of pipet4u® Pipettes with AHN Tips/Filter Tips, see Compatibility Chart



Light weight pipette design

Ergonomic design for easy operation prevents hand stress

Ergonomic grip shape

Ergonomic low plunger force minimizes RSI<sup>1</sup>

- Sterile handling
   Fully autoclavable pipette
- Easy and quick maintenance
- and adjustment
  With the included disassembly/
  calibration tool
- No loss of samples
   Blow out system allows last drop dispensing

<sup>1</sup> RSI - Repetitive Strain Injury

Equipment of variable Volume Manual Pipettes

# pipet4u® Performance Single Channel fixed Volume Manual Pipettes

#### pipet4u® Performance Manual Pipettes meet the following international standards: according to

International Organisation for Standardisation European Committee for Standardisation German Institute for Standardisation Electrical and general safety in accordance with Electromagnetic compatibility in accordance with Marking and layout in accordance with Conformity testing in accordance with CE-Sign marked in accordance with

ISO 8655, part 1-6 CEN EN ISO 8655 DIN 12650 IEC 61010-1 IEC 61326-1 IEC 60073 DIN 12600 EU Directive 98/79 EG, Art. 10

- Tool for calibration and disassembling
- O-rings (for 5000 μl | 10000 μl pipette)
- Sample bag with tips
- Grease
- Calibration report
- Instruction manual

Volume	Test Volume	Increments	Inaccuracy*	Imprecision**	Cat. No.
5 μΙ	5 µl	-	1.3 %	1.1 %	8-001-00-9
10 μΙ	10 μΙ	-	0.8 %	0.6 %	8-002-00-9
20 μΙ	20 μΙ	-	0.6 %	0.3 %	8-003-00-9
25 μΙ	25 μΙ	-	0.6 %	0.3 %	8-004-00-9
50 µl	50 µl	-	0.6 %	0.3 %	8-007-00-9
100 μΙ	100 µl	-	0.5 %	0.2 %	8-008-00-9
200 μΙ	200 μΙ	-	0.5 %	0.2 %	8-009-00-9
250 μΙ	250 µl	-	0.5 %	0.2 %	8-010-00-9
500 μΙ	500 μl	-	0.5 %	0.2 %	8-011-00-9
1000 μΙ	1000 μΙ	-	0.5 %	0.2 %	8-012-00-9
2000 μΙ	2000 μΙ	-	0.5 %	0.2 %	8-013-00-9
2500 μΙ	2500 µl	-	0.5 %	0.2 %	8-014-00-9
5000 μΙ	5000 μl	-	0.5 %	0.2 %	8-015-00-9
10000 μl <sup>***</sup>	10000 μΙ	-	0.4 %	0.2 %	8-016-00-9

<sup>\*</sup> Systematic error

<sup>\*\*</sup> Random error

<sup>\*\*\*</sup> Tip ejector function not available

# pipet4u® Performance Single Channel variable Volume Manual Pipettes

#### pipet4u® Performance Manual Pipettes meet the following international standards: according to

International Organisation for Standardisation European Committee for Standardisation German Institute for Standardisation Electrical and general safety in accordance with Electromagnetic compatibility in accordance with Marking and layout in accordance with Conformity testing in accordance with CE-Sign marked in accordance with

ISO 8655, part 1-6 CEN EN ISO 8655 DIN 12650 IEC 61010-1 IEC 61326-1 IEC 60073 DIN 12600 EU Directive 98/79 EG, Art. 10

 Tool for calibration and disassembling O-rings (for 5000 µl | 10000 µl pipette)

Sample bag with tips

Grease

Calibration report

Instruction manual

Volume Range	Test Volume	Increments	Inaccuracy*	Imprecision**	Cat. No.
0.1 - 2.5 μΙ	0.25 μl 1.25 μl 2.5 μl	0.01 µl	12.0 % 3.0 % 2.5 %	6.0 % 3.0 % 2.0 %	8-100-00-9
0.5 - 10 μΙ	1 µl 5 µl 10 µl	0.1 μΙ	2.5 % 1.5 % 1.0 %	1.5 % 0.8 % 0.4 %	8-101-00-9
2 - 20 µl	2 µl 10 µl 20 µl	0.5 µl	2.5 % 1.2 % 1.0 %	1.5 % 0.6 % 0.3 %	8-102-00-9
5 - 50 μl	5 μl 25 μl 50 μl	0.5 μΙ	2.0 % 1.2 % 1.0 %	1.5 % 0.8 % 0.3 %	8-103-00-9
10 - 100 μΙ	10 μl 50 μl 100 μl	0.5 μΙ	2.0 % 1.0 % 0.8 %	1.5 % 0.3 % 0.2 %	8-104-00-9
20 - 200 μΙ	20 μl 100 μl 200 μl	1.0 μΙ	2.5 % 1.0 % 0.6 %	0.7 % 0.3 % 0.2 %	8-105-00-9
50 - 200 μΙ	50 μl 100 μl 200 μl	1.0 μΙ	1.0 % 1.0 % 0.6 %	0.4 % 0.3 % 0.2 %	8-105-01-9
100 - 1000 μΙ	100 μl 500 μl 1000 μl	5.0 µl	2.0 % 0.9 % 0.6 %	0.6 % 0.2 % 0.2 %	8-106-00-9
200 - 1000 μΙ	200 μl 500 μl 1000 μl	5.0 µl	0.9 % 0.9 % 0.6 %	0.3 % 0.2 % 0.2 %	8-106-01-9
500 - 5000 μl	500 μl 2500 μl 5000 μl	50.0 μl	1.9 % 1.0 % 0.6 %	0.7 % 0.5 % 0.3 %	8-107-00-9
2000 - 10000 μl <sup>***</sup>	2000 µl 5000 µl 10000 µl	100.0 µl	3.0 % 1.2 % 0.6 %	0.6 % 0.3 % 0.2 %	8-108-00-9

<sup>\*</sup> Systematic error

<sup>\*\*</sup> Random error

<sup>\*\*\*</sup> Tip ejector function not available

# pipet4u® Performance

# Multi Channel variable Volume Manual Pipettes

### $\text{pipet4u}^{\circledcirc}$ Performance Manual Pipettes meet the following international standards: $_{\text{according to}}$

International Organisation for Standardisation
European Committee for Standardisation
German Institute for Standardisation
Electrical and general safety in accordance with
Electromagnetic compatibility in accordance with
Marking and layout in accordance with
Conformity testing in accordance with
CE-Sign marked in accordance with

ISO 8655, part 1-6 CEN EN ISO 8655 DIN 12650 IEC 61010-1 IEC 61326-1 IEC 60073 DIN 12600 EU Directive 98/79 EG, Art. 10 Tool for calibration and disassemblingO-ringsSample bag with tipsGrease

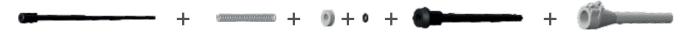
- Calibration report
- Instruction manual

Volume Range		Test Volume	Increments	Inaccuracy*	Imprecision**	Cat. No.
0.5 - 10 μl	8 Channel	0.50 µl 5 µl 10 µl	0.1 μΙ	2.0 % 1.6 % 1.5 %	2.0 % 1.6 % 1.5 %	8-201-00-9
5 - 50 μl	8 Channel	5 μl 25 μl 50 μl	0.5 μΙ	2.0 % 1.0 % 0.6 %	2.0 % 0.8 % 0.5 %	8-202-00-9
30 - 300 μl	8 Channel	30 μl 150 μl 300 μl	1.0 μΙ	2.5 % 1.2 % 0.6 %	0.9 % 0.5 % 0.4 %	8-203-00-9
0.5 - 10 μΙ	12 Channel	1 μl 5 μl 10 μl	0.1 μΙ	4.0 % 2.5 % 1.5 %	4.0 % 2.5 % 1.5 %	8-401-00-9
5 - 50 µl	12 Channel	5 μl 25 μl 50 μl	0.5 μΙ	3.0 % 1.5 % 1.0 %	2.0 % 1.0 % 0.7 %	8-402-00-9
30 - 300 μl	12 Channel	30 µl 150 µl 300 µl	1.0 μΙ	1.5 % 1.0 % 0.8 %	0.75 % 0.5 % 0.25 %	8-403-00-9

<sup>\*</sup> Systematic error

#### **Spare Parts**

pipet4u® Performance Single Channel Manual Pipette



Description	Volume	Sales Unit	Cat. No.
pipet4u <sup>®</sup> bottom assembly 1	0.1-2.5 μl	1 Set	8-190-00-9
pipet4u <sup>®</sup> bottom assembly 2	0.5-10 μl   2.5 μl	1 Set	8-190-01-9
pipet4u <sup>®</sup> bottom assembly 3	2-20 µl	1 Set	8-190-02-9
pipet4u <sup>®</sup> bottom assembly 4	5-50 µl   5 µl   10 µl   20 µl   25 µl   50 µl	1 Set	8-190-03-9
pipet4u <sup>®</sup> bottom assembly 5	10-100 μl   100 μl	1 Set	8-190-04-9
pipet4u <sup>®</sup> bottom assembly 6	20-200 µl   50-200 µl   200 µl	1 Set	8-190-05-9
pipet4u <sup>®</sup> bottom assembly 7	100-1000 µl   200-1000 µl   250 µl   500 µl   1000 µl	1 Set	8-190-06-9
pipet4u <sup>®</sup> bottom assembly 8	0.5-5 ml   1-5 ml   2 ml   2.5 ml   5 ml	1 Set	8-190-07-9
pipet4u <sup>®</sup> bottom assembly 9	0.5-10 ml   1-10 ml   2-10 ml   10 ml	1 Set	8-190-08-9

<sup>\*\*</sup> Random error

# pipet4u® Revolution

# High Performance Electronic Pipettes











# Comfortable and effortless pipetting

Ultra bright OLED display for extra clear visibility

Ergonomic grip

Ergonomic design for fatiguefree operation

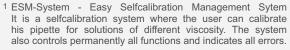
210-200 µI

Ergonomic pipetting dial for easy volume control and low strain pipetting (minimizes RSI<sup>3</sup>)



Compatibility of pipet4u® Pipettes with AHN Tips/Filter Tips, see Compatibility Chart

- Easy handling with one dial Control of all operating programs with the patented 1 dial system
- 6 different operating programs:
   Pipetting Mode
   Dispensing Mode
   Reverse Pipetting Mode
   Mixing Mode
   Auto Calibration Mode
   Speed Control
- Accurate and reliable pipetting SCS-System<sup>2</sup> controls piston movement giving highest precision and accuracy
- Easy self-calibration ESM-System¹ allows user calibration of pipette, e.g. useful for high viscosity samples



<sup>&</sup>lt;sup>2</sup> SCS-System - Speed Control System

<sup>&</sup>lt;sup>3</sup> RSI - Repetitive Strain Injury

# pipet4u® Revolution

# Single | Multi Channel variable Volume Electronic Pipettes

#### pipet4u® Revolution Electronic Pipettes meet the following international standards: according to

International Organisation for Standardisation European Committee for Standardisation German Institute for Standardisation Electrical and general safety in accordance with Electromagnetic compatibility in accordance with Marking and layout in accordance with Conformity testing in accordance with CE-Sign marked in accordance with

ISO 8655, part 1-6 CEN EN ISO 8655 DIN 12650 IEC 61010-1 IEC 61326-1 IEC 60073 DIN 12600 EU Directive 98/79 EG, Art. 10

- Battery (Li-Ion-battery)
- Screw driver
- Screw for hand grip
- Charger (available with EU | UK | US Charger)
- Sample bag with tips
- Grease
- Calibration report
- Instruction manual

Volume Range	Test Volume	Increments	Inaccuracy*	Imprecision**	Cat. No.
0.2 - 10 μΙ	0.50 µl 5 µl 10 µl	0.01 μΙ	5.0 % 2.5 % 0.9 %	3.0 % 1.5 % 0.5 %	8-500-00-0
5 - 100 µl	5 µl 50 µl 100 µl	0.1 μΙ	2.5 % 0.9 % 0.4 %	1.5 % 0.3 % 0.5 %	8-501-00-0
10 - 200 μΙ	10 μl 100 μl 200 μl	0.1 μΙ	0.9 % 0.4 % 0.3 %	0.5 % 0.5 % 0.1 %	8-502-00-0
50 - 1000 μl	100 µl 500 µl 1000 µl	1.0 μΙ	0.4 % 0.4 % 0.3 %	0.5 % 0.2 % 0.1 %	8-503-00-0
100 - 5000 μΙ	500 μl 2500 μl 5000 μl	5.0 µl	0.4 % 0.1 % 0.1 %	0.5 % 0.1 % 0.1 %	8-505-00-0
<b>0.2 - 10 μl</b> 8 Channel	0.5 µl 5 µl 10 µl	0.01 μΙ	5.0 % 2.5 % 0.9 %	3.0 % 1.5 % 0.5 %	8-520-00-0
<b>2.5 - 50 μl</b> 8 Channel	5 μl 25 μl 50 μl	0.10 μΙ	2.5 % 0.9 % 0.4 %	1.5 % 0.3 % 0.5 %	8-521-00-0
<b>15 - 300 μl</b> 8 Channel	20 µl 150 µl 300 µl	0.50 μΙ	0.9 % 0.4 % 0.3 %	0.5 % 0.3 % 0.1 %	8-522-00-0
<b>0.2 - 10 μl</b> 12 Channel	0.5 µl 5 µl 10 µl	0.01 μΙ	5.0 % 2.5 % 0.9 %	3.0 % 1.5 % 0.5 %	8-530-00-0
<b>2.5 - 50 μl</b> 12 Channel	5 μl 25 μl 50 μl	0.10 µl	2.5 % 0.9 % 0.4 %	1.5 % 0.3 % 0.5 %	8-531-00-0
<b>15 - 300 μl</b> 12 Channel	20 µl 150 µl 300 µl	0.50 μΙ	0.9 % 0.4 % 0.3 %	0.5 % 0.3 % 0.1 %	8-532-00-0

<sup>\*</sup> Systematic error

<sup>\*\*</sup> Random error

# pipet4u® Accessoires Racks for Single Channel and Multi Channel Manual Pipettes



Rack	Description	Sales Unit	Cat. No.
St. Day	pipet4u <sup>®</sup> single rack for manual 8/12 channel pipette, black	Carton/1 rack	8-130-02-7
	pipet4u <sup>®</sup> single rack for manual 8/12 channel pipette, white	Carton/1 rack	8-130-02-9
" (mar	pipet4u <sup>®</sup> rack for 4 manual single channel pipettes, white	Carton/1 rack	8-130-00-9
Perdu	pipet4u <sup>®</sup> rack for 6 manual single channel pipettes, white	Carton/1 rack	8-131-00-9

# Pipette Controller Features

# pipet4u® Oasis

# Pipette Controller







autoclavable 121° C | 250° F 1.05 bar | 15 psig (Pounds) 15 min



# pipet4u® Oasis Pipette Controller

Volume Range	Description	Sales Unit	Cat. No.
0.1 - 100 ml	pipet4u <sup>®</sup> Oasis Pipette Controller	Carton/1 Oasis	8-300-00-9

- 2 x NiMH batteries
- Desktop stand
- Wall mount bracket
- 2 x PTFE membrane filter (0.2 μm and 0.45 μm)
- Instruction manual

### **Spare Parts**

Pore Size	Description	Sales Unit	Cat. No.
land C	pipet4u <sup>®</sup> Oasis PTFE membrane filters 0.2 μm	Carton/5 filters	8-300-03-0
"ngos"	pipet4u <sup>®</sup> Oasis PTFE membrane filters 0.45 μm	Carton/5 filters	8-300-04-0
	pipet4u <sup>®</sup> Oasis silicone adapter	Carton/1 adapter	8-300-01-0
	pipet4u <sup>®</sup> Oasis pipette cone	Carton/1 cone	8-300-02-8

# **Serological Pipettes**

### for Pipette Controller



- Quick volume check
  Glass-clear polystyrene (PS) with graduation marks
- Maintain sample integrity
   Sterile, individually packed
- Convenient identification
   Colour-coded cotton-wool plug,
   standard colour code
- Accurate, minimal residual wetting
   Weldless one piece pipette
- Additional capacity
   Availability of negative graduation
- Display of dispensed and residual volumes
   5, 10 and 25 ml pipettes provides reverse double scales

Serological Pipette	Length	Volume
((n) 2 A( ') + ( '' + (	271.0 mm	1.0 ml
	271.0 mm	2.0 ml
	294.0 mm	5.0 ml
	294.0 mm	10.0 ml
	297.0 mm	25.0 ml

Positive Volume	Negative Volume	Colour Coding	Graduation	Cat. No.	Pack Type	Sterilized	Sales Unit
1.0 ml	0.3 ml	yellow	0.01 ml	8-840-00-0 8-840-00-1	Ind. wrapped 25/Bag	:	4x500 4x1000
2.0 ml	0.4 ml	green	0.02 ml	8-840-01-0 8-840-01-1	Ind. wrapped 25/Bag	:	4x500 4x1000
5.0 ml	3.0 ml	blue	0.10 ml	8-840-02-0 8-840-02-1	Ind. wrapped 25/Bag	:	4x250 4x375
10.0 ml	3.0 ml	orange	0.10 ml	8-840-03-0 8-840-03-1	Ind. wrapped 25/Bag	:	4x200 4x250
25.0 ml	2.6 ml	red	0.20 ml	8-840-04-0 8-840-04-1	Ind. wrapped 10/Bag	:	4x100 4x100

# TUBES Liquid Handling









# **PCR Tubes**

### 0.2 ml | 0.5 ml flat and domed cap











- Effortless and secure working Ergonomic cap design allows opening and closing with one hand
- Elimination of contamination and loss of sample
   High quality raw material meets standards of purity and is highly resistant to extreme mechanical strain and has excellent chemical resistance

Centrifuge specifications: up to 25.000 x g - fixed-angle rotor up to 70.000 x g - swing out rotor

- Maintain sample integrity sterile version available (by beta irradiation)
- Optical measurement and unsurpassed clarity
- Fully autoclavable tube

PCR Tube		Tube Height	Cat. No.	Pack Type	Sterilized	Sales Unit
0.2 ml, flat cap, clear PCR Tube	il	21.5 mm	3-010-50-0 3-010-80-0 3-011-50-0	Bag Bag Bag		1 x 1000 10 x 1000 1 x 1000
0.2 ml, domed cap, clear PCR Tube	il	23.3 mm	3-020-50-0 3-020-80-0 3-021-50-0	Bag Bag Bag		1 x 1000 10 x 1000 1 x 1000
0.5 ml, flat cap, clear PCR Tube	il	32.1 mm	3-110-50-0 3-110-80-0 3-111-50-0	Bag Bag Bag		1 x 1000 25 x 1000 1 x 1000
0.5 ml, domed cap, clear PCR Tube	il	34.3 mm	3-120-50-0 3-120-80-0 3-121-50-0	Bag Bag Bag		1 x 1000 25 x 1000 1 x 1000

# **Micro Tubes**

0.5 ml | 1.5 ml | 2.0 ml











- Quick and simple volume check
   Tubes are equipped with precise
   graduation marks (1.5 ml and
   2.0 ml)
  - 1.5 ml tube has 0.2 ml extra space for freezing/boiling purpose
- Optical measurement and unsurpassed clarity
- Elimination of contamination and loss of sample
   High quality raw material meets standards of purity, is highly resistant to extreme mechanical strain and has excellent chemical resistance

Centrifuge specifications: up to 25.000 x g - fixed-angle rotor up to 70.000 x g - swing out rotor

Sterile handling
 Fully autoclavable tube



Micro Tube		Tube Height	Colour	Cat. No.	Pack Type	Sterilized	Sales Unit
0.5 ml Micro Tube	T	32.1 mm	clear	3-115-50-0 3-115-80-0 3-116-50-0	Bag Bag Bag		1 x 1000 25 x 1000 1 x 1000
1.5 ml Micro Tube	17	40.9 mm	clear	3-205-50-0 3-205-85-0 3-207-50-0	Bag Bag Bag		1 x 1000 8 x 1000 1 x 1000
**LIGHT resistant		40.9 mm	black**	3-205-50-7 3-205-85-7	Bag Bag		1 x 1000 8 x 1000
2.0 ml Micro Tube	Î	41.7 mm	clear	3-204-50-0 3-204-85-0 3-208-50-0	Bag Bag Bag		1 x 1000 8 x 1000 1 x 1000

# **Centrifuge Tubes**

# 15 ml | 50 ml





- Elimination of contamination of sample
  - Centrifuge tube is manufactured from high clarity polypropylene, tube cap from polyethylene
    Cap design allows one hand removal of cap to prevent contamination
- Conical bottom design with screw cap
- Easy sample identification
   Large writing surface on tube
- Quick and simple volume check
   Graduation marks on tube
- No loss of sample
  Tube resists high centrifugal
  force and temperature variations
  Centrifuge specifications:
  up to 12.000 x g 15 ml
  Centrifuge Tube
  up to 9.500 x g 50 ml
  Centrifuge Tube
- Secure long term storage and preservation
   Safe usage in a temperature range from - 80 °C to + 121 °C
- Sterile handling
  Fully autoclavable tube



Centrifuge Tube	Tube Height	Cat. No.	Pack Type	Sterilized	Sales Unit
15 ml, Centrifuge Tube, clear, blue screw cap	121.0 mm	3-252-25-0 3-262-25-0	Bag Bag		1x25 1x25
50 ml, Centrifuge Tube, clear, blue screw cap	118.0 mm	3-253-25-0 3-263-25-0	Bag Bag		1x25 1x25

# **Cryo Tubes**

1.8 ml



autoclavable 120°C | 248°F 0,95 bar | 14 psi 20 min



Easy sample identification

Unique barcode printing directly on tube

Large writing surface on tube



- Secure long term storage and preservation
   Tube can be stored to -196 °C
- No loss of sample
   Tested to specific pressure to guarantee no leaking from tube





- No contamination during storage
   O-ring injected directly into cap to minimize risk of leaking
- Quick and simple volume check
   Clear printed graduation marks
- Preserved viability of samples
   Manufactured from proven
   non-toxic materials
- Sterile handling
   Autoclavable tube
- Maintain sample integrity
   Sterilized by beta irradiation

Cryo Tube	Tube Height	Cat. No.	Pack Type	Sterilized	Sales Unit
1.8 ml, Cryo Tube, clear self stand	44.5 mm	3-251-49-0 3-251-10-0	Bag Bag	:	10 x 50 2 x 50
external thread barcode					

Accessories	Colour	Cat. No.	Pack Type	Sterilized	Sales Unit
Capdisks  colour coding of samples snap into screw-top cap	white yellow blue red green purple	3-252-10-0 3-252-50-0 3-252-10-1 3-252-50-1 3-252-10-2 3-252-50-2 3-252-10-3 3-252-50-3 3-252-10-4 3-252-50-4 3-252-10-8 3-252-50-8	Bag Bag Bag Bag Bag Bag Bag Bag Bag		1 x 100 1 x 1000 1 x 1000

# **Cryo Box**

### 81-place

Effortless and secure operation

Box can be easily opened and closed with one hand

Robust hinge with safe snap-on lid

Drain openings on bottom for liquid N<sub>2</sub> Storage

- Secure long term storage and preservation Box can be stored between -90 °C and + 121 °C
- Secure transportation and storage
   Stackability of box
- Universal fit
  Suitable for all
  standard cryo
  tubes 1.2 2 ml
- Sterile handling Autoclavable box
- Storage of light sensitive samples
   Available with bottom and lid in black



Cryo Box	Colour	Cat. No.	Pack Type	Sterile	Sales Unit
81-place Cryo- and Storage Box	black	3-630-05-7	Pack		1 Pack/ 5 Boxes
dimensions: 133 mm (W) x 133 mm (D) x 52 mm (H) 9 x 9 matrix, numeric code, for tube diameter 12,8 mm light protection		3-630-99-7	Pack		12 Packs/ 60 Boxes
81-place Cryo- and Storage Box	magenta	3-630-05-8	Pack		1 Pack/ 5 Boxes
dimensions: 133 mm (W) x 133 mm (D) x 52 mm (H) 9 x 9 matrix, numeric code, for tube diameter 12,8 mm		3-630-99-8	Pack		12 Packs/ 60 Boxes

Liquid Handling

# FILTRATION | ULTRA FILTRATION







# Mini Spin Column Systems

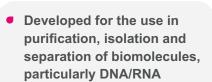


# CUSTOMISED SOLUTIONS FOR

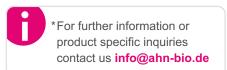
FILTRATION

ULTRA FILTRATION

DNA | RNA PURIFICATION



- Filter tubes can be delivered with various membrane filters (e.g. CA|RC|GF|PVDF| PE|PTFE|Nylon) depending on customer specific applications\*
- Available with 1.5 ml or 2.0 ml receiver tubes







Mini Spin Column round bottom without lid







Spin Column Single Parts without filter	Cat. No.	Pack Type	Sterilized	Sales Unit
0.8 ml, Spin Column Filter Tube, clear	3-330-50-0	Bag		1x1000
0.8 ml, Spin Column Filter Tube, clear, with filterring	3-331-50-0	Bag		1x1000
0.8 ml, Spin Column Filter Tube, clear, with cap	3-336-50-0	Bag		1x1000
1.5 ml, Receiver Tube, clear	3-200-50-0 3-200-80-0	Bag Bag		1x1000 10x1000
2.0 ml, Receiver Tube, clear	3-202-50-0 3-202-80-0	Bag Bag		1×1000 10×1000

# **Filtration System**

### Deep Well Microplate | Microfilterplate | Vacuum Manifold





- Elimination of risk of sample contamination
   Manufactured from absolutely clear high-quality virgin polystyrene
- U-bottom design with 1.0 ml capacity perfectly fits together with the most robotic systems in SBS-Standard
- Available in 8x12 matrix with 96 individual wells





Elimination of risk of sample contamination
 Manufactured from absolutely clear high-quality virgin polystyrene

**Deep Well Microplate** 

- Available in 8x12 matrix with 96 individual drip directors in accordance with SBS-Standard
- Microfilterplate can be delivered with standard or customised\* filters (e.g. CA|RC|GF|PVDF|PE| PTFE|Nylon) depending on customer specific applications
- Elimination of risk of sample contamination
   Manufactured from clear acrylic
- Material of individual components:
   Annealed, transparent acrylic
   Connection sleeve PTFE
   Rubber seal synthetic caoutchouc
- Designed for all usual filterplates according to SBS standard



Filtration System	Cat. No.	Pack Type	Sterilized	Sales Unit
1.0 ml, Deep Well Microplate, 96 Wells, SBS, clear	3-211-25-0	Carton		1 Carton/ 25 Plates
Vacuum Manifold, manual, clear bottom part - height 50 mm upper part - height 20 mm spacer - height 22 mm	3-401-01-0	Carton		1 Carton/ 1 Manifold

Vacuum Manifold

#### 1. General

All deliveries and services are based on the following Terms and Conditions. Deviating conditions issued by the buyer are not binding, even if they are not explicitly contradicted. The buyer accepts the General Terms and Conditions of the AHN Biotechnologie GmbH as legally binding by order placement or/and acceptance of the goods. In case of entrepreneurs, this also applies to pending and all further deliveries and services. The current issue of the General Terms and Conditions of the AHN Biotechnologie GmbH shall be valid as from 01 January 2013.

#### 2. Offers and Orders

Prepared offers are always not binding. If the offer has been accepted by the orderer, the terms of sale shall be considered as accepted in their entirety. AHN Biotechnologie GmbH shall immediately respond to received offers. If the AHN Biotechnologie GmbH does not immediately oppose received offers, the offer will be seen as accepted. Therefore, deviating terms of sale and delivery issued by the orderer shall not be binding for the AHN Biotechnologie GmbH. Orders as well as any verbal side agreements require written confirmation. The exceptions to this are subsequently made verbal agreements. If within 48 hours after order confirmation the order needs to be not changed, this applies the order confirmation as bonded. In the case of non-compliance or cancellation of the order a net order value is immediately payable up to 25%.

#### 3. Prices

The final calculation will be carried out on the basis of the prices applicable on the date of the delivery plus VAT. In this respect, the quotations, provided in the offer and the confirmation, are not binding. Price changes are allowed when more than four months are between the conclusion of the contract and the agreed date of delivery. In case, wages, material costs, or the marketrelated cost prices increase after that period and before the completion date of the delivery, the AHN Biotechnologie GmbH shall be entitled to reasonably increase the price owing to the increase in costs. The orderer is only entitled to withdraw when the increase of the price does not only insignificantly exceed the increase of the general living costs within the period of order and delivery. If the orderer is a businessman, a corporate body under public law, or a special fund under public law, the price changes will be possible according to the before mentioned regulations provided that more than six weeks are between the conclusion of the contract and the agreed date of delivery. The prices shall apply, unless otherwise agreed, ex-works, excluding freight, custom duties, insurance and packaging. In case of delivery values below 250.00 euros, a processing charge of 25.00 euros will be charged. If unexpected changes of the goods and/or of the incidental expenses of the goods occur after the acceptance of a contract that make the fulfilment of the contract unacceptable, the contract shall be adapted to the changed conditions. The contract adaptation and the Vendor's possibility of cancellation must be reasonable for the Buyer. If no agreement will be achieved thereby, the AHN Biotechnologie GmbH will be released from the contractual obligation without the

Buyer's possibility to make compensation or liability claims. The exceptions to this are compensation or liability claims due to injury to life, body, or health with intent and gross fault.

#### 4. Delivery and Shipment

The delivery is ex-works. In case of contracts and with deliveries to entrepreneurs, the goods are generally delivered on account and at the Buyer's risk. The Buyer also bears the risk if the freight is prepaid. If requested, we are willing to cover transport insurances only by invoicing the insurance rate and do not accept assume the obligation to obtain insurance. The AHN Biotechnologie GmbH is entitled to name itself as beneficiary. The vendor shall not be responsible for delays in delivery or services due to force majeure and due to events which considerably complicate the delivery or indeed render it impossible - this includes in particular strikes, lockouts, official directives etc. - also when these events occur at the sites of the vendor's suppliers or their subcontractors - even in case the vendor is bound by agreed terms and dates. They shall entitle the vendor to defer the deliveries or services for the period of hindrance plus an appropriate start-up time, and completely or in part, to withdraw from the contract due to unfulfilled terms of contract. The user will be entitled to withdraw if the performance is not available. The user explicitly undertakes to inform the contractual party immediately about the non-availability and to reimburse the counter-performance. Immediately after the completion or if the goods are ready for delivery, the orderer shall take over the goods. In case of default in taking delivery, the costs and the risk of storage shall pass to the orderer. The same applies to closing of railway lines and other transport possibilities that make the shipment impossible.

#### 5. Date of delivery

The delivery time stated in the order confirmation is an approximate date and is determined under consideration of the known facts. If these facts change until the end of delivery period through no fault of our own, or other events which cannot be accounted for by us obstruct the delivery in due time, the delivery deadline will be extended reasonably. Delivery delays due to operating disruptions, regulatory actions or force majeure cause a reasonable extension of the delivery deadline. Force majeure is also to be understood to include industrial action including strikes and legitimate lockouts at the AHN Biotechnologie GmbH or our subcontractors' sites. In this case, our customers' right to claim for damages shall be excluded. With this, partial deliveries shall be eligible provided that the reasonable minimum quantity is not undercut.

#### 6. Payment

The purchase price is payable net (for entrepreneurs) or gross (for consumers) on delivery of goods if not otherwise agreed. If the period of payment is exceeded, the AHN Biotechnologie GmbH shall be entitled to charge interest counted from the due date which refers to the value of the rate that we had to pay for the used bank loan, at least, however, of 5 % above the current bank rate of the Deutschen Bundesbank and to refuse the further fulfilment of the contract. Expenses for debt

recovery and reminding shall be on the buyer's account. With this, payments shall be paid directly. The buyer is not allowed to set off any payments, insofar not undisputed or legally effective claims, or counterclaims which are ready for a decision and counterclaims arising from the synallagmatic relation are affected.

#### 7. Reservation of ownership

Until the full payment of the delivery and the regulation of all accounts payable from the business relation including interest, expenses as well as until the coverage of possible current account balance, AHN Biotechnologie GmbH reserves the property right for the delivered goods as well as in the commercial legal relations for the goods that have been manufactured using our goods. In this case, the goods will be reclaimed from the buyer without setting a final deadline or a letter of resignation if the Buyer does not meet its obligations despite of dunning notice. In the commercial legal relations, with this, the property includes the products that are produced by processing of the goods subject to retention of title or their mixtures to their full value. If the property right of third parties in the goods that are processed or mixed remains in force, we shall acquire co-property (§§ 947, 948 BGB) proportional to the invoice values of the goods to be processed. The buyer is obliged to keep the goods that are subject to retention of title safe and free of charge. As long as the buyer duly fulfils its liabilities against the AHN Biotechnologie GmbH, it shall be revocably entitled to have the goods that are subject to retention of title at its disposal in an ordinary business routine.

It shall not be authorized to pledging and assignment as security or other encumbrances. If the buyer is an entrepreneur, with this, it already assigns its claims from the resale of the goods owned or partially owned by the AHN Biotechnologie GmbH (§ 947 subparagraph 1, § 948 BGB) to the AHN Biotechnologie GmbH as a precaution. If the settlement of the claims is at risk, the buyer has to inform its customers about the assignment on request and has to pass all required information and documents to the AHN Biotechnologie GmbH. The buyer must immediately report about third parties' access to the goods that are subject to retention of title and assigned claims.

#### 8. Notifications of defects, guarantee

The buyer is explicitly responsible for application, use, and processing of the ordered goods. In the commercial legal relations, the buyer is obliged to check the goods immediately when delivered and to confirm the delivery note. Is this examination neglected, it will not be possible to claim for defective goods or the delivery of goods which do not refer to the ordered goods afterwards. Complaints concerning obvious defects can only be considered when they are made within 5 days after the goods arrived at the place of destination. If the goods are sold per FOB, complaints shall be made in a timely manner so that the shipment of obviously wrong or defective goods can be avoided. If the goods are sold per CIF- or C&F, the limitation period for filing a complaint will be 14 days after the arrival of the goods in the port of entry. A notice of defects does not release from the obligation to pay. In case the goods have been delivered on time and the suppliers have accepted the complaints, the orderer shall only be entitled for rescission of sale but not for price changes. The AHN Biotechnologie GmbH reserves the right to deliver replacement goods for the complained and returned goods. In case the subsequent delivery fails again, the buyer shall be entitled to have the legal rights to withdraw from the contract. The above-mentioned paragraphs finally include the warranty for the product and exclude other warranty claims of any kind. Complaints on latent/not obvious defects have to be brought to notice immediately after they have become recognizable, however, in commercial legal relations, this has to be within 6 months after the receipt of the goods and in case of contracts with consumers, this has to be within the statutory warranty period. Warranty services are only possible under the corresponding conditions of the individual suppliers.

**9. Applicable law, place of jurisdiction, partial nullity** The Law of the Federal Republic of Germany shall be applicable for these terms of business and the entire legal relationship between the vendor and the buyer excluding the United Nations Convention on Contracts for the International Sale of Goods (CISG) as well as possible inter-governmental agreements. This also applies if the Buyer's place of business is abroad or the delivery shall be sent from or to abroad.

If the buyer is a merchant within the meaning of the Commercial Code, a legal entity under public law, or public/statutory special funds, the place of business of the AHN Biotechnologie GmbH shall be the exclusive place of jurisdiction for all disputes arising directly or indirectly from this contractual relation. Should any provision of these terms of business or a provision within the scope of any other agreements be or become ineffective, this shall not affect the validity of any other provisions or agreements.

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