

Product survey: DNA/RNA isolation

# Spoilt for Choice

Finding the best kit for RNA or DNA extraction from a certain organism or tissue is definitely not an easy task. You may choose from a plethora of available kits and, of course, every vendor claims that his kit is the best.

In this respect, little seems to have changed since the days when I extracted RNA from yeast 10 years ago. Back then I performed a lot of northern blots and routinely extracted RNA from baker's yeast. To this end, I used the classical phenol-chloroform-isoamylalcohol (PCI) extraction. Though working with phenol and chloroform is not terribly amusing, PCI extraction works perfectly well and I usually got tons of RNA for my northern.

I remember one day in the lab, when two sales representatives from a major kit manufacturer entered the room presenting their latest RNA extraction kit (which incidentally the company still includes in its current product portfolio!). "Why aren't you doing the RNA extraction with our new kit?" they asked in a friendly manner. "I usually get plenty of pure RNA with the PCI extraction protocol. I don't need a kit", I succinctly replied. These two guys, however, were really hard to convince. To end the discussion and get them out of the lab, I finally promised to give their kit a try.

## Disappointing RNA Kit

So the next morning I disrupted the yeast cells with glass beads in a bead-mill homogeniser as I always did but instead of performing a PCI extraction with the lysate, I followed the instructions given in the manual of the RNA extraction kit. The kit was based on RNA binding to a silica-gel, so the protocol was rather straightforward and went something like this: Add some ethanol to the lysate, apply the sample to a column and spin it down, wash three times with buffers XYZ and elute RNA with water. A simple and fast procedure, without using phenol and chloroform. That was a real plus! However, after spinning down the reaction tube containing the eluate and looking at the bottom of the cup – I saw nothing! With the PCI extraction I usually got a big, fat, easily visible RNA pellet. At first I thought I had probably missed a point in the protocol or made some other mistake

and tried once more. However, once again, no RNA materialised after elution. Finally, I threw the kit into the bin, grabbed the phenol bottle and ran a PCI extraction to get some RNA before the whole day was wasted with things that didn't work.

## Big differences

Don't get me wrong. I am not against kits and I have used them whenever they were faster or easier to handle than a traditional lab protocol. However, even RNA extraction kits that work usually differ in their performance. Deng *et al.* for example, compared the performance of six commercially available RNA extraction kits and in 2005 published their results in a *Journal of Veterinary Diagnostic Investigation* paper (17, 574-578). They simply extracted RNA from dif-



Searching for the RNA pellet.

ferent pig tissues and blood and evaluated as to whether or not they could get enough pure material to detect classical swine fever virus (CSFV) with a qualitative real-time RT-PCR. Deng and his colleagues found that "All six methods are more or less useful for the detection of CSFV by real-time and conventional RT-PCR in swine-blood and tissues. However, some of the six reagents offer certain advantages not common to all six extraction procedures. For example, RNA extracted by the TRIzolLS reagent [Invitrogen] constantly had the highest yield; RNA extracted by the RNAqueous [Ambion] kit had the highest A260/A280 ratio for almost all samples; and RNA extracted by the NucleoSpin RNAII [BD Biosciences] and the GenElute mamma-

lian total RNA kit [Sigma-Aldrich] was most likely to be free of genomic DNA contamination." So in this case, you may choose between yield, purity or gDNA contamination free RNA.

## Manual operation vs. RNA extractor

Petrich *et al.* presented similar results in a Canadian multi-centre comparison of nucleic acid extraction methods of SARS Coronavirus-RNA in stool specimens published last year in the *Journal of Clinical Microbiology* (Vol. 44, No. 8 2681-2688). They also included automatic RNA extraction methods in their study and came to the conclusion that "Automated extractors may not perform the best with this specimen type and the advantages of high throughput may sacrifice performance." That's good news for all labs with a limited budget that cannot afford expensive RNA extractors.

What holds true for RNA extraction also applies to DNA extraction. In particular, the performance of DNA extraction from hard to lyse fungal cells may largely depend on the extraction kit used. Fredericks *et al.* (2005, *J. Clin. Microbiol.* Vol 43, No 10, 5122-5128), for example, found that "differences among the DNA yields from the six extraction methods [they used] were highly significant." This group had compared the recovery of DNA from *Aspergillus fumigatus* conidia and *Candida albicans* cells present in bronchoalveolar lavage fluid.

Though, for example in clinical diagnostics, it may admittedly be useful to know which kit gives the best results; it is astonishing to see just how many papers have actually been published that simply compare commercially available RNA/DNA extraction kits. If, after scouring these, you are still unable to find one describing the extraction method that suits your needs, there is no other way than to try to find out for yourself, which kit really works best for your application.

HARALD ZÄHRINGER

DNA/RNA Isolation					
Company	Product name	Extraction method	Sample types	Miscellaneous, Specialities, Generally	Price [EUR]
<b>Active Motif</b> www.activemotif.com, Belgium Contact: E. Jans, D. Meents, Phone: +32 (0)2 653 0001 cseurope@activemotif.com	mTRAP	Magnetic	Tissues or cells	■ Poly T gripNA probe	540,- (Maxi) 595,- (Midi) 415,- (Total)
<b>Applied Biosystems</b> Applera Deutschland Germany Contact: Phone: +49(0)6151-9670 5335 Germany.order@ eur.appliedbiosystems.com	TaqMan Gene Expression Cells-to-CT Kit	No extraction, direct from cells to RT-PCR in 7 min	Cells	■ Fast ■ 96- or 384-well culture plates ■ Automatable ■ MasterMix format	1131,- 3844,-
	RecoverAll Total Nucleic Acid Isolation Kit for FFPE	Filter-based	FFPE tissue	■ Isolates DNA and miRNA containing total RNA suitable for qRT-PCR, qPCR, mutation screening, and microarray analyses	304,-
	mirVana miRNA Isolat. Kit	Filter-based	Tissue and cells	■ Total RNA and enriched small RNA <200 nt	286,-
	mirVana PARIS Kit	Filter-based	Tissue and cells	■ Native proteins & Total RNA and enriched small RNA <200 nt	302,-
	RNAqueous-Micro Kit	Organic extraction	Tissue and cells	■ For LCM applications with LCM Staining Kit	284,-
<b>AppliChem</b> Germany www.applichem.de Contact: Wolfram H. Marx Phone +49(0)6151/9357-45 w.marx@applichem.de	Total RNA Isolation Spin-Kit	Silica	Cells or tissue from human, animal, bacteria	■ Binding capacity: 100 µg RNA per column ■ For RT-PCR, cDNA synthesis, Northern blotting	71,80 (25 iso.) 240,90 (100)
	Plas/mini Isolat. Spin-Kit	Silica	Bacteria culture	■ Binding capacity: 20 µg DNA per column	65,60/288,30
	Plas/midi Isolat. Spin-Kit	Ion exchange membrane	Bacteria culture	■ Binding capacity: 200 µg DNA per column	56,90
	maxXbond	-	-	■ For 20-fold re-use of silica mini-columns	42,- (125 regener.) 69,40 (250 regener.)
	maxXmore MINI	-	-	■ Used in combination with maxXbond regenerated silica columns	24,20/68,30/317- (50x, 250x, 1250x)
	maxXbond AX	-	-	■ F multiple-use of anion exchanger-based col.	On request
	maxXmore AX	-	-	■ Combination w. maxXbond AX regenerated col.	On request
	DNA Isolation Spin-Kit	Silica	DNA on agarose gels	■ Binding capacity: 10 µg DNA per column	65,10
	DNA Enzyme-free Isolation Spin. Kit	Silica	DNA from enzyme reactions. Maximum loading volume: 700 µl	■ Binding capacity: 10 µg DNA per column	56,90 247,10
	Geno/mini DNA Isolation Spin-Kit	Silica	Blood (100 µl), cell culture cells (10 <sup>6</sup> cells); bact. (10 <sup>8</sup> cells), tiss. (15 mg)	■ Binding capacity: 20 µg DNA per column	93,80 411,80
	Geno/midi DNA Isolation Spin-Kit	Ion exchange membranes	Blood (2 ml); cell cult. cells (10 <sup>7</sup> ), bact. (5x10 <sup>8</sup> cells), tiss. (100 mg)	■ Binding capacity 100 µg DNA	97,-
	Geno/miracle DNA Isolation Spin-Kit	High affinity anion exchange membrane	For universal genomic DNA purification from difficult sources	■ Binding capacity 20 µg ■ Includes Proteinase K.	70,50 251,50
	DNA Blood Isolat. Spin Kit	Silica	Blood cells	■ Binding capacity: 10 µg DNA	100,30 / 445,40
	DNA Swab Isolation Spin-Kit	Silica	Swabs	■ Binding capacity: 10 µg DNA	56,80 194,40
	DNA Isolation Kit	Silica batch procedure	Plasmid DNA or DNA from agarose gels	■ For DNA fragments larger than 100 bp ■ Highest yield for fragments >300 bp	89,60
DNA Isolation Reagent for Genomic DNA	Guanidine-detergent lysis, subseq. DNA precipitation	Human, animal, plant, yeast, bacteria, viruses	■ DNA recovery: 70-100 %	89,00	
<b>Ambion</b> An Applied Biosystems Business, England www.ambion.com Contact: Edyta Bocian, Julia Neuwirth Product Manager: Christina Buchanan Phone: 0800 182 3578 euotech@ambion.com	MagMAX-96 Total RNA Isolation Kit	Guanidin. thiocyanate-bas. solution/magnet. beads	total RNA from cultured cells, mammalian tissues and plants	■ Enhanced lysis/binding conditions to accommodate larger sample inputs	304,-
	MELT Total Nucleic Acid Isolation System	Digestion master mix and magnetic beads	RNA or DNA	■ Genomic DNA removal ■ Preserve RNA for days in tissue lysates	314,-
	RecoverAll Total Nucleic Acid Isolation Kit for FFPE	Column-based purification after deparaffinization	DNA, RNA, and small RNA isolation from FFPE samples	■ No overnight Protein. K digest. requir. ■ Obtain typical yields of >50% that of unfixed tissue	304,-
	mirVana miRNA Isolation Kit	Organic extraction/col.-based RNA purification	-	■ miRNA, siRNA, shRNA, & snRNA analysis ■ Compatible with virtually all cell & tissue types	302,-
	RNAqueous-Micro Kit	Column-based RNA purification	-	■ Now includes reagents/protocol for RNA recovery from LCM samples	284,-
	RiboPure- Kit	Organic cell disruption/column purification	RNA	■ Ideal for the most stringent downstream applications ■ Handles problematic samples	372,-
<b>BioCat</b> Germany www.biocat.de Contact: Elke Gamer Phone +49-6221-7141516 gamer@biocat.de	High Purity Plasmid Purification Kits	Ion exchange resin	Bacterial cultures used for plasmid DNA propagation	■ Reproducible purification of high- & low-copy plasmids	155,- to 455,-
	Rapid Plasmid Purification Kits	High-capacity silica membranes	Bacterial cultures used for plasmid DNA propagation	■ Purification of high-copy plasmids up to 45 kb	94,- to 315,-
	Norgen Plasmid and BAC Purification Kits	Resin	Bacterial cultures used for plasmid DNA propagation	■ Purification of high- & low-copy plasmids & BAC DNA	125,-
	Genomic DNA Isolation Kit (Cells & Tissue)	Cell lysis, incubation with enzyme mix, precipit. w. absol. ethanol, centrifugat.	Mammalian cells or tissue	■ Isolation of genomic DNA from 1-2 x 10 <sup>6</sup> cells or 5 mg tissue	261,-
	FitAmp Genomic DNA Purification Kits (Tissue Sections, Plasma, Serum)	Spin column-based	Fresh or paraffin-embedded tissue sections, microdissection samples. Serum, plasma, body fluids.	■ Efficient and consistent DNA isolation ■ Rapid processing of multiple samples	139,- to 395,-

DNA/RNA Isolation					
Company	Product name	Extraction method	Sample types	Miscellaneous, Specialities, Generally	Price [EUR]
<b>BioCat</b> Contact see page 52	Norgen Genomic DNA Purificat. Kits (Blood, Saliva, Urine, Yeast, Bacteria)	Spin column chromatography	Blood; Saliva; Urine; Yeast; Bacteria; Urine Bacteria; Milk Bacteria;	<ul style="list-style-type: none"> <li>■ Purification of high-quality genomic DNA</li> <li>■ Rapid process. of multiple samples</li> <li>■ Purified genomic DNA is free of RNA &amp; cellular proteins</li> </ul>	149,- to 275,-
	Norgen Total RNA Purification Kit (Cells, Tissue, Blood, Yeast, Bacteria)	Spin column chromatography	Cells, Tissue, Blood, Yeast, Bacteria	<ul style="list-style-type: none"> <li>■ Isolation of high-quality RNA from a variety of sources</li> </ul>	225,-
	RNA- and RNA/DNA-Protein Purification Kit	Spin column chromatography	Tissue, Cells, Blood, Bacteria, Yeast, Fungi, Plants	<ul style="list-style-type: none"> <li>■ Simultan. isolate and purify total RNA &amp; proteins</li> <li>■ For small/difficult to obtain samples</li> </ul>	195,- 225,-
	microRNA Isolation Kit	Spin column	Cells, tissue	<ul style="list-style-type: none"> <li>■ High-quality small RNA</li> <li>■ Fast and easy</li> </ul>	275,-
	Ademtech mRNA Isolation Kit	mRNA isol. based on superparamag. nanoparticl.	Cells, blood, total RNA	<ul style="list-style-type: none"> <li>■ Pure, intact mRNA</li> <li>■ Kits are downscalable</li> <li>■ Elution volume &lt; 50 ul</li> </ul>	280,- to 560,-
<b>Bio-Nobile Oy</b> Finland www.Bio-Nobile.com Contact: Stefan Järnström Phone: +358 2 4101100 info@bio-nobile.com	Magro 96-M High Throughput Robotic Workstation	PickPen technology: separat. of magnetic particles	Blood, Tissue, Cell, Bacteria, Viruses, Swabs, Plant	<ul style="list-style-type: none"> <li>■ Diff. batch sizes</li> <li>■ Tubes/plates</li> <li>■ Gene expr. screen.</li> <li>■ Nucl. Acid/Protein purific., Cell Sort.</li> </ul>	On request
	Magro 8-M Rob. Workstat.	See above	See above	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	On request
	PickPen 1-M, 8-M, MagneticTools (Handheld)	See above	See above	<ul style="list-style-type: none"> <li>■ Short hands-on-time</li> <li>■ Different sample materials and amounts</li> </ul>	On request
	QuickPick DNA/RNA purification kits	See above	See above	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	On request
<b>Epicentre Biotechnologies</b> www.epibio.com <b>Biozym Scientific</b> , Germany Contact: Monika Burbach Phone: +49 5152 9020 support@biozym.com	MasterPure DNA and RNA Purification Kits	Salt/proteolysis/detergent based lysis	Eukaryotic cells; bacteria; yeast; tissue samples	<ul style="list-style-type: none"> <li>■ Gene expression</li> <li>■ Genomics</li> <li>■ RNA research</li> </ul>	On request
	MasterPure Yeast DNA Purification Kit	Salt/detergent	Yeast and filamentous fungi	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	On request
	MasterPure Gram Positive DNA Purification Kit	Lysozyme digestion then salt/detergent/ proteolysis	Any gram positive bacteria	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	On request
<b>Bruker Daltonik</b> Germany Contact: Dr. Guido Mix Phone: +49(0)4212205307 mix@bdal.de	Genopure ds	Purification after extraction	All kind of samples after PCR	<ul style="list-style-type: none"> <li>■ MALDI-Mass spectrometry compatible</li> <li>■ Purification of double-stranded DNAPCR products 40 up to several 1000 bp</li> </ul>	944,-
	Genopure oligo	Purification after extraction	All kind of samples	<ul style="list-style-type: none"> <li>■ MALDI-Mass spectrometry compatible</li> <li>■ Purification of single-stranded DNA</li> </ul>	944,-
<b>Carl Zeiss Micro-Imaging</b> , Germany www.zeiss.de/microdissection Contact: Hermine Hitzler palm-labs@zeiss.de	PALM MicroBeam PALM Application Lab	Laser-Microdissection	Archive samples, Living cells, tissues, single cells	<ul style="list-style-type: none"> <li>■ Laser microdissection</li> <li>■ Non contact</li> <li>■ Pure samples</li> <li>■ Living cells</li> <li>■ DNA-, RNA- isolation</li> </ul>	Depending on configuration
<b>Chemicell</b> Germany Contact: Cengiz Öztürk Phone: +49-30-2141481 cengiz@chemicell.com	geneMAG-DNA Blood Kit	Isolat. of genomic DNA fr. blood/cells w. magn. part.	Blood samples incl. fresh, frozen, anti-coagulated blood, buffy coat, cells	<ul style="list-style-type: none"> <li>■ Suitable for a variety of automatization platforms</li> </ul>	40,- /220,-/900,- (15, 100, 500 Kit)
	geneMAG-DNA Bacteria Kit	Isolat. of genomic DNA fr. bacteria w. magn. particles	Bacteria	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	40,- /220,-/900,- (15, 100, 500 Kit)
	geneMAG-RNA/ DNA Kit	Isolat. of total RNA/DNA w. magnet. silica particles	Blood, cells, bacteria, viruses	<ul style="list-style-type: none"> <li>■ Simple washing steps</li> <li>■ Easy and quick protocol</li> </ul>	30,-/130,-/500,- (15, 100, 500 Kit)
	geneMAG-plasmidDNAKit	Isolat. of plasmid DNA w. magnetic silica particles	Plasmid DNA can be isolated directly from <i>E.coli</i> cultures	<ul style="list-style-type: none"> <li>■ Optional: no centrifugation step!</li> </ul>	15,-/40,-/150,- (10/50/250 Kit)
	MagnetoPURE	Separation of magnet. particles i. standard tubes	-	<ul style="list-style-type: none"> <li>■ Open and close the inserted tube with one hand while pipetting with the other</li> </ul>	65,-/350,- (Big Size) / 220,- (96)
<b>Cortex Biochem</b> European distributor: <b>Europa Bioproducts</b> , UK www.europa-bioproducts.com Contact: Marco Rhoter, Phone: 0044-(0)-1353-721118 info@europa-bioproducts.com	Cortex MagaZorb Nucleic Acid Isolation System: MagaZorb RNA MagaZorb DNA MagaZorb Plasmid DNA MagaZorb Plant DNA	Magnetic separation based technology	DNA or RNA, from biological fluids, tissues, cultured cells, plants and bacterial cells carrying plasmid DNA	<ul style="list-style-type: none"> <li>■ Organic solvent free</li> <li>■ Ideal for automated Platforms</li> </ul>	98,60 DNA Mini-Pr. 79,75 DNA Mini-Prep Plasmid 124,70 DNA Mini-Prep Plant 179,80 DNA Mini-Prep 96-Well from 105,- (Magn. Sep.)
<b>Fermentas</b> Germany, www.fermentas.com Contact: Frank Schestag Phone: +49-6227 356790 frank.schestag@fermentas.de	GeneJET Plasm. Minipr. Kit	Silica (spin column)	Bacterial culture	<ul style="list-style-type: none"> <li>■ Efficient (up to 20 µg)</li> <li>■ Fast</li> <li>■ Convenient</li> </ul>	35,-/ 49,-/ 204,-
	DNA Extraction Kit	Adsorpt. on silica particles	Agarose gels; reaction mixtures	<ul style="list-style-type: none"> <li>■ Effective</li> <li>■ No toxic reagents</li> </ul>	73,- (100 preps)
	Genomic Purification Kit	Sel. DNA precipitation fr. lysates using detergents	whole blood, serum, cell culture, bacteria, plant, mammalian tissue	<ul style="list-style-type: none"> <li>■ Universal</li> <li>■ Safe</li> </ul>	94,-
<b>Fujifilm Europe</b> Germany www.fujifilm.com Contact: Amalia Adler-Beutgen Phone: + 49(0)211-5080141 aadler@fujifilmeurope.de	QuickGene-Mini80	DNA and RNA extraction with Fujifilm's 80µm membrane film	DNA fr. whole blood, tissue, plasmid & forensic application/RNA from blood cell, tissue and cultured cells	<ul style="list-style-type: none"> <li>■ Personal bench-top device</li> <li>■ Quick and easy</li> </ul>	700,-
	QuickGene-810	See above	See above	<ul style="list-style-type: none"> <li>■ Semi-automated device</li> <li>■ Clogging control</li> </ul>	10.000,-
	QuickGene-610L	DNA extraction with 80µm membrane film	DNA: whole blood	<ul style="list-style-type: none"> <li>■ Semi-automated device</li> <li>■ DNA extraction out of 2 ml blood</li> </ul>	10.000,-
	QuickGene SP kits	DNA/RNA extract. w. Fujifilm's 80µm membr. film	DNA: blood, tissue, plasmid, forensic RNA: blood, tissue, cultured cells	<ul style="list-style-type: none"> <li>■ Reliable high purity and yield</li> <li>■ Spin Cartridges</li> </ul>	140,- to 280,- (p. kit)

DNA/RNA Isolation					
Company	Product name	Extraction method	Sample types	Miscellaneous, Specialities, Generally	Price [EUR]
<b>GE Healthcare Europe</b> Germany www.gelifesciences.com/ illustra <b>Contact:</b> Andrea Löhndorf Phone: +49-89 96281 660 productde@ge.com	illustra RNAspin Mini Isolation Kit	Silica membrane spin columns	Total RNA from cultured cells, tissue, bacteria or yeast	<ul style="list-style-type: none"> <li>■ On-column DNase I treatment</li> <li>■ Elution volume 40-120ul</li> </ul>	85,-/176,-/773,- (20,50, 250 preps)
	illustra RNAspin Midi Isolation Kit	See above	See above	<ul style="list-style-type: none"> <li>■ See above</li> <li>■ Elution volume 500ul</li> </ul>	167,- (20 preps)
	illustra RNAspin 96 RNA Isolation Kit	See above	See above	<ul style="list-style-type: none"> <li>■ Integrated wash plate</li> <li>■ Flexible processing by vacuum or centrifugation</li> </ul>	521/925/5032,- (2x/4x/24x96 pr.)
	illustra tissue and cells genomicPrep Mini Spin Kit	Novel Silica membrane Spin columns	Variety of animal tissue and mammalian cell cultures	<ul style="list-style-type: none"> <li>■ gDNA product size &gt; 20kb</li> <li>■ Color coded bottles and caps</li> </ul>	110,- (50 preps) 496,- (250 preps)
	illustra tissue and cells genomicPrep Midi Flow Kit	Fast flow Media gravity Flow columns	See above	<ul style="list-style-type: none"> <li>■ Capacity &gt;250µg gDNA</li> <li>■ Fast Flow Media reduces clogging</li> </ul>	192,- (25 preps)
	illustra blood genomicPrep Mini Spin Kit	Novel Silica membrane Spin columns	Human, horse, rabbit, rat, mouse blood, buffy coat, bone marrow, etc.	<ul style="list-style-type: none"> <li>■ 90% of gDNA intact average size &gt;20kb</li> </ul>	96,- (50 preps) 435,- (250 preps)
	illustra blood genomicPrep Midi Flow Kit	Fast flow Media gravity Flow columns	See above	<ul style="list-style-type: none"> <li>■ Intact DNA average size &gt;48kb</li> <li>■ Capacity &gt;250µg gDNA</li> </ul>	192,- (25 preps) 709,- (100 preps)
	illustra bacteria genomic-Prep Mini Spin Kit	Novel Silica membrane spin columns	Gram-positive and gram-negative bacteria strains	<ul style="list-style-type: none"> <li>■ Reduced protocol steps</li> <li>■ Color coded bottles and caps</li> </ul>	112,- (50 preps) 504,- (250 preps)
	illustra plasmidPrep Mini Spin Kit	Mod. alkal. lysis proced., silica bas. memb. spin col.	High and low copy numbers of plasmid DNA	<ul style="list-style-type: none"> <li>■ Less than 10 minutes</li> <li>■ Easy-to-use color coded bottles and caps</li> </ul>	65,- (50 preps) 286,- (250 preps)
	illustra plasmidPrep Midi Flow Kit	Fast flow plasmid purification medium	-	<ul style="list-style-type: none"> <li>■ Transfection grade plasmid DNA</li> <li>■ Capacity &gt;250µg plasmid DNA</li> </ul>	127,- (25 preps) 461,- (100 preps)
	Nucleon PhytoPure Genomic DNA Extraction Kits	Phytopure Resin binds plant polysaccharids	Plant species	<ul style="list-style-type: none"> <li>■ Binds plant polysaccharids ensuring high yields of high-quality plant genomic DNA</li> </ul>	157,- (50 p.x0,1g) 322,- (50 p.x1,0 g)
<b>Hamilton Robotics</b> Germany www.hamiltonrobotics.com <b>Contact:</b> Jörg Katzenberger Phone +49 89 552 649 0 infoservice@hamiltonrobotics.com	Microlab STAR Line Liquid Handling workstations	Magnetic bead with static or electronic magnet or vacuum based protocols	From plant tissue to mouse tails: protocols for most common sample types available.	<ul style="list-style-type: none"> <li>■ Monitored Air Displacement</li> <li>■ Nano- and Microliter pipetting from 50nl to 5000µl</li> </ul>	Depending on configuration
<b>Invitex</b> Germany www.invitex.de <b>Contact:</b> Andrea Ockhardt Phone: +49 30 9489 2907 info@invitex.de	Invisorb Spin Blood Mini Kit	Membrane adsorption based isolation	Hum./mamm. blood, buffy coat, cerebrospinal fluid, bone marrow, etc.	<ul style="list-style-type: none"> <li>■ CE marked for in vitro diagnostics</li> <li>■ For samples with high content of erythrocytes</li> </ul>	100,- 424,-
	Invisorb Blood Universal Kit	Solution based isolation	Blood (EDTA, Citrate), corresponding amount of buffy coat	<ul style="list-style-type: none"> <li>■ CE marked for in vitro diagnostics</li> <li>■ High yield of pure genomic DNA</li> </ul>	41,-/386,-/657,-
	Invisorb Spin Tissue Mini Kit	Membrane adsorption based isolation	Tiss. sample, biopsy mat., rodent tail, insects, paraff. embed. tissues, etc.	<ul style="list-style-type: none"> <li>■ Lysis without mechanical homogenization</li> <li>■ CE marked</li> </ul>	112,- 464,50
	Invisorb Spin Plant Mini Kit	Membrane adsorption based isolation	Plant material, dried material	<ul style="list-style-type: none"> <li>■ Applicable for a broad variety of plant species</li> </ul>	117,- 498,50
	RTP Bacteria DNA Mini Kit	Membrane adsorp. based isolat., prefilled Extr. tubes	Bacteria cells, tissue, biopsy material, paraffin embedded tissue, etc.	<ul style="list-style-type: none"> <li>■ Pathogen detection</li> </ul>	143,- 612,-
	RTP DNA/RNA Virus Mini Kit	See above	Cell-free body fluids, cell culture supernatants, swabs or tissue biopsies	<ul style="list-style-type: none"> <li>■ Very sensitive virus detection</li> </ul>	146,- 615,-
	Invisorb TwinSpin Cell Mini Kit	Membrane adsorption based isolation	Human or animal cells, tissue samples	<ul style="list-style-type: none"> <li>■ DNA and RNA purification</li> </ul>	214,- 881,-
	Invisorb Spin Cell RNA Mini Kit	Membrane adsorp. based isolation, sel. DNA removal	Human or animal cells, Gram-positive or-negative bacteria, yeast	<ul style="list-style-type: none"> <li>■ Total RNA almost free of genomic DNA</li> </ul>	169,- 712,-
	I. Spin Tissue RNA Mini Kit	See above	Human and animal tissue	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	157,50 / 680,-
	I. Spin Plant RNA Mini Kit	See above	Plant tissue or plant or fungal cells	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	106,- /206,-
<b>LTF-Labortechnik</b> Germany www.labortechnik.com <b>Contact:</b> Phone +49-08382-98520 info@labortechnik.com	CAS-1820 X-TractorGene	Automatic extraction of DNA and RNA from a variety of sources	-	<ul style="list-style-type: none"> <li>■ High throughput without contamination</li> </ul>	From 36.000,-
<b>Macherey-Nagel</b> Germany www.mn-net.com <b>Contact:</b> Phone +49 (0) 2421 969-270 tech-bio@mn-net.com	NucleoBond Xtra, Midi, Midi Plus, Maxi, Maxi Plus	Anion-exchange chromatography	Bacterial cultures	<ul style="list-style-type: none"> <li>■ High- and low-copy plasmids, BAC's, PAC's</li> </ul>	On request
	NucleoBond PC 20-10000	See above	Bacterial cultures	<ul style="list-style-type: none"> <li>■ High- and low-copy plasmids, BAC's, PAC's</li> </ul>	On request
	NucleoBond Xtra/Midi/Mi. Plus/Maxi/Maxi Pl. EF	See above	Bacterial cultures	<ul style="list-style-type: none"> <li>■ DNA with less than 0.05 EU/µg</li> <li>■ Plus EF kits include NucleoBond Finalizer</li> </ul>	On request
	NucleoBond EF: 500/2000/10000 EF, Pr. 100	See above	Bacterial cultures	<ul style="list-style-type: none"> <li>■ Transfection of sensitive cell lines</li> </ul>	On request
	NucleoSpin, Plasm., 8-/96-w., Plasm. QuickPure	Silica-membrane technology	Bacterial cultures	<ul style="list-style-type: none"> <li>■ For high- and low-copy Plasmids &lt;15 kb</li> <li>■ &lt;40 µg plasmid DNA</li> </ul>	On request
	NucleoSpin Extract II	See above	PCR rxn mixt., TAE/ TBE agarose gels,	<ul style="list-style-type: none"> <li>■ High recovery</li> <li>■ Minim. elution volume &gt; 15 µl</li> </ul>	On request
	NucleoSpin Extr., 8/96-w	See above	PCR reaction mixtures	<ul style="list-style-type: none"> <li>■ Manual/autom. use</li> <li>■ Vacuum/centrifugation</li> </ul>	On request
	NucleoFast 96 PCR	Ultrafiltration technology	PCR reaction mixtures	<ul style="list-style-type: none"> <li>■ Sturdy membrane, no abrasion</li> <li>■ Complete kit or plates only</li> </ul>	On request

DNA/RNA Isolation					
Company	Product name	Extraction method	Sample types	Miscellaneous, Specialities, Generally	Price [EUR]
<b>Macherey-Nagel</b> Contact see page 55	NucleoSpin RNA Kits, RNA II, 8-well, 96-well, RNA L	Silica-membrane technology	Number of cultured cells / mg tissue	<ul style="list-style-type: none"> <li>■ rDNase digestion directly on the membrane</li> <li>■ RNA fr. cells, tissue, bacteria, yeast, biol. fluids</li> </ul>	On request
	NucleoSpin RNA Clean-up	See above	Trizol-extracts, reaction mixtures [µl]- < 200	<ul style="list-style-type: none"> <li>■ Support protocol for isolation of total RNA from &lt; 1x10<sup>5</sup> cells</li> </ul>	On request
	NucleoSpin RNA/Protein	See above	Number of cultured cells / mg tissue <5x10 <sup>6</sup> /30	<ul style="list-style-type: none"> <li>■ Parallel isolation of RNA and protein from one unsplit sample</li> </ul>	On request
	NucleoSpin RNA XS	See above	Number of cultured cells / mg tissue <5x10 <sup>5</sup> /5	<ul style="list-style-type: none"> <li>■ RNA isolation from very small samples</li> <li>■ Elution volume 5-30 µl</li> </ul>	On request
	NucleoSpin, Blood L/XL/QuickPure, 8-/96-well	See above	Whole blood serum/plasma, biolog. fluids	<ul style="list-style-type: none"> <li>■ Blood/L/XL: Effic. removal of PCR inhibitors</li> <li>■ 8/96 Blood: Manual/automated use</li> </ul>	On request
	NucleoMag 96 Blood	Magnetic-bead technology	Whole blood - <100	<ul style="list-style-type: none"> <li>■ Removal of PCR inhibitors</li> </ul>	On request
	NucleoSpin Plasma XS	Silica-membr. technology	Plasma (EDTA) serum [µl]- <240	<ul style="list-style-type: none"> <li>■ Circul. DNA fr. plasm. smpl. ■ Elut. vol. 5-30 µl</li> </ul>	On request
	NucleoSpin, Tissue, 8-well, 96-well	See above	Number of cultured cells/ mg tissue 1x10 <sup>7</sup> /25- -/20- -/20	<ul style="list-style-type: none"> <li>■ Support protocols available</li> <li>■ High recovery of small amounts of DNA</li> </ul>	On request
	NucleoSpin Tissue XS	See above	No of cult. cells/mg tissue 1x10 <sup>4</sup> /10	<ul style="list-style-type: none"> <li>■ DNA fr. smallest sampl. ■ Elution vol. 5-30 µl</li> </ul>	On request
	NucleoSpin, DNA Trace, 8-well, 96-well	See above	Forensic samples: swabs, cigarette filters, blood spots	<ul style="list-style-type: none"> <li>■ Large sample/small elution volume</li> <li>■ Closed system, no cross-contamination</li> </ul>	On request
	NucleoSpin, Plant II, 8-/96-well, Plant L/XL	See above	Plant cells/ plant tissue, fungi	<ul style="list-style-type: none"> <li>■ NucleoSpin Plant II/L/XL: Two different lysis buffers included</li> </ul>	On request
	NucleoSpin Food	See above	Food and feed	<ul style="list-style-type: none"> <li>■ Isolat. of DNA fr. heterog., process. sampl. mat.</li> </ul>	On request
	NucleoSpin, RNA Virus, 8-well, 96-well, RNA Virus F	See above	Plasma, serum, biological fluids	<ul style="list-style-type: none"> <li>■ Recovery &gt; 90 % ■ Support protocol for parallel isolation of viral DNA</li> </ul>	On request
	NucleoSEQ	Gel filtration technology	Sequencing reactions, desalting- <20 µl	<ul style="list-style-type: none"> <li>■ Removal of fluorescence labelled or unlabelled nucleotides, proteins</li> </ul>	On request
<b>Merck Chemicals</b> Germany www.merckbio.eucustomer. Contact: service@merckbio.eu	UltraMobius1000 Plasmid Kit	Anion exchange-based purification	Bacterial cells	<ul style="list-style-type: none"> <li>■ Reduces endotoxin contamination to negligible levels</li> </ul>	218,- (10 rxn) 450,- (25 rxn)
	MagPrep Bacterial Genomic DNA Kit	Silica-based magnetic separation	Bacterial cells	<ul style="list-style-type: none"> <li>■ Yields of up to 30 µg from 1ml culture</li> </ul>	302,-
	MagPrep Blood Genomic DNA Kit	See above	Blood leukocytes	<ul style="list-style-type: none"> <li>■ Yields 0.3-0.6 µg genomic DNA from 10 µl of fresh human whole blood</li> </ul>	78,-
	Pellet Paint NF Co-Precipitant	Precipitation	Crude PCR samples	<ul style="list-style-type: none"> <li>■ Visible DNA co-precipitant</li> </ul>	74,- (125 rxn) 508,- (1000 rxn)
<b>Metabion international</b> Germany Contact: Gerlinde Konrad Phone: +49 (0)89/899 3630 info@metabion.com	mi-PM200Plasmid Miniprep Kit	Spin column with silica membrane	Bacteria	<ul style="list-style-type: none"> <li>■ Easy and rapid protocol</li> </ul>	150,-
	mi-PMHTS10High ThroughputPlasmid Kit	96 well plate with silica membrane	Bacteria	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	690,-
	mi-PMHTS30High ThroughputPlasmid Kit	See above	Bacteria	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	1995,-
	mi-PP200PCR Purific. Kit	Spin col. w. silica membr.	PCR reactions	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	150,-
	mi-PPHTS10High ThroughputPCR Purification Kit	96 well plate with silica membrane	PCR reactions	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	480,-
	mi-PPHTS30High ThroughputPCR Purification Kit	See above	PCR reactions	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	1359,-
	mi-GE100Gel Extraction Kit	Spin column with silica membrane	Agarose gel	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	105,-
	mi-BG100Blood Geno. Kit	See above	Whole blood, serum, plas., body flui.	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	140,-
	mi-BGHTS10High Throughput Blood Genomic Kit	96 well plate with silica membrane	See above	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	1189,-
	mi-BGHTS30High Throughput Blood Genomic Kit	See above	See above	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	2998,-
	mi-TD100Tissue Genomic Kit	Spin column with silica membrane	Animal tissues and cell cultures	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	105,-
	mi-PD100Plant Gen. Kit	See above	Plants	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	105,-
	mi-YD100Yeast Gen. Kit	See above	Yeast	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	105,-
	mi-BD100Bact. Gen. Kit	See above	Bacteria	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	105,-
	mi-CZ100Total RNA Iso. K.	Phenol based reagent	Cells/tissues fr. anim./plants/bacter.	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	130,-
	mi-CMM05OMag mRNA Isolation Kit	Oligo dT Magnetic beads	Cells and tissues from animals, plant tissue	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	330,-
	<b>Millipore</b> Germany, www.millipore.com Contact: Phone: +49(0)6196 494-299 technischerservice@millipore.com	Montage Plasmid MiniprepHTS 96 Kit	Cell lysis, Membrane filtration-size exclusion	<i>E.coli</i> overnight culture	<ul style="list-style-type: none"> <li>■ Automation compatible</li> <li>■ Direct stack, no crosscontamination</li> </ul>
Montage Gel-Extraktions-Kit		Centrifugation and Gel Compression	DNA-Agarose gels	<ul style="list-style-type: none"> <li>■ Minimal hands-on time</li> <li>■ 10-minute spin</li> </ul>	88,- (Germany)

## DNA/RNA Isolation

Company	Product name	Extraction method	Sample types	Miscellaneous, Specialities, Generally	Price [EUR]
<b>Miltenyi Biotec</b> Germany www.miltenyibiotec.com <b>Contact:</b> Phone: +49 2204 8306-0 macs@miltenyibiotec.de	µMACS mRNA Isolation Kit, small scale	Magn. isolat. w. paramagnetic oligo(dt) MicroBeads	Cells, tissue, whole blood	-	-
	µMACS mRNA Isolation Kit, large scale	See above	Cells, tissue, whole blood	-	-
	µMACS mRNA Isolation Kit, for total RNA	See above	Total RNA	-	-
	MultiMACS mRNA Isolation Kit (12x8)	See above	Cells or tissue	-	-
	MultiMACS mRNA Isolation Kit (4x96)	See above	Cells or tissue	-	-
<b>Peqlab Biotechnologie</b> Germany, www.peqlab.de <b>Contact:</b> Michael Hartmann Phone: +49-9131-610 7020 info@peqlab.de	peqGOLD TrifastpeqGOLD RNA Pure	Single reagent extraction systems	Tissue, Bacteria, Plants, Fungi	<ul style="list-style-type: none"> <li>■ Easy and fast protocol</li> <li>■ High yield and purity</li> </ul>	141,- (for 100 ml)
	peqGOLD RNA Kits	Silica based spin columns	Cells, Tiss., Bact., Blood, Plants, Virus	<ul style="list-style-type: none"> <li>■ High yields</li> <li>■ No organic extractions</li> </ul>	513-635,- (200 pr)
	peqGOLD DNA Mini Kits	Silica based spin columns	See above	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	299-397,- (200 pr)
	peqGOLD Plasmid Mini Kit I & II	Silica based spin columns	Plasmid DNA from bacteria	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	165,- Kit I (200 pr) 221,- Kit II (200)
<b>Promega</b> Germany www.promega.com <b>Contact:</b> Uwe Mohr Phone: +49-621-8501-290 uwe.mohr@promega.com	Maxwell RNA isolation system	Silica based extract. w. paramag. Magnesil beads	White blood cells, tissue cultured cells	<ul style="list-style-type: none"> <li>■ In combination with personal automated Maxwell system fully walk away extraction method</li> </ul>	285,- (each per 48 samples)
	PureYield RNA Midiprep System	Total RNA extraction/Silica membrane technology	Cultured cells, tissue bacteria, yeast, plants, blood etc.	<ul style="list-style-type: none"> <li>■ No DNA contamination without using Dnase</li> </ul>	96,- (10 preps) 425,- (50 preps)
	SV Total RNA Isolation System	Silica membrane technology	See above	<ul style="list-style-type: none"> <li>■ Complete system inclusive DNase and incubation buffer</li> </ul>	187,- (50 preps) 771,- (250 preps)
	PolyAtract System 1000	mRNA isol. (biotinyl. prob.) & MagneSphere particles	Cells and tissue	<ul style="list-style-type: none"> <li>■</li> </ul>	426,- (scalable)
	Maxwell DNA isolation system	Silica based extract. with paramag. Magnesil beads	Blood, tissue, cells, mouse tail, bacteria	<ul style="list-style-type: none"> <li>■ In combination with personal automated Maxwell system fully walk away extraction method</li> </ul>	235,- (each per 48 samples)
	PureYield Plasmid Midiprep System	Silica membrane technology	Plasmid from Bacteria	-	149,- (25 preps) 537,- (100 preps)
	PureYield Plasmid Maxiprep System	See above	Plasmid from Bacteria	-	139,- (10 preps) 319,- (25 preps)
	Wizard SV Gel and PCR Clean-Up System	See above	DNA from agarose gel and PCR	<ul style="list-style-type: none"> <li>■ High binding capacity</li> <li>■ Low elution volume</li> </ul>	79,- (50 preps) 348,- (250 preps)
	Wizard SV Genomic DNA Purification System	See above	Mouse tails and tissue cultured cells	<ul style="list-style-type: none"> <li>■ Fast isolation without preprocessing</li> </ul>	106,- (50 preps) 446,- (250 preps)
<b>PromoCell</b> Germany www.promokine.info <b>Contact:</b> Technical Support Phone +49 6221 64934-0 info@promokine.info	DNA Isolation Kit	Glass powder suspension & sodium iodide solution	DNA	<ul style="list-style-type: none"> <li>■ Pure DNA, high yields</li> <li>■ Multiple applications</li> </ul>	75,-
	Genomic DNA Isolation Kit I	Cell lysis buffer and an enzyme mix	Genomic DNA from mammalian cells and tissue samples	<ul style="list-style-type: none"> <li>■ See above</li> <li>■ No RNA and protein contamination</li> </ul>	95,-
	Genomic DNA Isolation Kit II	Guanidine thiocyanate-containing reagent	Human, animal, plant, yeast, bacterial and viral origin	<ul style="list-style-type: none"> <li>■ See above</li> <li>■ Selective isolation of DNA</li> </ul>	95,-
	Mitochondrial DNA Isolation Kit	Cytosol extraction and mitochondrial lysis buffer	A variety of cells and tissues	<ul style="list-style-type: none"> <li>■ See above</li> <li>■ No genomic DNA contaminations</li> </ul>	399,-
	RNA Isolation Kit I	Guanidine thiocyanate/deterg. solution, organic extract., alcohol precipitat.	Human, animal, plant, yeast, bacterial and viral origin	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	95,-
	RNA Isolation Kit II	See above, Harm. BCP replacesvolat., toxic chlorof.	See above	<ul style="list-style-type: none"> <li>■ See above</li> </ul>	99,-
<b>Qiagen</b> Germany, www.qiagen.com <b>Contact:</b> Customer Care Phone: +49-2103-29-12000 orders-de@qiagen.com	AllPrep DNA/RNA Micro Kit	Spin column	Cells, easy-to-lyse tissues, and microdissected cryosections	-	525,- (Germany; price varies in other countries)
	AllPrep DNA/RNA Mini Kit	Spin column	Cells and easy-to-lyse tissues	-	362,- (see above)
<b>Roche Diagnostics</b> Switzerland www.roche-applied-science.com	High Pure PCR Template Preparation Kit	Silica Adsorption	Blood, cultured cells, thymus tissues, mouse tail, yeast, bacteria	<ul style="list-style-type: none"> <li>■ gDNA ranging in size from 30-50 kb</li> </ul>	Local prices
	DNA Isolation Kit for Cells and Tissues	Solution based isolation	Cells and tissues	<ul style="list-style-type: none"> <li>■ gDNA ranging in size from 50-150 kb</li> </ul>	Local prices
	DNA Isolation Kit for Mammalian Blood	Solution based isolation	Mammalian blood	<ul style="list-style-type: none"> <li>■ High molecular weight gDNA</li> </ul>	Local prices
	High Pure Plasmid Isol. Kit	Silica Adsorption	Recombinant <i>E.coli</i> cultures	<ul style="list-style-type: none"> <li>■ Preparation of up to 15 µg plasmid DNA</li> </ul>	Local prices
	Genopure Plasmid Midi Kit	Ion exchange chromatogr.	Recombinant <i>E.coli</i> cultures	<ul style="list-style-type: none"> <li>■ Up to 100 µg plasmid DNA</li> </ul>	Local prices
	Genopure Plasmid Maxi Kit	See above	Recombinant <i>E.coli</i> cultures	<ul style="list-style-type: none"> <li>■ Preparation of up to 500 µg plasmid DNA</li> <li>■ See above</li> </ul>	Local prices
	High Pure M13 Isolation Kit	Silica Adsorption	Cleared supernatant of M13 or phagemid infected bacterial culture	<ul style="list-style-type: none"> <li>■ One preparation yields enough template to run 5-10 cycle sequencing reactions</li> </ul>	Local prices

DNA/RNA Isolation					
Company	Product name	Extraction method	Sample types	Miscellaneous, Specialities, Generally	Price [EUR]
	High Pure Lambda Isolation Kit	See above	Clear. supernat. of Lambda infect. & lysed bact. cult.; liq. cult., plate lysat.	■ Average yield 10-13 µg ds DNA	Local prices
	High Pure Viral Nucleic Acid Kit	See above	Research samples of serum, plasma, whole blood, cell culture supernatant	■ Purification of nucleic acids from either DNA or RNA viruses	Local prices
	High Pure 16 System Viral Nucleic Acid Kit	Silica Adsorption	Research samples of serum, plasma, whole blood, cell culture supernatant	■ See above	Local prices
	TriPure Isolation reagent	One-step sample homogenization/lysis procedure	Cultured cells, fresh/frozen animal tissue, hum. leucocytes, bacter. cell suspens., yeast & plant spheroplasts	■ Single reagent to isolate DNA-free RNA, RNA-free DNA and protein	Local prices
	High Pure PCR Product Purification Kit	Silica Adsorption	DNA fr. PCR, enzyma. labeled, modif., or digested DNA, RNA fr. in vitro transcript. rxns, DNA fr. agarose gel slice	■ Kit removes DNA fragments smaller than 100 bp	Local prices
	High Pure PCR Cleanup Micro Kit	See above	See above	■ See above ■ Elution volume approx. 10 µl ■ Binding enhancer for flexible choose of cut off	Local prices
	High Pure 96 UF Cleanup Kit	Silica Adsorption/ultrafiltration technology	DNA from PCR reactions	■ Purification of PCR products	Local prices
	High Pure RNA Isolation Kit	Silica Adsorption	Cultured mammalian cells, human whole blood, yeast, bacteria	■ Integrated DNase incubation	Local prices
	High Pure RNA Tissue Kit	See above	Tissue	■ 0,3 - 3 µg total RNA/mg tissue	Local prices
	High Pure RNA Paraffin Kit	See above	Formalin-fixed, paraffin-embed. tissue, fresh-froz., tiss.-research sampl.	■ Isolated RNA suitable for RT-PCR or quantification procedures	Local prices
	High Pure Viral RNA Kit	See above	Serum, plasma, tears, cell culture supernatant, urine, breast milk	■ Purification from a variety of samples	Local prices
	High Pure FFPE RNA Micro Kit	See above	Formalin-fixed, paraffin-embedded tissue	■ Small elution volume	Local prices
	High Pure miRNA Isolation Kit	See above	Animal cells and tissue samples or plant material.	■ Isolation of small RNAs from cells and tissues, FFPE tissue sections	Local prices
<b>Stratagene (Agilent)</b> The Netherlands www.stratagene.com Contact: Cedric Lemarie Phone: +31 20 321 5600 Cedric.lemarie@stratagene.com	Absolutely RNA Isolation kit	Silica-based spin-columns	<i>E.coli</i> , Mammalian, Cells Tissue	■ DNase for purest RNA attached to the column ■ Highly concentrated RNA	299,-/233,-/238,-
	Abs. RNA 96 microprep kit	See above	<i>E.coli</i> , Mammalian Cells	■ DNase for purest RNA attached to the column	632,- / 2.658,-
	Absolutely RNA FFPE kit	See above	Formalin-fixed-embedded tissue	■ Non-toxic, delivers highly purified RNA	281,-
	Absolutely mRNA kit	Precision-engineered oligo dT magnetic particles	Total RNA	■ 1 mg total RNA / 1 mg of magnetic particles	420,-
	miracle miRNA isolation kit	Organic isolation and Silica-based spin-columns	Cells and tissues	■ 10 <sup>4</sup> to 10 <sup>7</sup> cells/ 5 to 180 mg of tissue	225,-
<b>Takara Bio Europe</b> France, www.takara-bio.eu Contact: Lonza Verviers (Distributor) Phone: +32 87 321 611 Info.europe@lonza.com	FastPure RNA kit	Spin-column	Mammalian & plants cells & tissues	■ Particularly suited for qRT-PCR	299,-
	Dexpat (DNA Extraction fr. Paraffin-Embedd. Tissue)	Affinity resin to extract DNA fr. thin paraff. section	Paraffin embedded tissue, formalin fixed	■ Quick and easy extraction of DNA for PCR	229,-
	Dr. GentLE (from Yeast)	GentLE solution lyses cells & forms non-charged complex w. nucleic acids	Yeast and bacteria	■ High molecular weight, pure DNA ■ Also available for DNA extraction from whole blood	258,-
<b>Tecan Deutschland</b> Germany, www.tecan.de Contact: Jürgen Fetzer Phone: +49 7951 9417618 info.de@tecan.com	Freedom EVO Series	Magnetic bead separation or vacuum extraction	Any liquid samples that can be used with an isolation kit	■ Fully automated Isolation	From 33.300,-
<b>Thermo Fisher</b> Finland, www.thermo.com Contact: Maija Partanen Phone: +358-9-3291-0447 maija.partanen@thermofisher.com	KingFisher 96, purification of DNA/RNA, proteins and cells	Automated magnetic particle processing	Blood, cells, plant material, tissue homogenate, forensic material, swaps, buffy coat	■ Compatible with deep well plates, KingFisher 96 and PCR plates	35.000,- to 40.000,-
	King-Fisher & KingFisher mL, purification of DNA/RNA, proteins and cells	See above	See above	■ Validated protocols ■ KingFisher Software ■ Compact size	10.000,- to 15.000,-
<b>VWR International</b> Germany, www.vwr.de Contact: Matthias Dornheim Phone: +49-2173-3942422 biotech@de.vwr.com	E.Z.N.A. Isol. Kits f. Plasm. DNA, genom. DNA/RNA	Silica based columns	Bacteria, Gels, PCR, Tissue, Blood, Funghi, and more	■ Very broad range with some specialized kits	34,- to 60,- 140,- to 300,-
	5PrimeFastPlasmid Mini Kit	Silica based columns	Bacteria	■ Time saving by one step lysis	115,- 257,-
	5PrimeGelElute Kit	Silica based columns	DNA from Agarose and Acralamid Gels	■ Extraction of DNA from 40bp to 50kb ■ No DNA sharing	146,- 351,-
	5Prime ArchivePure DNA kits	Silica based columns	Genomic DNA fr. blood, cells, tissue. Mouse tail, bucc. cells, plant & yeast	■ Isolation of archivable quality genomic DNA up to 200kb	-
	5PrimePerfectPure DNA kits	Silica based columns	Genomic DNA from blood and cultured cells	■ Non toxic procedure	-
	5PrimePhase Lock Gel	Gel phase between organic and aqueous phase	All phenol or phenol chlorophorm extractions	■ Eliminates interphase contamination	-