



# QIAasymphony® SP/AS – Flexible Input, Quality Output

Automate your sample purification  
and assay setup



Sample to Insight

## Flexibility for all your applications

QIAasymphony SP purifies DNA, RNA and bacterial and viral nucleic acids from a wide range of starting materials. The QIAasymphony AS module extends these capabilities with automated PCR assay setup. The system gives you the flexibility to process batches of multiple sample types with the highest possible quality standards, while maintaining cost and throughput.

- Process 1–96 samples in continuous batches of 1–24
- Combine multiple starting sample types
- Benefit from dedicated kits for a range of applications
- Enjoy fully automated sample preparation and/or assay setup

## The power of magnetic-particle purification

QIAasymphony SP combines the speed and efficiency of silica-based purification with the convenient handling of magnetic particles, so you can expect reliable results time after time.

- High yields and high recovery rates with excellent purity
- Clean eluates ready for highly sensitive downstream applications
- Purification of intact nucleic acids (e.g., > 25 kb DNA)



## Easy-to-use reagent cartridges

Ready-to-run, bar code-labeled reagent cartridges are prefilled with all reagents needed for the purification procedure (Figure 1). The cartridges are opened automatically by the instrument and only the reagent volumes required for the number of samples are used, giving you complete cost control.

- Safe handling and ease of use
- Traceable documentation with 2D bar codes
- Economical chemistry use matching the number of samples



Figure 1. Prefilled, sealed reagent cartridges.

## Process safety and documentation

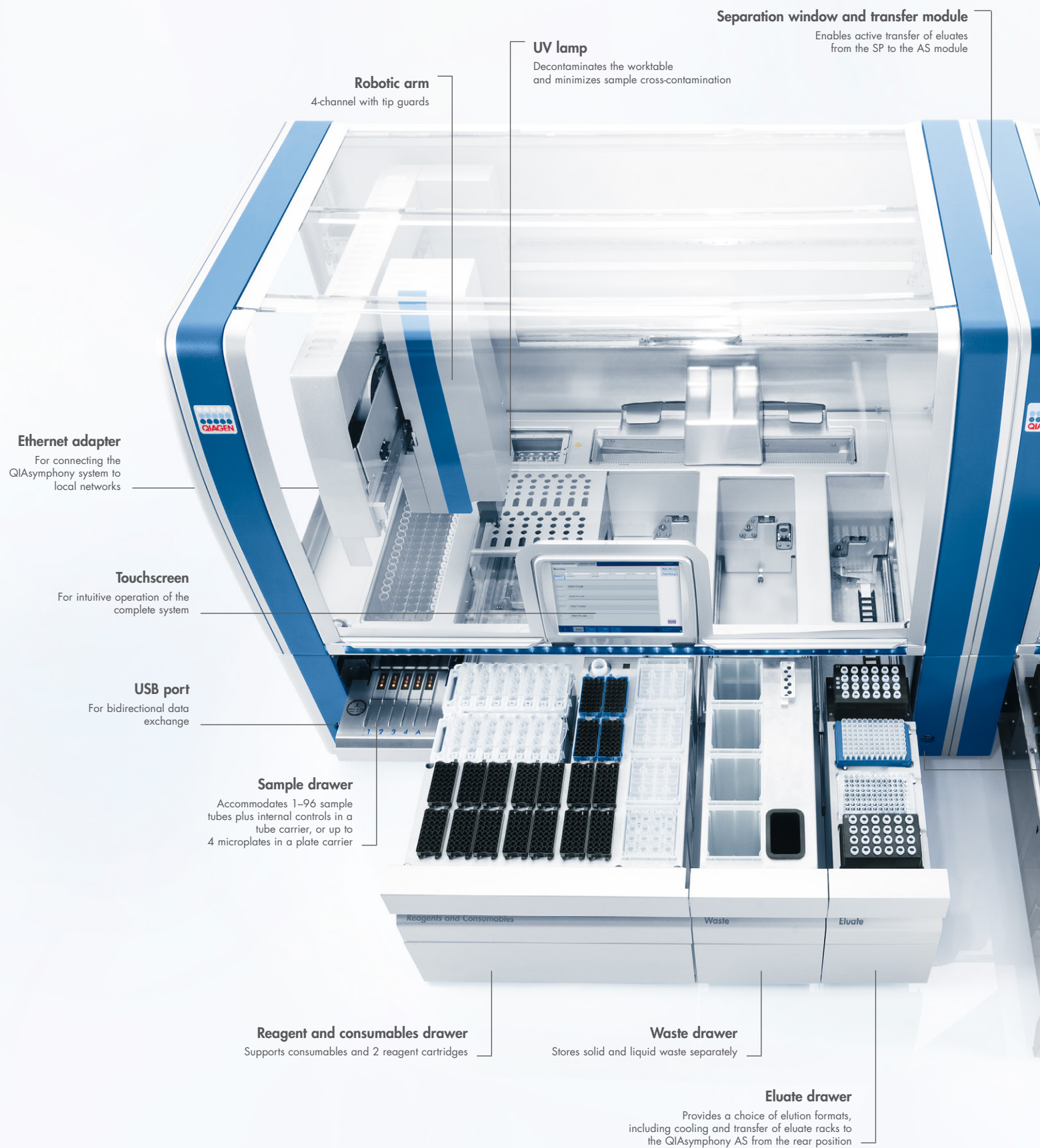
With a range of innovative design features, QIAAsymphony SP/AS systems deliver exceptional process safety and standardization.

- Bar code reader for input samples and reagents
- Sample tracking for purification and assay setup
- UV light for worktable decontamination
- Tip guards for minimized cross-contamination risk
- Liquid level detection
- LIMS connectivity for easy data exchange
- Active cooling of eluates
- Complete electronic documentation capability



**Figure 2. QIAAsymphony sample carrier.** The sample carrier holds one batch of 24 samples. A variety of primary tube types can be loaded directly into the carrier using specific inserts. Each position is bar code-labeled for complete sample traceability.







## Turning features into benefits

### Unmatched flexibility

- 1–96 samples processed in each run
- Sample volumes up to 2 ml, 50 mg lysed tissue or  $10^7$  cells
- Supports a variety of sample tubes, microplates and blocks
- Work directly with primary tubes (Figure 2)
- Continuous loading in batches of up to 24 samples
- Ability to run different protocols for each batch
- Elution in either tubes or 96-well plates

### Optimized workflow for high efficiency

- Higher sample throughput per day
- Saves precious primary samples
- Optimal batch-to-batch reproducibility
- Standardized process for global comparability of results
- Laboratory information management systems (LIMS) compatibility
- User management for record of responsibility

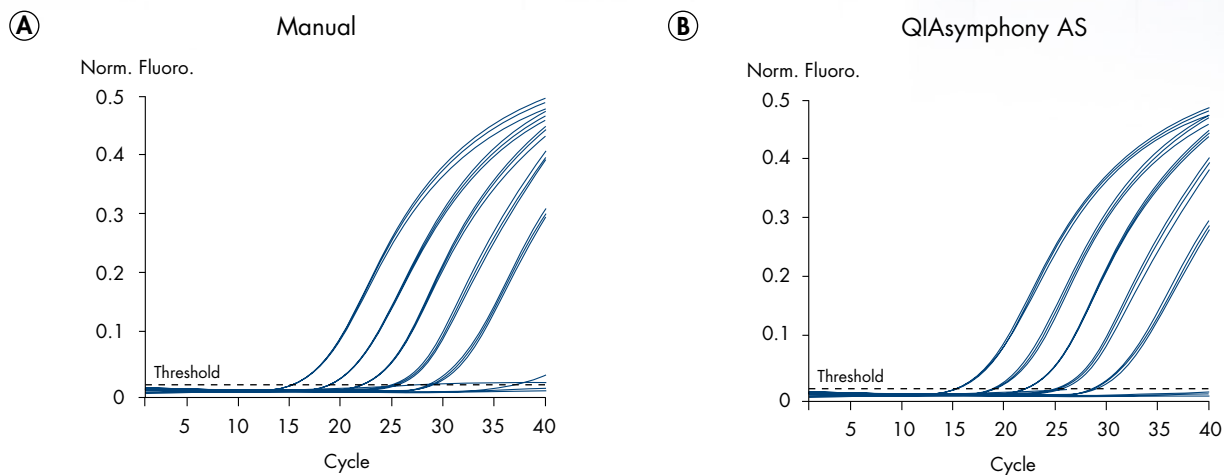
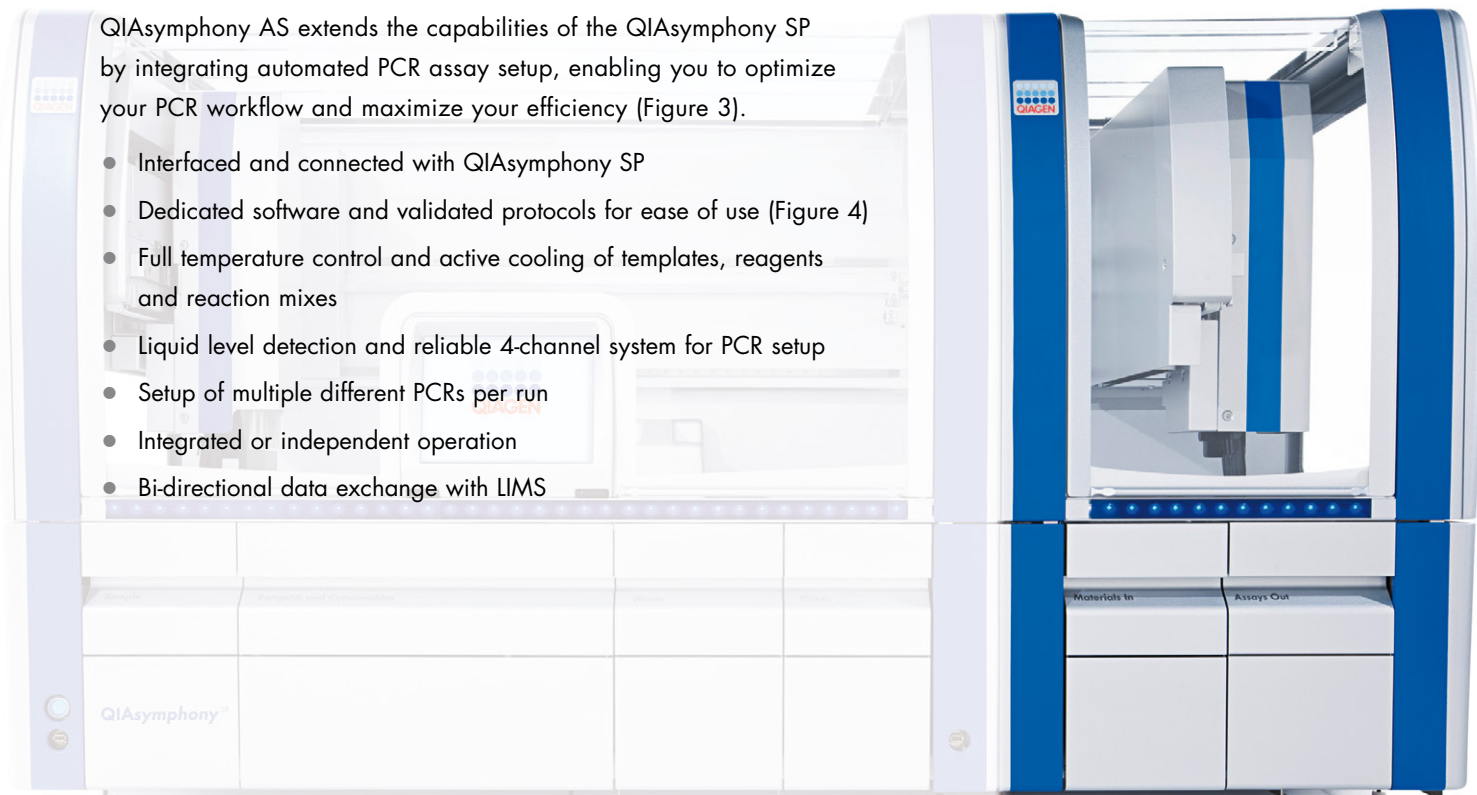
### Convenience, safety, ease of use

- Eluate splitting for different analysis panels
- Minimization of cross-contamination
- Active cooling of reagents and eluates
- Automatic inventory scanning
- Effective UV worktable decontamination
- Automated bar code reader for exact sample tracking
- Laboratory-developed test compatibility and customization

## Seamlessly integrated PCR assay setup

QIAAsymphony AS extends the capabilities of the QIAAsymphony SP by integrating automated PCR assay setup, enabling you to optimize your PCR workflow and maximize your efficiency (Figure 3).

- Interfaced and connected with QIAAsymphony SP
- Dedicated software and validated protocols for ease of use (Figure 4)
- Full temperature control and active cooling of templates, reagents and reaction mixes
- Liquid level detection and reliable 4-channel system for PCR setup
- Setup of multiple different PCRs per run
- Integrated or independent operation
- Bi-directional data exchange with LIMS



**Figure 3. Highly reproducible assay setup.** A serial dilution of leukocyte cDNA (100 ng to 0.01 ng) was performed **A.** manually and **B.** using the QIAAsymphony AS. GAPDH was amplified from these dilutions, using the Rotor-Gene® Q and the QuantiFast® Probe PCR Kit. Reactions were set up in replicates of 4 in strip tubes.

## LIMS-compatible data exchange

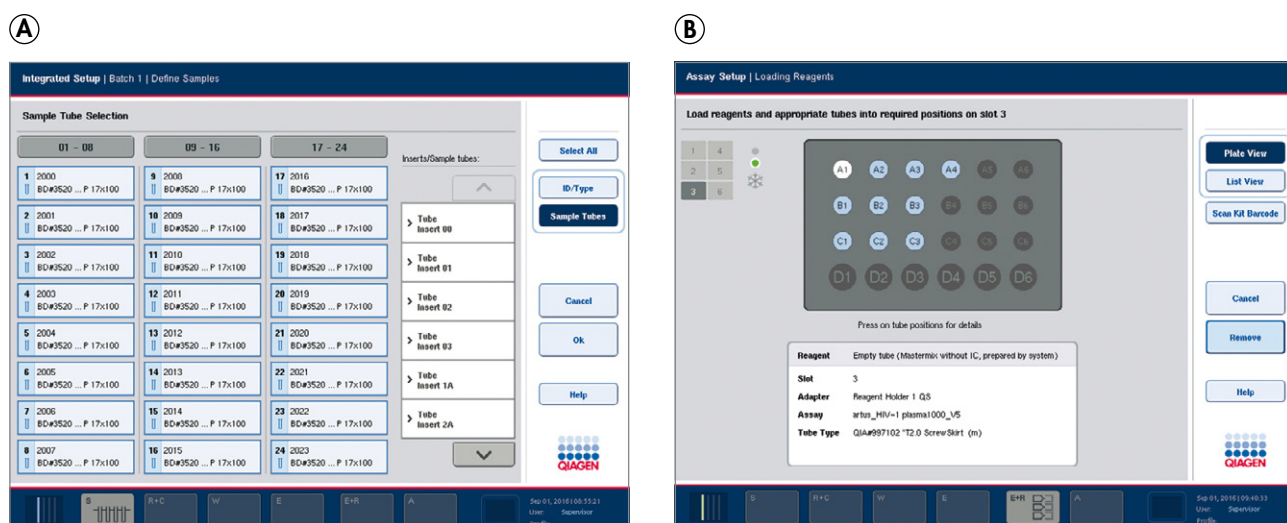
The QIAasymphony SP/AS system provides standardized communication interfaces. Work lists and rack files can be imported to the system, enabling automatic run definition before samples are received in the laboratory. After assay

setup, sample lists can be exported to selected real-time PCR cyclers, including the Rotor-Gene Q. This bi-directional data exchange allows integration of QIAasymphony systems into laboratory information management systems (LIMS).

## Effortless sample tracing throughout the entire workflow

Bar code reading of samples and reagents enables full sample tracking throughout the purification and PCR assay setup procedures. The inventory scan performed during run preparation checks consumables and liquid levels, reads bar codes of reagent cartridges and prevents loading errors. Chronological, electronic documentation includes information

about sample IDs, worktable positions and the lot number and expiration date of sample preparations, along with a record of which user was responsible for sample processing. Results in HTM and XML formats can be automatically transferred via a network connection for integration into LIMS, downloaded via USB or printed.

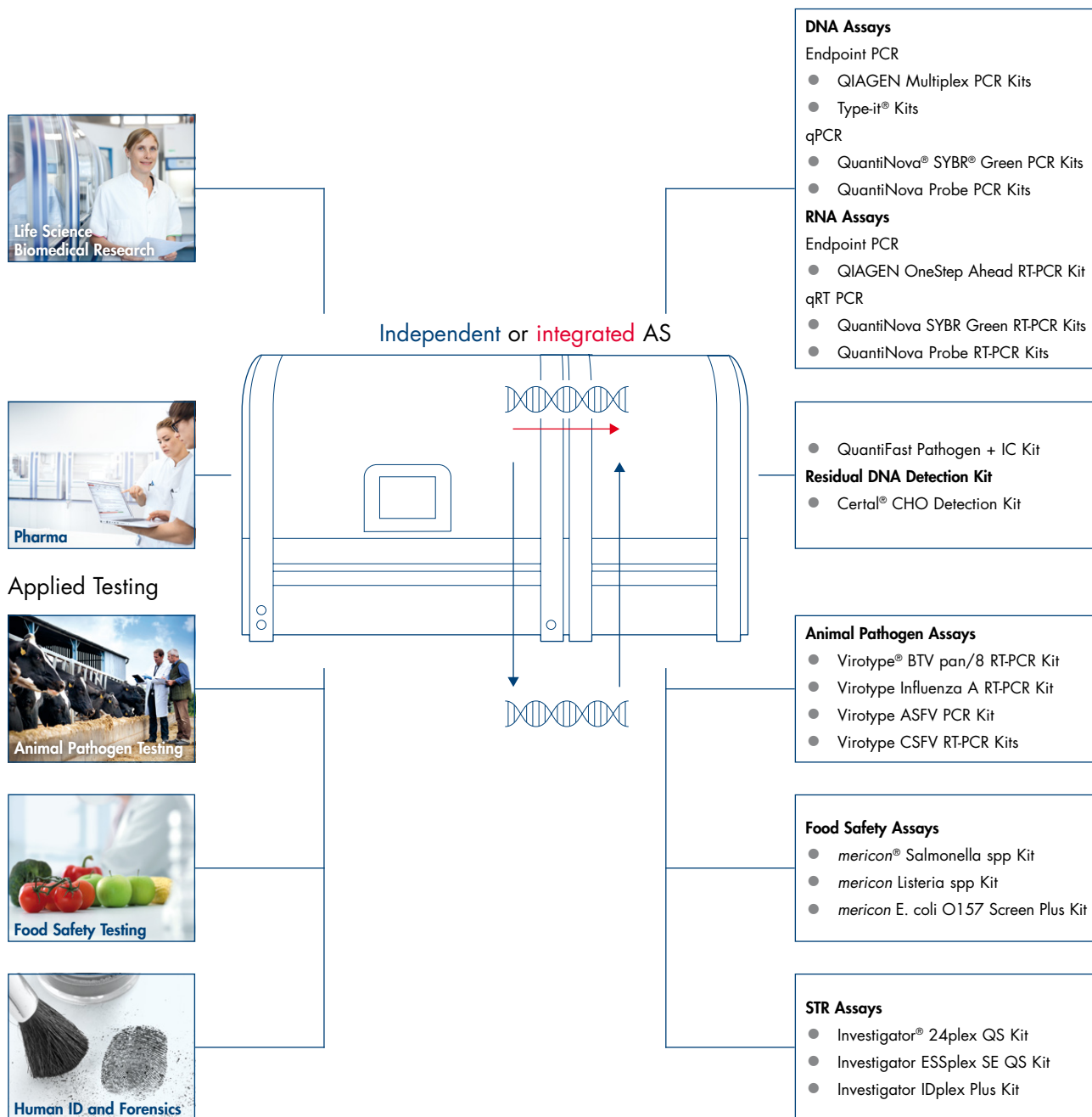


**Figure 4. Easy-to-use operating software.** QIAasymphony operating software guides the user through setting up a sample preparation or assay setup run in a step-by-step fashion, with options to select and adapt standardized protocols. **A.** Sample information after sample handling. **B.** Reagent loading information for the QIAasymphony AS.



# Free up your hands with an automated workflow

Example selection of kits that can be automated



Some products may not be available in all countries. Only selected products listed.  
Visit [www.qiagen.com](http://www.qiagen.com) for more PCR kits.



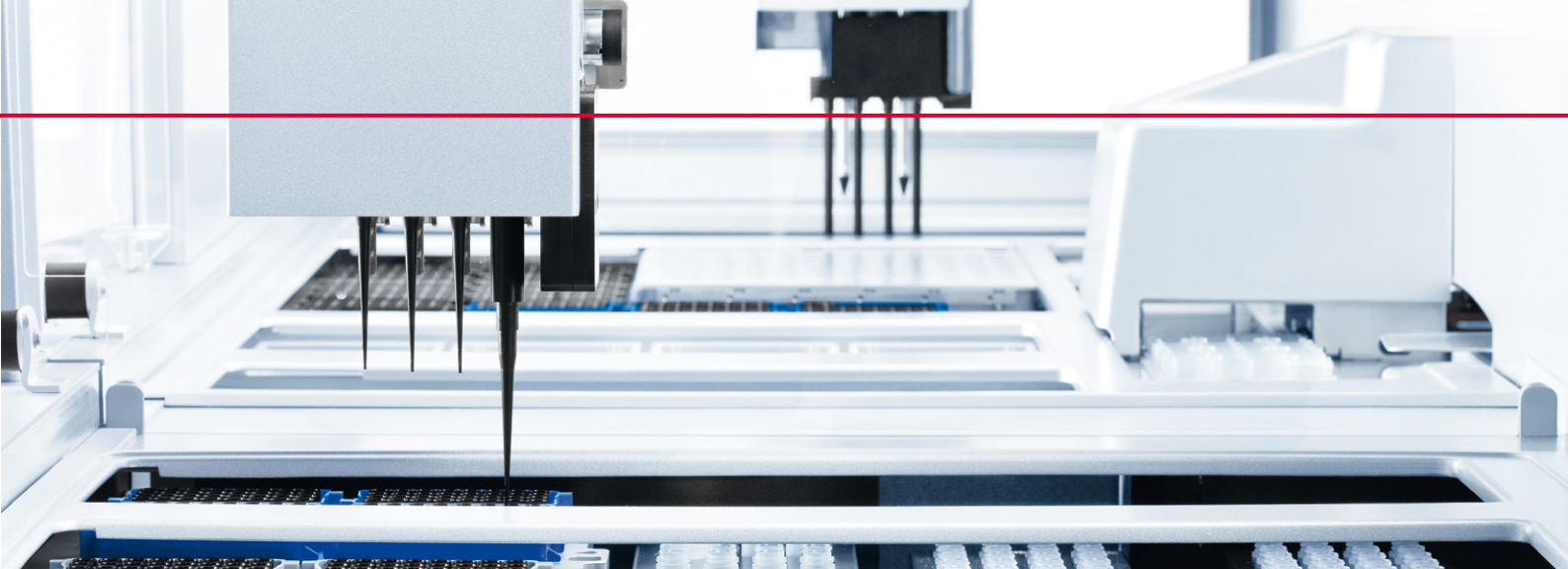
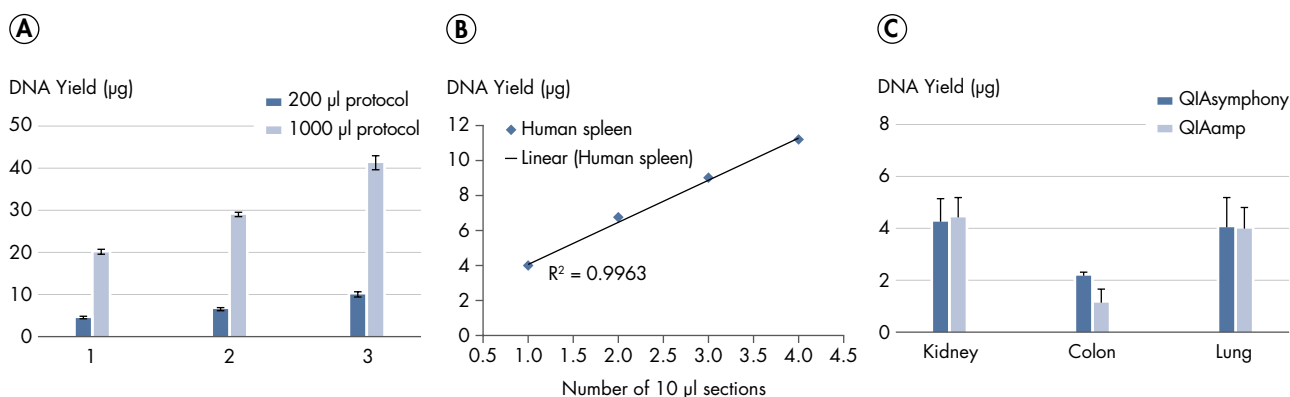


Table 1. Specifications for nucleic acid purification from a range of sample types.

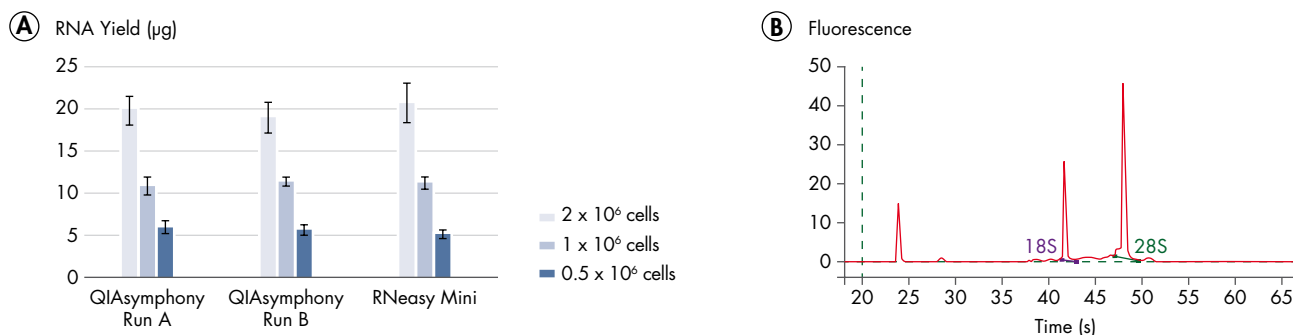
Sample types		Input sample amount	Elution volume (µl)	Nucleic acid yield (µg)
DNA from blood samples	Whole blood	200 µl	200	4–12
	Whole blood	400 µl	400	8–24
	Whole blood	1000 µl	500	15–45
	Buffy coat	200 µl	200	12–40
	Buffy coat	400 µl	400	24–72
cfDNA from cell-free body fluids	Plasma	200–4000 µl	60	~5 ng/ml plasma
DNA from tissues and cells	Cultured cells	1x10 <sup>7</sup>	200	40–80
	Spleen	25 mg	200	40–80
	Muscle	50 mg	100	5–15
	Lung	25 mg	200	10–25
	Kidney	25 mg	200	15–30
	Mouse tail	1 mg	200	20–40
	<i>Escherichia coli</i>	4x10 <sup>9</sup>	200	50–70
	FFPE tissues	1–8 sections	50–200	sample dependent
DNA from forensic samples	HID sample lysates	200–1000 µl	30–400	sample dependent
DNA from food testing samples	Bacterial enrichment culture	500 µl	100–400	sample dependent
	gDNA from food samples	500 µl	100–400	sample dependent
RNA from tissues and cells	Cultured cells	1x10 <sup>6</sup>	100, 200	10–25
	Kidney	10 mg	100, 200	20–30
	Liver	10 mg	100, 200	40–60
	Spleen	10 mg	100, 200	30–40
	Lung	10 mg	100, 200	10–20
	Skin	10 mg	100, 200	4–8
	Brain	10 mg	100, 200	3–10
	FFPE tissue	1–5 sections	50, 100, 200	sample dependent

# High quality nucleic acids, ready for analysis

QIAAsymphony SP uses magnetic bead technology to streamline and automate nucleic acid purification from a wide range of starting materials (Table 1). Optimized protocols provide high yields of pure DNA (Figure 5A) and RNA (Figure 6), even from FFPE tissues (Figure 5B, C). Nucleic acids purified with QIAAsymphony SP are free from inhibitors and ready for use in downstream analyses such as PCR, qPCR and RT-PCR.



**Figure 5. High yield and purity.** **A.** DNA was purified from human blood in replicates of 4 using the QIAAsymphony DSP DNA Kit. The purified DNA was of high yield and purity, with  $A_{260}/A_{280} > 1.8$ , regardless of the starting volume (not shown). **B.** DNA was purified from human spleen FFPE sections using the QIAAsymphony DSP DNA Kit. The yield increases linearly with the starting sample amounts. **C.** DNA was purified from human FFPE tissues manually using the QIAamp® DSP DNA FFPE Tissue Kit or automated using QIAAsymphony and the QIAAsymphony DSP DNA Kit. Automated purification is as reliable as the manual method.



**Figure 6. High yields of high-quality RNA.** **A.** RNA was purified from Jurkat cells manually using the RNeasy® Mini Kit or automated using QIAAsymphony SP and the QIAAsymphony RNA Kit. The automated procedure performed as well as the trusted manual procedure. **B.** RNA purified from cultured Jurkat cells using QIAAsymphony SP had RIN values between 9.9 and 10 and 28S/18S rRNA ratios of 2.0–2.1, indicating intact and high-quality RNA.

## Ordering Information

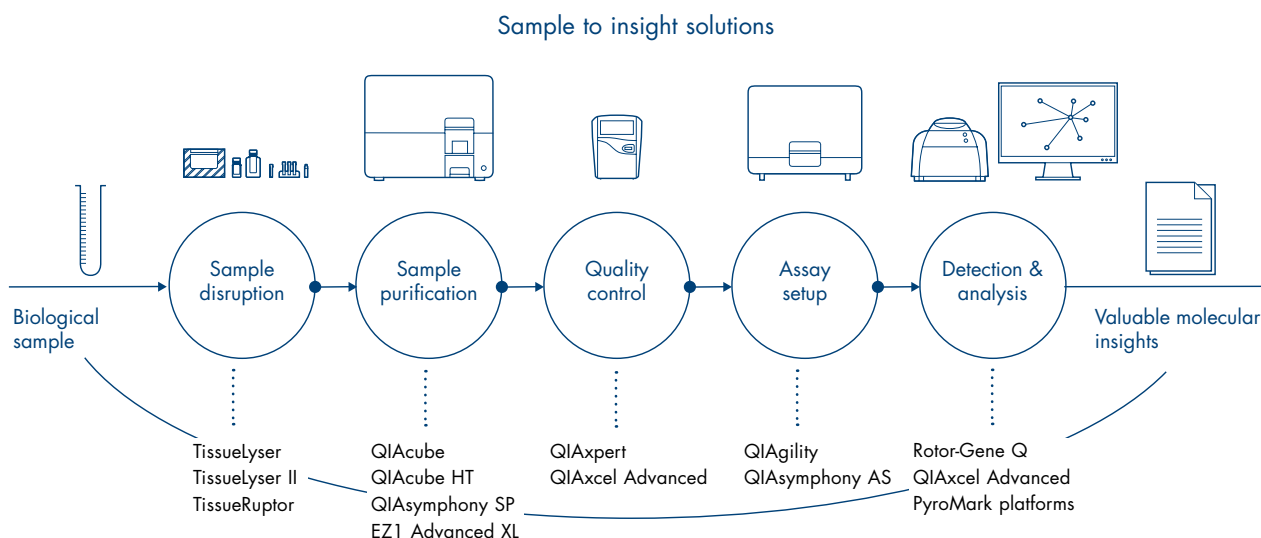
Product	Contents	Cat. no.
QIAasymphony SP	QIAasymphony sample prep module, 1-year parts and labor warranty	9001297
QIAasymphony AS	QIAasymphony assay setup module, 1-year parts and labor warranty	9001301
<b>Kits</b>		
QIAasymphony Virus/Bacteria Mini Kit	2 reagent cartridges, enzyme racks and accessories for 192 preps of 200 µl	931036
QIAasymphony Virus/Bacteria Midi Kit	2 reagent cartridges, enzyme racks and accessories for 96 preps of 1000 µl	931055
QIAasymphony DNA Mini Kit	2 reagent cartridges, enzyme racks and accessories for 192 preps of 200 µl	931236
QIAasymphony DNA Midi Kit	2 reagent cartridges, enzyme racks and accessories for 96 preps of 1000 µl	931255
QIAasymphony DNA Investigator Kit	2 reagent cartridges, enzyme racks and accessories for 192 casework and reference sample preps	931436
QIAasymphony RNA Kit	2 reagent cartridges, enzyme racks and accessories for 192 preps	931636
QIAasymphony PAXgene Blood RNA Kit	2 reagent cartridges, enzyme racks and accessories for 96 preps	762535
QIAasymphony Certal Residual DNA Kit	2 reagent cartridges, enzyme racks and accessories for 96 preps of 1000 µl	931855
QIAasymphony Certal Vaccine Kit	2 reagent cartridges, enzyme racks and accessories for 96 preps of 1000 µl	931955
QIAasymphony <i>mericon</i> Bacteria Kit	2 reagent cartridges, Piercing Lid, TopElute Fluid (60 ml), Reuse Seal Set for 360 preps	931156

Some kits may not be available in all countries. Please inquire.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at [www.qiagen.com](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

# QIAGEN's Automated Solutions – your gateway to faster and reliable results

Our automation solutions and optimized chemistries seamlessly integrate into your daily work and help you quickly convert your biological samples into valuable molecular insights. Whether you are a researcher in an academic, commercial or standardized testing lab, our automated Sample to Insight® solutions will standardize every step of your workflow and deliver the reproducible, high-quality data you need to compare your results to those from laboratories around the world.



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